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Core Network and Interoperability Testing (INT);
Conformance tests;
(3GPP Release 10);
Interworking between SIP-I based circuit-switched core network and other networks;
Part 2: SIP-I/SIP NNI
Test Suite Structure and Test Purposes (TSS&TP)

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RTS/INT-00110-2

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Foreword

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

The present document is part 2 of a multi-part deliverable covering SIP NNI - SIP-I Interworking described in the clauses 7.2 and 7.3 of TS 129 235 [1] (Release 10), as identified below:

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

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

Modal verbs terminology

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

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1 Scope

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

2 References

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

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2.1 Normative references

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

[1] ETSI TS 129 235 (V10.1.0): "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Interworking between SIP-I based circuit-switched core network and other networks (3GPP TS 29.235 version 10.1.0 Release 10) ".

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

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

[4] Recommendation ITU-T T.38: "Procedures for real-time Group 3 facsimile communication over IP networks".

[5] Void.

[6] ETSI TS 101 572-1: "Core Network and Interoperability Testing (INT); Conformance tests according to 3GPP™ 29.235 Release 10; Interworking between SIP-I based circuit-switched core network and other networks; Part 1: Protocol Implementation Conformance Statement (PICS)".

2.2 Informative references

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

[i.1] Recommendation ITU-T E.164: "The international public telecommunication numbering plan".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in TS 129 235 [1] and the following apply:

Implementation Under Test (IUT): Refer to ISO/IEC 9646-1 [3].

System Under Test (SUT): Refer to ISO/IEC 9646-1 [3].

Test Purpose (TP): Refer to ISO/IEC 9646-1 [3].

3.2 Symbols

For the purposes of the present document, the symbols given in TS 129 235 [1] apply.

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in TS 129 235 [1] and the following apply:

ACM	Address Complete Message
IAM	Initial Address Message
IUT	Implementation Under Test
oBCI	optional Backward Call Indicator
REL	RELease message
SUT	System Under Test
TP	Test Purpose

4 Test Suite Structure (TSS)

The Test Suite Structure is in close alignment with TS 129 235 [1] and TS 129 163 [2].

SIP NNI -SIP-I			
	Basic call	Sending_of_INVITE (IAM)	TP_101_xxx
			TP_102_xxx
			TP_103_xxx
			TP_104_xxx
			TP_105_xxx
			TP_106_xxx
			TP_107_xxx

SIP-I –SIP NNI			
	Basic call	Sending_of_INVITE	TP_201_xxx
			TP_202_xxx
			TP_203_xxx
			TP_204_xxx
			TP_205_xxx
			TP_206_xxx
			TP_207_xxx
			TP_208_xxx
			TP_209_xxx
			TP_211_xxx

PSTN-SS		
	PSTN-SS/COL	TP_302_xxx
	PSTN-SS/MCID	TP_303_xxx
	PSTN-SS/SUB	TP_304_xxx
	PSTN-SS/CDIV	TP_305_xxx
	PSTN-SS/ECT	TP_306_xxx
	PSTN-SS/HOLD	TP_308_xxx
	PSTN-SS/CCBS	TP_309_xxx
	PSTN-SS/CCNR	TP_310_xxx
	PSTN-SS/TP	TP_311_xxx
	PSTN-SS/CONF	TP_312_xxx
	PSTN-SS/MLPP	TP_314_xxx
	PSTN-SS/GVNS	TP_315_xxx
	PSTN-SS/REV	TP_316_xxx

IMS-SS		
	IMS-SS/OIP-OIR	TP_401_xxx
	IMS-SS/TIP-TIR	TP_402_xxx
	IMS-SS/CDIV	TP_403_xxx
	PSTN-SS/CONF	TP_404_xxx
	IMS-SS/MCID	TP_406_xxx
	IMS-SS/CUG	TP_407_xxx
	IMS-SS/CC/	TP_408_xxx
	IMS-SS/CW	TP_409_xxx

5 Test Purposes (TP)

5.1 Introduction

For each requirement in TS 129 163 [2] a TP is defined.

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 5.1.1-1).

Table 5.1.1-1: TP identifier naming convention scheme

Identifier: **TP_<group>_<nnn>**			
<group>	=	group	3 digit field representing group reference according to TSS
<nnn>	=	TP number	3 digit sequential number (001 to 999)

5.1.2 Test strategy

As the base standard TS 129 235 [1] and TS 129 163 [2] contains no explicit requirements for testing, the TPs were generated as a result of an analysis of the base standard and the PICS specification TS 101 572-1 [6]. The criteria applied include the following:

- whether or not a test case can be built from the TP is not considered.

5.1.3 Test purpose structure

The test purpose structure is according to the test suite structure (TSS). The Reference column in each Test Purpose refers to the basic specification except stated explicitly.

6 Test purposes (TP)

6.1 SIP NNI -SIP-I protocol interworking

6.1.1 Signalling Interworking of a Call from the IP Multimedia Subsystem towards the SIP-I based circuit-switched core network

6.1.1.1 Sending of INVITE (IAM)

TP number	TP_101_001	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria			
Test Purpose name	Sending of SIP-INVITE request		
Test Purpose	Ensure that on reception of a SIP-INVITE requesting a session, the I-MGCF sends a SIP-INVITE request with encapsulated IAM message.		
ISUP Parameter values			
SIP Parameter values			
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←	←	100 Trying
	Apply post test routine		

TP number	TP_101_002	**Reference**	[1], clause 7.2.4 [2], clause 7.2.3.1.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.1.1/1 AND PICS 6.2.1/1 AND PICS 6.2.1/2		
Test Purpose name	Preconditions support indicated in the **Supported** header		
Test Purpose	Ensure that the Preconditions procedure is successful if the support of Precondition is indicated in the Supported header. The INVITE with encapsulated IAM is immediately sent. The Nature of connection indicator is set to 'continuity check performed on a previous circuit' or 'continuity check required'. After the UPDATE was received, a UPDATE is sent		
ISUP Parameter values	**IAM:** Nature of connection indicator = 'continuity check performed on a previous circuit' or 'continuity check required'		
SIP Parameter values	**INVITE:** Supported: precondition, 100rel SDP a=curr:qos local none a=curr:qos remote none a=des:qos mandatory local sendrecv a=des:qos none remote sendrecv 183: Require: 100rel SDP a=curr:qos local none a=curr:qos remote none a=des:qos mandatory local sendrecv a=des:qos mandatory remote sendrecv a=conf:qos remote sendrecv UPDATE: SDP a=curr:qos local sendrecv a=curr:qos remote none a=des:qos mandatory local sendrecv a=des:qos mandatory remote sendrecv 200 OK UPDATE SDP a=curr:qos local sendrecv a=curr:qos remote sendrecv a=des:qos mandatory local sendrecv a=des:qos mandatory remote sendrecv		
Comments			

Message flows

SIP NNI		**MGCF**		**SIP-I**
INVITE	→		→	INVITE (IAM)
100 Trying	←		←	100 Trying
183 Session Progress	←		←	183 Session Progress
PRACK	→		→	PRACK
200 OK (PRACK)	←		←	200 OK (PRACK)
UPDATE	→		→	UPDATE
200 OK (UPDATE)	←		←	200 OK (UPDATE)
Apply post test routine				

TP number	TP_101_003	**Reference**	[1], clause 7.2.4 [2], clause 7.2.3.1.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.1.1/1 AND PICS 6.2.1/1 AND NOT PICS 6.2.1/2		
Test Purpose name	Preconditions support indicated in the **Supported** header		
Test Purpose	Ensure that the Preconditions procedure is successful if the support of Precondition is indicated in the Supported header. The INVITE with encapsulated IAM is sent after the UPDATE was received. The Nature of connection indicator is set to 'continuity check is not required'.		
ISUP Parameter values	**IAM:** Nature of connection indicator = 'continuity check is not required'		
SIP Parameter values	**INVITE:** Supported: precondition, 100rel SDP a=curr:qos local none a=curr:qos remote none a=des:qos mandatory local sendrecv a=des:qos none remote sendrecv 183: Require: 100rel SDP a=curr:qos local none a=curr:qos remote none a=des:qos mandatory local sendrecv a=des:qos mandatory remote sendrecv a=conf:qos remote sendrecv UPDATE: SDP a=curr:qos local sendrecv a=curr:qos remote none a=des:qos mandatory local sendrecv a=des:qos mandatory remote sendrecv 200 OK UPDATE SDP a=curr:qos local sendrecv a=curr:qos remote sendrecv a=des:qos mandatory local sendrecv a=des:qos mandatory remote sendrecv		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →		
	100 Trying ←		
	183 Session Progress ←		
	PRACK →		
	200 OK (PRACK) ←		
	UPDATE →	→	INVITE (IAM)
	200 OK (UPDATE) ←		
	Apply post test routine		

TP number	TP_101_006	**Reference**	[1], clause 7.2.4 [2], clause 73.3.1.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.1.1/2 AND PICS 6.2.1/1 AND PICS 6.2.1/2; BICC support		
Test Purpose name	Preconditions support indicated in the Supported header COT procedure supported		
Test Purpose	Ensure that the Preconditions procedure is successful if the support of Precondition is indicated in the Supported header. The internal ISUP Continuity check procedure is not supported. The INVITE with encapsulated IAM is immediately sent. The Nature of connection indicator is set to 'COT to be expected'. After the UPDATE was received, an UPDATE is sent		
ISUP Parameter values	**IAM:** Nature of connection indicator = 'COT to be expected'		
SIP Parameter values	**INVITE:** Supported: precondition, 100rel SDP a=curr:qos local none a=curr:qos remote none a=des:qos mandatory local sendrecv a=des:qos none remote sendrecv 183: Require: 100rel SDP a=curr:qos local none a=curr:qos remote none a=des:qos mandatory local sendrecv a=des:qos mandatory remote sendrecv a=conf:qos remote sendrecv UPDATE: SDP a=curr:qos local sendrecv a=curr:qos remote none a=des:qos mandatory local sendrecv a=des:qos mandatory remote sendrecv 200 OK UPDATE SDP a=curr:qos local sendrecv a=curr:qos remote sendrecv a=des:qos mandatory local sendrecv a=des:qos mandatory remote sendrecv		
Comments			

Message flows

SIP NNI		**MGCF**		**SIP-I**
INVITE	→		→	INVITE (IAM)
100 Trying	←		←	100 Trying
183 Session Progress	←		←	183 Session Progress
PRACK	→		→	PRACK
200 OK (PRACK)	←		←	200 OK (PRACK)
UPDATE	→		→	UPDATE
200 OK (UPDATE)	←		←	200 OK (UPDATE)
Apply post test routine				

TP number	TP_101_007	**Reference**	[1], clause 7.2.4 [2], clause 7.3.3.1.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.1.1/2 AND PICS 6.2.1/1 AND NOT PICS 6.2.1/2		
Test Purpose name	Preconditions support indicated in the Supported header		
Test Purpose	Ensure that the Preconditions procedure is successful if the support of Precondition is indicated in the Supported header. The INVITE with encapsulated IAM) is sent after the UPDATE was received. The Nature of connection indicator is set to 'no COT to be expected'.		
ISUP Parameter values	**IAM:** Nature of connection indicator = 'no COT to be expected'		
SIP Parameter values	**INVITE:** Supported: precondition, 100rel SDP a=curr:qos local none a=curr:qos remote none a=des:qos mandatory local sendrecv a=des:qos none remote sendrecv 183: Require: 100rel SDP a=curr:qos local none a=curr:qos remote none a=des:qos mandatory local sendrecv a=des:qos mandatory remote sendrecv a=conf:qos remote sendrecv UPDATE: SDP a=curr:qos local sendrecv a=curr:qos remote none a=des:qos mandatory local sendrecv a=des:qos mandatory remote sendrecv 200 OK UPDATE SDP a=curr:qos local sendrecv a=curr:qos remote sendrecv a=des:qos mandatory local sendrecv a=des:qos mandatory remote sendrecv		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →		
	100 Trying ←		
	183 Session Progress ←		
	PRACK →		
	200 OK (PRACK) ←		
	UPDATE →	→	INVITE (IAM)
	200 OK (UPDATE) ←		
	Apply post test routine		

TP number	TP_101_007A	**Reference**	[1], clause 7.2.4 [2], clause 7.3.3.1.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.1/1 AND PICS 6.2.1/2		
Test Purpose name	Preconditions fulfilled indicated in the INVITE request		
Test Purpose	Ensure that Preconditions are fulfilled is indicated in the SDP received in the INVITE request. The INVITE with encapsulated IAM) is sent. The Nature of connection indicator is set to 'no COT to be expected'.		
ISUP Parameter values	**IAM:** Nature of connection indicator = 'continuity check is not required' or **IAM:** Nature of connection indicator = 'no COT to be expected'		
SIP Parameter values	**INVITE:** Supported: precondition, 100rel SDP a=curr:qos local sendrecv a=curr:qos remote none a=des:qos mandatory local sendrecv a=des:qos none remote sendrecv 180 SDP a=curr:qos local sendrecv a=curr:qos remote sendrecv a=des:qos mandatory local sendrecv a=des:qos mandatory remote sendrecv		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	180 Ringing ←	←	180 Ringing (ACM)
	PRACK →	→	PRACK
	200 OK (PRACK) ←	←	200 OK (PRACK)
	Apply post test routine		

TP number	TP_101_010	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria			
Test Purpose name	Unsupported media type is rejected 488 is sent		
Test Purpose	Ensure that an unsupported media type is rejected a 488 Not Acceptable Here final response is sent to the calling user.		
ISUP Parameter values			
SIP Parameter values	**INVITE**: SDP: m= video 4713 RTP/AVP 31		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →		
	488 Not Acceptable Here ←		
	ACK →		

TP number	TP_101_011	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria			
Test Purpose name	Unsupported media type is rejected session successful		
Test Purpose	Ensure that an unsupported media type is rejected. The SUT sends in the SDP answer the port number '0' for the concerned media type.		
ISUP Parameter values			
SIP Parameter values	**INVITE:** SDP: m=audio 4711 RTP/AVP 8 m= video 4713 RTP/AVP 31 180 Ringing or 183 Session Progress SDP: m=audio <appropriate Port #> RTP/AVP 8 m=video 0 RTP/AVP 31		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	100 Trying	←			
	CASE A				
	180 Ringing	←		←	180 Ringing (ACM)
	CASE B				
	183 Session Progress	←		←	183 Session Progress (ACM)
	Apply post test routine				

TP number	TP_101_012	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria			
Test Purpose name	Unsupported codec is deselected		
Test Purpose	Ensure that the SUT removes a codec from the codec list in the SDP answer if the codec is an unsupported codec.		
ISUP Parameter values			
SIP Parameter values	**INVITE:** SDP: m=audio 4711 RTP/AVP <unsupported codec> 8 180 Ringing or 183 Session Progress SDP: m=audio <appropriate Port #> RTP/AVP 8		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	100 Trying	←			
	CASE A				
	180 Ringing	←		←	180 Ringing (ACM)
	CASE B				
	183 Session Progress	←		←	183 Session Progress (ACM)
	Apply post test routine				

TP number	TP_101_013	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria			
Test Purpose name	INVITE request without SDP offer received		
Test Purpose	Ensure that on receipt of an INVITE request without a SDP offer, the SUT sends a SDP offer in the first reliable non-failure message.		
ISUP Parameter values			
SIP Parameter values	**INVITE:** Supported: 100rel 180 Ringing or 183 Session Progress SDP: m=audio 4711 RTP/AVP 8		
Comments			

Message flows

SIP NNI		**MGCF**		**SIP-I**
INVITE	→		→	INVITE (IAM)
100 Trying	←			
CASE A				
180 Ringing	←		←	180 Ringing (ACM)
PRACK	→		→	PRACK
200 OK PRACK	←		←	200 OK PRACK
CASE B				
183 Session Progress	←		←	183 Session Progress (ACM)
PRACK	→		→	PRACK
200 OK PRACK	←		←	200 OK PRACK
Apply post test routine				

TP number	TP_101_014	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria			
Test Purpose name	To header tag is sent in the first provisional response		
Test Purpose	Ensure that a To header tag is contained in the first provisional response		
ISUP Parameter values			
SIP Parameter values	**INVITE:** To: <URI> 180 Ringing or 183 Session Progress: To: <URI>; <tag>		
Comments			

Message flows

SIP NNI		**MGCF**		**SIP-I**
INVITE	→		→	INVITE (IAM)
100 Trying	←			
CASE A				
180 Ringing	←		←	180 Ringing (ACM)
CASE B				
183 Session Progress	←		←	183 Session Progress (ACM)
Apply post test routine				

TP number	TP_101_015	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria			
Test Purpose name	Coding of called party number		
Test Purpose	Ensure that an INVITE with encapsulated IAM is sent after an INVITE request was received. In the encapsulated IAM • In case of the 'CC' of the received INVITE request URI is equal to the country code in which the next hop terminates: remove 'CC' from the user info and send the remaining part as digits in the called party number. The nature of address indicator is set to '**National (Significant) number**'. • In case of the 'CC' of the received INVITE request URI is **not** equal to the country code in which the next hop terminates: send the unchanged part of the request URI without '+' as digits in the called party number. The nature of address indicator is set to '**International number**'. The internal Network Number Indicator = 'routing to internal network number not allowed' Numbering Plan Indicator = 'ISDN (Telephony) numbering plan (*Recommendation E.164 [i.1]*)'		
ISUP Parameter values			
SIP Parameter values			
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	Apply post test routine		

TP number	TP_101_016	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.1/21		
Test Purpose name	SendingCompleteIndication is mapped into a hex digit 'F' in the called party number		
Test Purpose	Ensure that on receipt of a PSTN XML SendingCompleteIndication element a hex digit 'F' is sent al last digit in the called party number		
ISUP Parameter values			
SIP Parameter values			
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	Apply post test routine		

TP number	TP_101_017	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.2
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.1.1/1		
Test Purpose name	Nature of connection indicator		
Test Purpose	Ensure that an INVITE with encapsulated IAM is sent after an INVITE request was received. The nature of connection indicator in the encapsulated IAM is set **Satellite indicator** = 'no satellite circuit in the connection' **Continuity check indicator** = 'continuity check not required' or 'continuity check required' or 'continuity check performed on a previous circuit' **Echo control device indicator** • TMR audio 3,1 kHz or speech = outgoing echo control device included • TMR 64 kBit/s or HLC 'Facsimile Group 2/3' = 'outgoing echo control device not included'		
ISUP Parameter values			
SIP Parameter values			
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	Apply post test routine		

TP number	TP_101_018	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.2
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.1.1/2		
Test Purpose name	Nature of connection indicator		
Test Purpose	Ensure that an INVITE with encapsulated IAM is sent after an INVITE request was received. In the encapsulated IAM the nature of connection indicator is set **Satellite indicator** = 'no satellite circuit in the connection' **Continuity check indicator** = 'no COT to be expected or 'COT to be expected' **Echo control device indicator** = outgoing echo control device included		
ISUP Parameter values			
SIP Parameter values			
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	Apply post test routine		

TP number	TP_101_019	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.3
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	NOT PICS 6.2.1/5		
Test Purpose name	Forward Call indicator		
Test Purpose	Ensure that an INITE (IAM) is sent after an INVITE request was received. If no PSTN XML attachment is present and the TMR is set to audio, the Forward call indicator is coded as follows: • End-to-end method indicator = ('00') no end-to-end method available (only link-by-link method available) • Interworking indicator = ('1') interworking encountered • End-to-end information indicator = ('0') no end-to-end information available • ISDN user part/BICC indicator = ('0') ISDN user part/BICC not used all the way • ISDN user part/BICC preference indicator = ('01') ISDN user part/BICC not required all the way • ISDN access indicator = ('0') originating access non-ISDN • SCCP method indicator = ('00') no indication		
ISUP Parameter values			
SIP Parameter values			
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	Apply post test routine		

TP number	TP_101_020	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.3
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	NOT PICS 6.2.1/5 AND NOT PICS 6.2.1/6		
Test Purpose name	Forward Call indicator		
Test Purpose	Ensure that an INVITE with encapsulated IAM is sent after an INVITE request was received. If no PSTN XML attachment is present and the TMR 64 kBit/s **has no impact** of the coding of the Forward call indicator. The Forward call indicator is coded as follows: • End-to-end method indicator = ('00') no end-to-end method available (only link-by-link method available) • Interworking indicator = ('1') interworking encountered • End-to-end information indicator = ('0') no end-to-end information available • ISDN user part/BICC indicator = ('0') ISDN user part/BICC not used all the way • ISDN user part/BICC preference indicator = ('01') ISDN user part/BICC not required all the way • ISDN access indicator = ('0') originating access non-ISDN • SCCP method indicator = ('00') no indication		
ISUP Parameter values			
SIP Parameter values			
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_101_021	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.3
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	NOT PICS 6.2.1/5 AND PICS 6.2.1/6		
Test Purpose name	Forward Call indicator		
Test Purpose	Ensure that an INVITE with encapsulated IAM is sent after an INVITE request was received. If no PSTN XML attachment is present and the TMR 64 kBit/s **has impact** of the coding of the Forward call indicator, the Forward call indicator is coded as follows: • End-to-end method indicator = ('00') no end-to-end method available (only link-by-link method available) • Interworking indicator = ('0') no interworking encountered • End-to-end information indicator = ('0') no end-to-end information available • ISDN user part/BICC indicator = ('1') ISDN user part/BICC used all the way • ISDN user part/BICC preference indicator = ('01') ISDN user part/BICC not required all the way • ISDN access indicator = ('1') originating access ISDN • SCCP method indicator = ('00') no indication		
ISUP Parameter values			
SIP Parameter values			
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_101_022	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.3
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Forward Call indicator		
Test Purpose	Ensure that an INVITE with encapsulated IAM is sent after an INVITE request was received. If the PSTN XML attachment is present the ProgressIndicator value ProgressDescription = 6, the Forward call indicator is coded as follows: • End-to-end method indicator = ('00') no end-to-end method available (only link-by-link method available) • Interworking indicator = ('0') no interworking encountered • End-to-end information indicator = ('0') no end-to-end information available • ISDN user part/BICC indicator = ('1') ISDN user part/BICC used all the way • ISDN user part/BICC preference indicator = ('01') ISDN user part/BICC not required all the way • ISDN access indicator = ('1') originating access ISDN • SCCP method indicator = ('00') no indication		
ISUP Parameter values	**IAM:** Forward call indicator		
SIP Parameter values	**INVITE:** PSTM XML MIME body <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet3 CodingStandard>00< Location>yyyy< ProgressOctet4 ProgressDescription>**0000110**<		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	Apply post test routine		

TP number	TP_101_023	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.4
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria			
Test Purpose name	Mapping of calling party category		
Test Purpose	Ensure that a cpc parameter SIP_CPC received in the P-Asserted-Identity URI parameter and the "language" in the Accept-Language SIP_LANG header is mapped into the calling party parameter category ISUP_CPC in the sent IAM. The mapping is described in table 6.1.1.1-1		
ISUP Parameter values	**IAM:** Calling Party Category = ISUP_CPC		
SIP Parameter values	**INVITE:** P-Asserted-Identity ;cpc= PARAM, / Accept-Language = SIP_LANG **INVITE (IAM):** P-Asserted-Identity;		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	Apply post test routine		

Table 6.1.1.1-1: Coding of calling party category

	Values for test purposes TP101032		
	SIP_CPC		ISUP_CPC
	cpc received in a P-Asserted-Identity PARAM	Accept-Language SIP_LANG	Sent Calling party's category
VA_01	operator	fr	operator, language French
VA_02	operator	en	operator, language English
VA_03	operator	de	operator, language German
VA_04	operator	ru	operator, language Russian
VA_05	operator	es	operator, language Spanish
VA_06	ordinary		ordinary calling subscriber
VA_07	test		test call
VA_08	payphone		payphone
VA_09	mobile-hplmn		mobile terminal located in the home PLMN
VA_10	mobile-vplmn		mobile terminal located in a visited PLMN
VA_11	unknown		calling party's category unknown at this time (national use
VA_12	emergency		emergency service call

TP number	TP_101_024	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.5
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.4/6		
Test Purpose name	G.177 µ-law: Coding of TMR		
Test Purpose	Ensure that an INVITE with encapsulated IAM is sent after an INVITE request was received. The Transmission Medium Requirement parameter in the INVITE with encapsulated IAM is set to '3,1 kHz audio' derived from the codec PCMU.		
ISUP Parameter values	**IAM:** TMR 3,1 kHz audio		
SIP Parameter values	**INVITE:** SDP m=audio <port #> RTP/AVP 0 **or** <dynamic-PT> a=rtpmap:0 PCMU/8000 **or** rtpmap: <dynamic-PT> PCMU/8000		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_101_024A	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.5
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.4/5		
Test Purpose name	G.177 a-law: Coding of TMR		
Test Purpose	Ensure that an INVITE with encapsulated IAM is sent after an INVITE request was received. The Transmission Medium Requirement parameter in the INVITE with encapsulated IAM is set to '3,1 kHz audio' derived from the codec PCMA.		
ISUP Parameter values	**IAM:** TMR 3,1 kHz audio		
SIP Parameter values	**INVITE:** SDP m=audio <port #> RTP/AVP 8 **or** <dynamic-PT> a=rtpmap:8 PCMA/8000 **or** rtpmap: <dynamic-PT> PCMA/8000		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_101_024B	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.5
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.4/1		
Test Purpose name	CLEARMODE: Coding of TMR		
Test Purpose	Ensure that an INVITE with encapsulated IAM is sent after an INVITE request was received. The Transmission Medium Requirement parameter in the INVITE with encapsulated IAM is set to '64 kBit/s unrestricted' derived from the CLEARMODE codec.		
ISUP Parameter values	**IAM:** TMR 64 kBit/s unrestricted		
SIP Parameter values	**INVITE:** SDP m=audio <port #> RTP/AVP <dynamic-PT> a=rtpmap: <dynamic-PT> CLEARMODE/8000		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_101_024C	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.5
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.4/7		
Test Purpose name	CLEARMODE: Coding of TMR		
Test Purpose	Ensure that an INVITE with encapsulated IAM is sent after an INVITE request was received. The Transmission Medium Requirement parameter in the INVITE with encapsulated IAM is set to '64 kBit/s unrestricted' derived from the CLEARMODE codec.		
ISUP Parameter values	**IAM:** TMR 3,1 kHz audio		
SIP Parameter values	**INVITE:** SDP m=image 4<port #> udptl t38 **or** tcptl t38 a=[Based on ITU-T T.38 [4]]		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_101_025	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.5
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.4/1		
Test Purpose name	CLEARMODE: Coding of USI		
Test Purpose	Ensure that an INVITE with encapsulated IAM is sent after an INVITE request was received. The User service Information parameter in the IAM is set to 'Unrestricted digital information' or 'Unrestricted digital inf. w/tones/ann' if the first stated codec was set to CLEARMODE.		
ISUP Parameter values	**IAM:** USI Information Transport Capability Unrestricted digital information **or** Unrestricted digital inf. w/tones/ann		
SIP Parameter values	**INVITE:** SDP m=audio <port #> RTP/AVP <dynamic-PT> a=rtpmap: <dynamic-PT> CLEARMODE/8000		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_101_025A	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.5
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.4/7		
Test Purpose name	Fax T.38: Coding of USI		
Test Purpose	Ensure that an INVITE with encapsulated IAM is sent after an INVITE request was received. The User service Information parameter in the IAM is set to 'Unrestricted digital information' or 'Unrestricted digital inf. w/tones/ann' if the first stated codec was set to CLEARMODE.		
ISUP Parameter values	**IAM:** USI Information Transport Capability 3,1 kHz audio		
SIP Parameter values	**INVITE:** SDP m=image 4<port #> udptl t38 **or** tcptl t38 a=[Based on ITU-T T.38 [4]]		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

Table 6.1.1.1-3: Void

TP number	TP_101_026	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.5
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria			
Test Purpose name	Coding of HLC		
Test Purpose	Ensure that an INVITE with encapsulated IAM is sent after an INVITE request was received. The High Layer Compatibility parameter in the IAM is set according the mapping described in table 6.1.1.1-4		
ISUP Parameter values	**IAM:** HLC		
SIP Parameter values	**INVITE**: SDP m line a attributes		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	IAM
	100 Trying ←		
	Apply post test routine		

Table 6.1.1.1-4: Coding of HLC

HLC_VA	**m= line**			**a= line**	**HLC parameter (optional)**
	<media>	**<transport>**	**<fmt-list>**	**rtpmap:<dynamic-PT> <encoding name> <clock rate>[<encoding parameters>]**	**High Layer Characteristics Identification**
VA_01	image	Udptl	t38	Based on Recommendation ITU-T T.38 [4]	*"Facsímile Group 2/3"*
VA_02	image	tcptl	t38	Based on Recommendation ITU-T T.38 [4]	*"Facsímile Group 2/3"*

TP number	TP_101_027	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.5
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML HighLayerCompatibility		
Test Purpose	Ensure that on receipt of a PSTN XML attachment in an INVITE request containing a HighLayerCompatibility element, this information is mapped into a High Layer Compatibility IE present in an ISUP Access Transport Parameter the High Layer Characteristics value is derived from the PSTN XMLHighLayerCharacteristics element		
ISUP Parameter values	**IAM:** ATP High Layer Compatibility High Layer Characteristics>**HLC_value**		
SIP Parameter values	**INVITE:** PSTN XML MIME body <?xml version="1.0" encoding="utf-8"?> PSTN HighLayerCompatibility HLOctet3 CodingStandard>00< Interpretation>100< PresentationMethod>01< HLOctet4 HighLayerCharacteristics>**HLC_value**<		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	Apply post test routine		

Table 6.1.1.1-5: Mapping of PSTN XML HighLayerCharacteristic to ISUP ATP High layer compatibility

HLC_value	XML HighLayerCharacteristic	DSS1 High layer characteristics identification
HLC_VA_1	'0000001'	Telephony
HLC_VA_2	'0000100'	Facsimile Group 2/3
HLC_VA_3	'0100001'	Facsimile Group 4 Class I
HLC_VA_4	'0100100'	Facsimile service Group 4, Classes II and III
HLC_VA_5	'0110010'	Syntax based Videotex
HLC_VA_6	'0110011'	International Videotex interworking via gateways or interworking units
HLC_VA_7	'0110101'	Telex service
HLC_VA_8	'1000010'	FTAM application
HLC_VA_9	'1100000'	Videotelephony

TP number	TP_101_028	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.5
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML LowLayerCompatibility		
Test Purpose	Ensure that on receipt of a PSTN XML attachment in an INVITE request containing a LowLayerCompatibility element, this information is mapped into a Low Layer Compatibility IE present in an ISUP Access Transport Parameter the Information Transfer Capability value is derived from the PSTN XMLInformationTransferCapability element		
ISUP Parameter values	**IAM:** ATP Low Layer Compatibility InformationTransferCapability=**ITC_VA**		
SIP Parameter values	**INVITE:** <?xml version="1.0" encoding="utf-8"?> PSTN LowLayerCompatibility> LLOctet3> CodingStandard>00< InformationTransferCapability>**ITC_VA**< LLOctet4> TransferMode>00< InformationTransferRate>10000<		
Comments			
Message flows	**SIP NNI** → **MGCF** → **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

Table 6.1.1.1-6: Mapping of PSTN XML LowLayerCompatibility to ISUP ATP Low Layer Compatibility

ITC_value	XML LLC InformationTransferCapability	LLC Information transfer capability
ITC_VA_1	'00000'	Speech
ITC_VA_2	'10000'	3,1 kHz audio
ITC_VA_3	'01001'	Unrestricted digital info
ITC_VA_3	'10001'	7 kHz audio

TP number	TP_101_029	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.5
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML BearerCapability into TMR and USI		
Test Purpose	Ensure that on receipt of a PSTN XML attachment in an INVITE request containing a BearerCapability element, this information is mapped into a **User Service Information** Parameter the Information Transfer Capability value is derived from the PSTN XMLInformationTransferCapability element		
ISUP Parameter values	**IAM:** USI Information Transfer Capability=**ITC_value**		
SIP Parameter values	<?xml version="1.0" encoding="utf-8"?> PSTN BearerCapability BCoctet3 CodingStandard>00< InformationTransferCapability>ITC_value< BCoctet4 TransferMode>00< InformationTransferRate>10000< BCoctet5 Layer1Identification>01< UserInfoLayer1Protocol>00011<		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

Table 6.1.1.1-7: Mapping of PSTN XML BearerCapability to ISUP User Service Information

ITC_value	XML InformationTransferCapability	USI Information transfer capability
ITC_VA_1	'00000'	Speech
ITC_VA_2	'10000'	3,1 kHz audio
ITC_VA_3	'01000'	unrestricted digital information

TP number	TP_101_030	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.5
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.1/5AND PICS 6.2.1/7		
Test Purpose name	Mapping of PSTN XML HighLayerCompatibility into User Teleservice Information parameter		
Test Purpose	Ensure that on receipt of a PSTN XML attachment in an INVITE request containing a HighLayerCompatibility element, this information is mapped into a **User Teleservice Information** parameter the High Layer Characteristics value is derived from the PSTN XML HighLayerCharacteristics element		
ISUP Parameter values	**IAM:** UTI High Layer Characteristics>**HLC_value**		
SIP Parameter values	**INVITE:** PSTN XML MIME body <?xml version="1.0" encoding="utf-8"?> PSTN HighLayerCompatibility HLOctet3 CodingStandard>00< Interpretation>100< PresentationMethod>01< HLOctet4 HighLayerCharacteristics>**HLC_value**<		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
		Apply post test routine	

Table 6.1.1.1-8: Mapping of PSTN XML HighLayerCharacteristic to ISUP User Teleservice Information

HLC_value	XML HighLayerCharacteristic	DSS1 High layer characteristics identification
HLC_VA_1	'0000001'	Telephony
HLC_VA_2	'0000100'	Facsimile Group 2/3
HLC_VA_3	'0100001'	Facsimile Group 4 Class I
HLC_VA_4	'0100100'	Facsimile service Group 4, Classes II and III
HLC_VA_5	'0110010'	Syntax based Videotex
HLC_VA_6	'0110011'	International Videotex interworking via gateways or interworking units
HLC_VA_7	'0110101'	Telex service
HLC_VA_8	'1000010'	FTAM application
HLC_VA_9	'1100000'	Videotelephony

TP number	TP_101_031	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.5a
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Fall Back connection type is sent		
Test Purpose	Ensure that on receipt of two BearerCapability elements in a INVITE PSTN XML MIME body • The first stated codec in the SDP m line is the equivalent to the second BearerCapability element, the BearerCapability element is mapped into the User Service prime (USI prime) parameter in the sent IAM, the TMR is set according the second PSTN XML InformationTransferCapability value • The second stated codec in the SDP m line is the equivalent to the first BearerCapability element, the BearerCapability element is mapped into the User Service Information (USI) parameter in the sent IAM, the TMR prime is set according the first PSTN XML InformationTransferCapability value		
ISUP Parameter values	**IAM:** TMR = second InformationTransferCapability TMR prime = first InformationTransferCapability USI = first BearerCapability USI prime = second BearerCapability		
SIP Parameter values	**INVITE:** PSTN XML MIME body <?xml version="1.0" encoding="utf-8"?> PSTN **BearerCapability** BCoctet3 CodingStandard>00< InformationTransferCapability>**00000**< **or** InformationTransferCapability>**10000**< …. **BearerCapability** BCoctet3 CodingStandard>00< InformationTransferCapability>**10001**< ….		
Comments	SDP: m line contains as the first codec CLEARMODE and as the second codec a G.711 codec		
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_101_032	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.5a
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Fall Back connection type is not sent		
Test Purpose	Ensure that on receipt of two BearerCapability elements in a INVITE PSTN XML MIME body • The first stated codec in the SDP m line is the equivalent to the second BearerCapability element, the BearerCapability element is mapped into the User Service prime (USI prime) parameter in the sent IAM, the TMR is set according the second PSTN XML InformationTransferCapability value • The second stated codec in the SDP m line is the equivalent to the first BearerCapability element, the BearerCapability element is mapped into the User Service Information (USI) parameter in the sent IAM, the TMR prime is set according the first PSTN XML InformationTransferCapability value Ensure that the INVITE with encapsulated IAM does not contain the Fallback connection type if the succeeding network does not support the Fallback connection type: • TMR = Speech or audio 3,1 kHz • USI = Speech or audio 3,1 kHz • A TMR prime parameter is not present A USI prime is not present		
ISUP Parameter values	**IAM:** TMR = second InformationTransferCapability TMR prime = first InformationTransferCapability USI = first BearerCapability USI prime = second BearerCapability		
SIP Parameter values	**INVITE:** PSTN XML MIME body <?xml version="1.0" encoding="utf-8"?> PSTN **BearerCapability** BCoctet3 CodingStandard>00< InformationTransferCapability>**00000**< **or** InformationTransferCapability>**10000**< **BearerCapability** BCoctet3 CodingStandard>00< InformationTransferCapability>**10001**< SDP: m=audio <proper port number> RTP/AVP CLEARMODE 8 …		
Comments	SDP: m line contains as the first codec CLEARMODE and as the second codec a G.711 codec Configuration: the succeeding network does not support the Fall back connection type		
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_101_033	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.9
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.1/8		
Test Purpose name	Max-Forwards received, HOP is sent		
Test Purpose	Ensure that on receipt of the Max-Forwards header, the value is mapped into the Hop counter. The value of the HOP is created from the Max-Forwards header value by applying a given factor		
ISUP Parameter values			
SIP Parameter values			
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_101_034	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2.10
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator		
Test Purpose	Ensure that on receipt of a PSTN XML attachment in an INVITE request containing a ProgressIndicator element, this information is mapped into a Progress Indicator IE present in an ISUP Access Transport Parameter the Progress description value is derived from the PSTN XML ProgressDescription element		
ISUP Parameter values	**IAM:** ATP Progress Indicator Progress Description=**PI_value**		
SIP Parameter values	**INVITE:** <?xml version="1.0" encoding="utf-8"?> PSTN **ProgressIndicator** ProgressOctet3 CodingStandard>00< Location>0000< ProgressOctet4 ProgressDescription>**PI_value**<		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
		Apply post test routine	

Table 6.1.1.1-9: Mapping of PSTN XML ProgressIndicator to ISUP ATP Progress Indicator

PI_value	XML ProgressIndicator ProgressDescription	ATP Progress Indicator value
PI_VA_1	'0000001'	Call is not end-to-end ISDN; further call progress information may be available in-band
PI_VA_2	'0000010'	Destination address is non-ISDN
PI_VA_3	'0000011'	Origination address is non-ISDN
PI_VA_4	'0000100'	Call has returned to the ISDN
PI_VA_5	'0000101'	Interworking has occurred and has resulted in a telecommunication service change
PI_VA_6	'0001000'	In-band information or an appropriate pattern is now available

TP number	TP_101_035	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2A.1.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.2/1		
Test Purpose name	Number Portability Separate Directory Number Addressing Method is used. A Called Directory Number is present in the sent IAM		
Test Purpose	Ensure that on receipt of an initial INVITE request containing the **rn** and **npdi** parameters in the request line, an INVITE with encapsulated IAM is sent. The **Called Party Number** is set to: • **Nature of address indicator:** "Network routing number in national (significant) number format" **or** "National (significant) number" **or** "Network routing number in network specific number format" • **Internal Network Number Indicator:** routing to internal network number not allowed • **Numbering plan Indicator:** ISDN (Telephony) numbering plan (*Recommendation E.164 [i.1]*) • **Address Signal:** derived from the user info of the request URI the country code is removed. The **Called Directory Number** is set to: • **Nature of address indicator** "National (significant) number" • **Internal Network Number Indicator:** routing to internal network number not allowed • **Numbering plan Indicator:** ISDN (Telephony) numbering plan (*Recommendation E.164 [i.1]*) • **Address Signal:** derived from the rn parameter if the Number Portability Routing Number contains an E164 number the country code is removed else the address digits applied unchanged.		
ISUP Parameter values	**IAM:** Called party number, Called Directory Number		
SIP Parameter values	**INVITE:** Request URI: sip: <called number>; rn=<Number Portability Routing Number>; npdi **INVITE (IAM):** Request URI: sip: <called number>;		
Comments	The URI parameters can be received in arbitrary order		
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_101_036	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2A.1.2
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.2/2		
Test Purpose name	Number Portability Concatenated Addressing Method is used. The called party number is present		
Test Purpose	Ensure that on receipt of an initial INVITE request containing the **rn** and **npdi** parameters in the request line, an INVITE with encapsulated IAM is sent. The **Called Party Number** is set to: • **Nature of address indicator:** "Network routing number concatenated with called directory number" **or** "National (significant) number" • **Internal Network Number Indicator:** routing to internal network number not allowed • **Numbering plan Indicator:** ISDN (Telephony) numbering plan (*Recommendation E.164 [i.1]*) • **Address Signal:** derived from the rn parameter if the Number Portability Routing Number contains an E164 number the country code is removed else the address digits applied unchanged. The called party number derived from the user info is appended except the country code.		
ISUP Parameter values	**IAM:** Called party number		
SIP Parameter values	**INVITE:** Request URI: sip: <called number>; rn=<Number Portability Routing Number>; npdi **INVITE (IAM):** Request URI: sip: <called number>;		
Comments	The URI parameters can be received in arbitrary order		
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_101_037	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2A.1.3
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 7.2.2/3		
Test Purpose name	Number Portability Separate Network Routing Number Addressing Method is used. A Network Routing Number is present in the sent IAM		
Test Purpose	Ensure that on receipt of an initial INVITE request containing the **rn** and **npdi** parameters in the request line, an INVITE with encapsulated IAM is sent. The **Called Party Number** is set to: • **Nature of address indicator:** "National (significant) number" • **Internal Network Number Indicator:** routing to internal network number not allowed • **Numbering plan Indicator:** ISDN (Telephony) numbering plan (*Recommendation E.164 [i.1]*) • **Address Signal:** derived from the user info of the request URI the country code is removed. The **Network Routing Number** is set to: • **Nature of address indicator:** "Network routing number in national (significant) number format" **or** "Network routing number in network specific number format" • **Numbering plan Indicator:** ISDN (Telephony) numbering plan (*Recommendation E.164 [i.1]*) • **Address Signal:** derived from the rn parameter if the Number Portability Routing Number contains an E164 number the country code is removed else the address digits applied unchanged.		
ISUP Parameter values	**IAM:** Called party number, Network Routing Number		
SIP Parameter values	**INVITE:** Request URI: sip: <called number>; rn=<Number Portability Routing Number>; npdi **INVITE (IAM):** Request URI: sip: <called number>;		
Comments	The URI parameters can be received in arbitrary order		
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_101_038	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2A.2
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.2/1 OR PICS 6.2.2/2 OR PICS 6.2.2/3 AND PICS 6.2.2/4		
Test Purpose name	Sending of Number Portability Forward Information		
Test Purpose	Ensure that on receipt of an initial INVITE request containing the **npdi** parameters in the request line, an INVITE with encapsulated IAM is sent. The INVITE with encapsulated IAM contains the Number Portability Forward Information parameter set according the following roles • If the Number Portability Database Dip Indicator is present, and there is no Number Portability Routing Number, set to "number portability query done for called number, non-ported called subscriber".		
ISUP Parameter values	**IAM:** Number Portability Forward Information		
SIP Parameter values	**INVITE:** Request URI: sip: <called number>; npdi **INVITE (IAM):** Request URI: sip: <called number>;		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_101_039	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2A.2
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.2/1 OR PICS 6.2.2/2 OR PICS 6.2.2/3 AND PICS 6.2.2/4		
Test Purpose name	Sending of Number Portability Forward Information		
Test Purpose	Ensure that on receipt of an initial INVITE request containing the **rn** and **npdi** parameters in the request line, an INVITE with encapsulated IAM is sent. The INVITE with encapsulated IAM contains the Number Portability Forward Information parameter set according the following roles • If the Number Portability Database Dip Indicator is present, and a Number Portability Routing Number is present, set to "number portability query done for called number, ported called subscriber".		
ISUP Parameter values	**IAM:** Number Portability Forward Information		
SIP Parameter values	**INVITE:** Request URI: sip: <called number>; rn=<Number Portability Routing Number>; npdi **INVITE (IAM):** Request URI: sip: <called number>;		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_101_040	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2A.2
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.2/1 OR PICS 6.2.2/2 OR PICS 6.2.2/3 AND PICS 6.2.2/4		
Test Purpose name	Sending of Number Portability Forward Information		
Test Purpose	Ensure that on receipt of an initial INVITE request containing the **rn** parameters in the request line, an INVITE with encapsulated IAM is sent. The INVITE with encapsulated IAM contains the Number Portability Forward Information parameter set according the following roles • If there is no Number Portability Database Dip Indicator, set to "number portability query not done for called number"		
ISUP Parameter values	**IAM:** Number Portability Forward Information		
SIP Parameter values	**INVITE:** Request URI: sip: <called number>; rn=<Number Portability Routing Number> **INVITE (IAM):** Request URI: sip: <called number>;		
Comments			
Message flows	**SIP NNI** / **MGCF** / **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_101_041	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.2B.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_ SIP-INVITE request /		
Selection criteria	PICS 6.2.2/5 AND PICS 6.2.2/6		
Test Purpose name	Request URI cic parameter is mapped into IAM TNS parameter		
Test Purpose	Ensure that on receipt of an initial INVITE request containing the **cic** parameter in the request line, an INVITE with encapsulated IAM is sent. The Transit network selection parameter is set to: • **Type of network identification**: CCITT-standardized identification or national network identification. • **Network identification plan**: according value of Type of network identification • **Network identification**: digits derived from the carrier identification code value of the cic parameter		
ISUP Parameter values	**IAM:** Transit network selection BICC ?		
SIP Parameter values	**INVITE:** Request URI: sip: <called number>; cic=< Carrier identification code > **INVITE (IAM):** Request URI: sip: <called number>;		
Comments			
Message flows	**SIP NNI** / **MGCF** / **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

Table 6.1.1.1-10: Void

6.1.1.2 Sending of UPDATE

TP number	TP_102_001	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.3
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_COT/		
Selection criteria	PICS 6.1.1/1 AND PICS 6.2.1/1 AND NOT PICS 6.2.1/4		
Test Purpose name	Sending of UPDATE		
Test Purpose	If the INVITE with an encapsulated IAM has already been sent, the UPDATE message shall be sent, when all of the following conditions have been met: - the requested preconditions (if any) in the IMS network have been met - a possible outstanding continuity check procedure is successfully performed on the outgoing circuit		
ISUP Parameter values	**IAM:** Nature of connection indicator = "Continuity check performed on a previous circuit" or "Continuity check required on this circuit"		
SIP Parameter values	**INVITE:** Require: precondition SDP a=curr:qos local none a=curr:qos remote none a=des:qos mandatory local sendrecv a=des:qos none remote sendrecv 183: Require: 100rel SDP a=curr:qos local none a=curr:qos remote none a=des:qos mandatory local sendrecv a=des:qos mandatory remote sendrecv a=conf:qos remote sendrecv UPDATE: SDP a=curr:qos local sendrecv a=curr:qos remote none a=des:qos mandatory local sendrecv a=des:qos mandatory remote sendrecv 200 OK UPDATE SDP a=curr:qos local sendrecv a=curr:qos remote sendrecv a=des:qos mandatory local sendrecv a=des:qos mandatory remote sendrecv		
Comments			

Message flows

SIP NNI		**MGCF**		**SIP-I**
INVITE	→		→	INITE (IAM)
100 Trying	←		←	100 Trying
183 Session Progress	←		←	183 Session Progress
PRACK	→		→	PRACK
200 OK (PRACK)	←		←	200 OK (PRACK)
UPDATE	→		→	UPDATE
200 OK (UPDATE)	←		←	200 OK (UPDATE)
Apply post test routine				

TP number	TP_102_002	**Reference**	[2], clause 7.3.3.1.3
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_COT/		
Selection criteria	PICS 6.1.1/2 AND PICS 6.2.1/1 AND NOT PICS 6.2.1/4		
Test Purpose name	Sending of BICC UPDATE		
Test Purpose	If the INVITE with encapsulate IAM has already been sent, the UPDATE message shall be sent, when all of the following conditions have been met: - the requested preconditions (if any) in the IMS network have been met		
ISUP Parameter values	**IAM:** Nature of connection indicator = "COT to be expected"		
SIP Parameter values	**INVITE:** Require: precondition SDP a=curr:qos local none a=curr:qos remote none a=des:qos mandatory local sendrecv a=des:qos none remote sendrecv 183: Require: 100rel SDP a=curr:qos local none a=curr:qos remote none a=des:qos mandatory local sendrecv a=des:qos mandatory remote sendrecv a=conf:qos remote sendrecv UPDATE: SDP a=curr:qos local sendrecv a=curr:qos remote none a=des:qos mandatory local sendrecv a=des:qos mandatory remote sendrecv 200 OK UPDATE SDP a=curr:qos local sendrecv a=curr:qos remote sendrecv a=des:qos mandatory local sendrecv a=des:qos mandatory remote sendrecv		
Comments			

Message flows

SIP NNI		**MGCF**		**SIP-I**
INVITE	→		→	INVITE (IAM)
100 Trying	←		←	100 Trying
183 Session Progress	←		←	183 Session Progress
PRACK	→		→	PRACK
200 OK (PRACK)	←		←	200 OK (PRACK)
UPDATE	→		→	UPDATE
200 OK (UPDATE)	←		←	200 OK (UPDATE)
Apply post test routine				

6.1.1.3 Receipt of multiple INVITE request and in-dialog SIP INFO request

TP number	TP_103_001	**Reference**	[1], clause 7.2.3 [2] 7.2.3.1.3A.2
TSS reference	SIP-ISUP/Basic call/ Receipt of in-dialog SIP INFO requests		
Selection criteria	PICS 6.2.3/1		
Test Purpose name	Receipt of INFO request		
Test Purpose	If the MGCF supports overlap signalling from the preceding IMS node and the first incoming SIP INVITE request does not provide a complete number, then the MGCF shall not forward this first SIP INVITE request and additional SIP INFO requests which are used by the MGCF to collect all digits required to identify the called subscriber.		
ISUP Parameter values			
SIP Parameter values	**INVITE:** Supported: 100rel 183 Session Progress: Supported: 100rel or Required: 100rel INFO: Content-Type: application/x-session-info SubsequentDigit: <additional digits>		
Comments			

Message flows

SIP NNI		MGCF		SIP-I
INVITE	→			
484 Address Incomplete	←			
ACK	→			
INVITE	→			
183 Session Progress	←			
INFO	→			
200 OK (INFO)	←			
INFO	→		→	INVITE (IAM)
200 OK (INFO)	←			
180 Ringing(3)	←		←	180 Ringing(ACM)
		Apply post test routine		

TP number	TP_103_002	**Reference**	[1], clause 7.2.3 [2], clause 7.2.3.1.3A.3
TSS reference	SIP NNI - SIP-I/Basic call/ Receipt of multiple INVITE request		
Selection criteria	PICS 6.2.3/2		
Test Purpose name	Receipt of multiple INVITE request		
Test Purpose	If the MGCF supports overlap signalling from the preceding IMS node and the first incoming SIP INVITE request does not provide a complete number, then the MGCF shall not forward this first SIP INVITE request and additional SIP INVITE requests which are used by the MGCF to collect all digits required to identify the called subscriber.		
ISUP Parameter values			
SIP Parameter values			
Comments			

Message flows

SIP NNI		MGCF		SIP-I
INVITE(1)	→			
CASE A				
INVITE(2)	→			
484 Address Incomplete(1)	←			
ACK	→			
INVITE(3)	→		→	INVITE (IAM)
484 Address Incomplete(2)	←			
180 Ringing(3)	←		←	180 Ringing(ACM)
CASE B				
484 Address Incomplete(1)	←			
ACK	→			
INVITE(2)	→			
484 Address Incomplete(2)	←			
ACK	→			
INVITE(3)	→		→	INVITE (IAM)
180 Ringing(3)	←		←	180 Ringing (ACM)
Apply post test routine				

6.1.1.4 Sending of 18x provisional responses

TP number	TP_104_001	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria			
Test Purpose name	Sending of 180 Ringing after 180 Ringing with a encapsulated ACM was received		
Test Purpose	The SUT shall send the SIP 180 Ringing when receiving the following messages: - 180 Ringing (ACM) with Called party's status indicator set to subscriber free		
ISUP Parameter values	**ACM:** BCI Called party status indicator = subscriber free		
SIP Parameter values			
Comments			

Message flows

SIP NNI		MGCF		SIP-I
INVITE	→		→	INVITE (IAM)
100 Trying	←		←	100 Trying
180 Ringing	←		←	180 Ringing (ACM)
Apply post test routine				

TP number	TP_104_002	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria			
Test Purpose name	Sending of 180 Ringing after CPG was received		
Test Purpose	The SUT shall send the SIP 180 Ringing when receiving the following messages: - 180 Ringing (CPG) with Event indicator set to ALERTING.		
ISUP Parameter values	**ACM:** BCI Called party status indicator = no indication **CPG:** Event indicator = ALERTING		
SIP Parameter values			
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← ← 183 Session Progress (ACM - no indication) 180 Ringing ← ← 180 Ringing CPG(ALERTING) **Apply post test routine**		

TP number	TP_104_003	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/9		
Test Purpose name	ACM received, P-Earl-Media header present in 180		
Test Purpose	Ensure that on receipt of a 180 Ringing with an encapsulated ACM subscriber free a 180 Ringing is sent. In the 180 Ringing a P-Early-Media header is present indicating authorization of early media		
ISUP Parameter values	**IAM:** 3,1 kHz audio **ACM:** BCI Called party status indicator = free		
SIP Parameter values	**INVITE:** Supported: 100rel P-Early-Media: supported 180 ringing P-Early-Media: < authorization of early media>		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 180 Ringing ← ← 180 Ringing (ACM -free) **Apply post test routine**		

TP number	TP_104_004	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/10		
Test Purpose name	Provide media in a Call-Info header field, or an Alert-Info header field in a 180		
Test Purpose	Ensure that the SUT is able to provide media instead of the in-band media received from the PSTN in a Call-Info header field, or an Alert-Info header field present in a 180 Ringing		
ISUP Parameter values	**ACM:** BCI Called party status indicator = subscriber free		
SIP Parameter values	180: Call-Info: <Media resource>; or Alert-Info: <Media resource>		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← ← 100 Trying 180 Ringing ← ← 180 Ringing (ACM - free) **Apply post test routine**		

TP number	TP_104_005	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4A
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/10		
Test Purpose name	Provide media in a Call-Info header field, or an Alert-Info header field in a 183		
Test Purpose	Ensure that the SUT is able to provide media instead of the in-band media received from the PSTN in a Call-Info header field, or an Alert-Info header field present in a 183 Session Progress		
ISUP Parameter values	**ACM:** BCI Called party status indicator = no indication		
SIP Parameter values	183: Call-Info: <Media resource>; or Alert-Info: <Media resource>		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← ← 100 Trying 183 Session Progress ← ← 183 Session Progress ACM(no indication) **Apply post test routine**		

TP number	TP_104_006	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of Progress Indicator received in a ACM/CPG		
Test Purpose	Ensure that on receipt of an 18x Message with encapsulated ACM called party status subscriber free or a CPG event indicator ALERTING, a 180 Ringing is sent or 183 Session progress is sent . The Progress Indicator IE contained in the ACM ATP or CPG ATP parameter is mapped into the PSTN XML element in the 180 as indicated in table 6.1.1.4-2. • Progress Indicator received in an ACM called party status subscriber free 180 Ringing is sent in the PSTN XML element contains the ProgressIndicator value PI_value • Progress Indicator received in an CPG Event indicator ALERTING 180 Ringing is sent in the PSTN XML element contains the ProgressIndicator value PI_value		
ISUP Parameter values	**ACM:** CASE A BCi Called party status = subscriber free CASE B BCi Called party status = no indication oBCi 'inband info available' **CPG:** ATP contains a Progress Indicator IE		
SIP Parameter values	180: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet3 CodingStandard>00< Location<yyyy> ProgressOctet4 ProgressDescription>**PI_value**< 183: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet3 CodingStandard>00< Location<yyyy> ProgressOctet4 ProgressDescription>**PI_value**<g		
Comments			

Message flows

SIP NNI		MGCF		SIP-I
INVITE	→		→	INVITE (IAM)
CASE A				
180 Ringing	←		←	180 Ringing (ACM free) ATP contains a Progress Indicator IE)
CASE B				
183 Session Progress	←		←	183 Session Progress(ACM – no indication)
180 Ringing	←		←	CPG (ATP contains a Progress Indicator IE)
Apply post test routine				

TP number	TP_104_007	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of High layer compatibility received in a 18x Message with encapsulated ACM/CPG		
Test Purpose	Ensure that on receipt of an18x Message with encapsulated ACM called party status subscriber free or a 183 with a CPG event indicator ALERTING, a 180 Ringing is sent. The High layer compatibility IE contained in the ACM ATP or CPG ATP parameter is mapped into the HighLayerCompatibility PSTN XML element in the 180 as indicated in table 6.1.1.4-3. • High layer compatibility received in an ACM called party status subscriber free 180 Ringing is sent in the PSTN XML element contains the HighLayerCompatibility value HLC_value • High layer compatibility received in an CPG Event indicator ALERTING 180 Ringing is sent in the PSTN XML element contains the HighLayerCompatibility value HLC_value		
ISUP Parameter values	**ACM:** CASE A BCi Called party status = subscriber free ATP contains a High layer compatibility IE CASE B BCi Called party status = no indication oBCi 'inband info available' **CPG:** ATP contains a High layer compatibility IE		
SIP Parameter values	180: <?xml version="1.0" encoding="utf-8"?> PSTN HighLayerCompatibility HLOctet3 CodingStandard>00< Interpretation>100< PresentationMethod>01< HLOctet4 HighLayerCharacteristics>**HLC_value**<		
Comments			

Message flows

SIP NNI		MGCF		SIP-I
INVITE	→		→	INMVITE (IAM)
CASE A				
180 Ringing	←		←	180 Ringing (ACM) (ATP contains HLC)
CASE B				
183 Session Progress	←		←	183 Session Progress (ACM)
180 Ringing	←		←	180 Ringing (CPG) (ATP contains HLC)
		Apply post test routine		

TP number	TP_104_008	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of Low layer compatibility received in a 18x with encapsulated ACM/CPG		
Test Purpose	Ensure that on receipt of an 18x Message with an encapsulated ACM called party status subscriber free or encapsulated CPG event indicator ALERTING, a 180 Ringing is sent. The Low layer compatibility IE contained in the ACM ATP or CPG ATP parameter is mapped into the LowLayerCompatibility PSTN XML element in the 180 as indicated in table 6.1.1.4-4. • Low layer compatibility received in an ACM called party status subscriber free 180 Ringing is sent in the PSTN XML element contains the LowLayerCompatibility value ITC_value • Low layer compatibility received in an CPG Event indicator ALERTING 180 Ringing is sent in the PSTN XML element contains the LowLayerCompatibility value ITC_value		
ISUP Parameter values	**ACM:** CASE A BCi Called party status = subscriber free ATP contains a LLC IE CASE B BCi Called party status = no indication oBCi 'inband info available' **CPG:** ATP contains a Low layer compatibility IE		
SIP Parameter values	180: <?xml version="1.0" encoding="utf-8"?> PSTN LowLayerCompatibility> LLOctet3> CodingStandard>00< InformationTransferCapability>ITC_value< LLOctet4> TransferMode>00< InformationTransferRate>10000<		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	CASE A				
	180 Ringing	←		←	180 Ringing (ACM) (ATP contains LLC)
	CASE B				
	183 Session Progress	←		←	183 Session Progress (ACM)
	180 Ringing	←		←	180 Ringing CPG (ATP contains LLC)
	Apply post test routine				

TP number	TP_104_009	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of Bearer Capability received in a18x with encapsulated ACM/CPG		
Test Purpose	Ensure that on receipt of an 18x message with encapsulated ACM called party status subscriber free or a CPG event indicator ALERTING, a 180 Ringing is sent. The Bearer Capability IE contained in the ACM ATP or CPG ATP parameter is mapped into the BearerCapability PSTN XML element in the 180 as indicated in table 6.1.1.4-5. • Bearer Capability received in an ACM called party status subscriber free 180 Ringing is sent in the PSTN XML element contains the BearerCapability value ITC_value • Bearer Capability received in an CPG Event indicator ALERTING 180 Ringing is sent in the PSTN XML element contains the BearerCapability value ITC_value		
ISUP Parameter values	**ACM:** CASE A BCi Called party status = subscriber free ATP contains a BC IE CASE B BCi Called party status = no indication oBCi 'inband info available' **CPG:** ATP contains a Bearer Capability IE		
SIP Parameter values	180: <?xml version="1.0" encoding="utf-8"?> PSTN BearerCapability BCoctet3 CodingStandard>00< InformationTransferCapability>ITC_value< BCoctet4 TransferMode>00< InformationTransferRate>10000< BCoctet5> Layer1Identification>01< UserInfoLayer1Protocol>00011<		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	CASE A				
	180 Ringing	←		←	180 Ringing (ACM – free) (ACM with ATP contains a Bearer Capability IE)
	CASE C				
	183 Session Progress	←		←	183 Session Progress (ACM – no indication)
	180 Ringing	←		←	180 (CPG with ATP contains a Bearer Capability IE)
	Apply post test routine				

TP number	TP_104_010	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of Backward call indicator into PSTN XML ProgressIndicator element value 1 sent in 180		
Test Purpose	Ensure that on receipt of a 180 Ringing with encapsulated ACM and the Backward call indicator ISDN User Part indicator is set to ISDN User Part not used all the way, a 180 Ringing is sent. A PSTN XML ProgressIndicator element is present the value is set to No 1 (Call is not end-to-end ISDN: "further progress information may be available in-band")		
ISUP Parameter values	**ACM:** BCI ISDN User Part indicator = ISDN User Part not used all the way		
SIP Parameter values	180 Ringing <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator … ProgressOctet4 ProgressDescription>**0000001**<		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←	←	100 Trying
	180 Ringing ←	←	180 Ringing (ACM)
	Apply post test routine		

TP number	TP_104_011	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of Backward call indicator into PSTN XML ProgressIndicator element value 2 sent in 180		
Test Purpose	Ensure that on receipt of a 180 Ringing with encapsulated ACM and the Backward call indicator ISDN User Part indicator is set to ISDN User Part used all the way and ISDN access indicator = Terminating access non-ISDN, a 180 Ringing is sent. A PSTN XML ProgressIndicator element is present the value is set to No 2 (Destination address is non-ISDN)		
ISUP Parameter values	**ACM:** BCI ISDN User Part indicator = ISDN User Part used all the way ISDN access indicator = Terminating access non-ISDN		
SIP Parameter values	180 Ringing <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator … ProgressOctet4 ProgressDescription>**0000010**<		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←	←	100 Trying
	180 Ringing ←	←	180 Ringing (ACM)
	Apply post test routine		

TP number	TP_104_012	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of Backward call indicator into PSTN XML ProgressIndicator element value 7 sent in 180		
Test Purpose	Ensure that on receipt of a 180 Ringing with encapsulated ACM and the Backward call indicator ISDN User Part indicator is set to ISDN User Part used all the way and ISDN access indicator = Terminating access ISDN, a 180 Ringing is sent. A PSTN XML ProgressIndicator element is present the value is set to No 7		
ISUP Parameter values	**ACM:** BCI ISDN User Part indicator = ISDN User Part used all the way ISDN access indicator = Terminating access ISDN		
SIP Parameter values	180 Ringing <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator … ProgressOctet4 ProgressDescription>**0000111**<		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	IAM
	100 Trying ←	←	100 Trying
	180 Ringing ←	←	180 Ringing (ACM)
	Apply post test routine		

TP number	TP_104_013	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of optional Backward call indicator into PSTN XML ProgressIndicator element value 8 sent in 180		
Test Purpose	Ensure that on receipt of a 180 Ringing with ACM and the optional Backward call indicator In-band information indicator in-band information or an appropriate pattern is now available, a 180 Ringing is sent. A PSTN XML ProgressIndicator element is present the value is set to No 8		
ISUP Parameter values	**ACM:** oBCI In-band information indicator in-band information or an appropriate pattern is now available		
SIP Parameter values	180 Ringing <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator … ProgressOctet4 ProgressDescription>**0001000**<		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←	←	100 Trying
	180 Ringing ←	←	180 Ringing (ACM)
	Apply post test routine		

TP number	TP_104_014	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5 AND PICS 6.2.4/1 AND PICS 6.2.4/8		
Test Purpose name	The SUT performs Fall back		
Test Purpose	Ensure that on receipt of an INVITE request and the subsequent ISUP/BICC network is not able to perform Fall back, Fall back is performed in the SUT: The TMR in the sent INVITE (IAM) is set to 'speech' or '3,1 kHz audio' USI is copied from the first BearerCapability element received in the PSTN XML. Upon an ACM is received a 180 Ringing is sent		
ISUP Parameter values			
SIP Parameter values	**INVITE:** PSTN XML MIME body <?xml version="1.0" encoding="utf-8"?> PSTN **BearerCapability** BCoctet3 CodingStandard>00< InformationTransferCapability>**00000**< **or** InformationTransferCapability>**10000**< …. **BearerCapability** BCoctet3 CodingStandard>00< InformationTransferCapability>**10001**< …. 180 Ringing <?xml version="1.0" encoding="utf-8"?> PSTN **ProgressIndicator** … ProgressOctet4 ProgressDescription>**0000101**< **BearerCapability** BCoctet3 CodingStandard>00< InformationTransferCapability>**00000**< **or** InformationTransferCapability>**10000**< ….		
Comments	Fallback is performed in the SUT		
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← ← 100 Trying 180 Ringing ← ← 180 Ringing (ACM) **Apply post test routine**		

TP number	TP_104_015	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5 AND PICS 6.2.4/1 AND PICS 6.2.4/8		
Test Purpose name	Receipt of TMU speech, no BC present in ATP		
Test Purpose	Ensure that on receipt of a Transmission medium used parameter set to speech in the 180 Ringing with an ACM, a 180 Ringing is sent and a PSTN XML BearerCapability element is present the InformationTransferCapability is set to Speech		
ISUP Parameter values	**ACM:** Transmission medium used = speech		
SIP Parameter values	180 Ringing <?xml version="1.0" encoding="utf-8"?> PSTN BearerCapability BCoctet3 CodingStandard>00< InformationTransferCapability>00000< …		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←	←	100 Trying
	180 Ringing ←	←	180 Ringing (ACM)
	Apply post test routine		

TP number	TP_104_016	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5 AND PICS 6.2.4/1 AND PICS 6.2.4/8		
Test Purpose name	Receipt of TMU 3,1 kHz audio, no BC present in ATP		
Test Purpose	Ensure that on receipt of a Transmission medium used parameter set to 3,1 kHz audio in the 180 Ringing with encapsulated ACM, a 180 Ringing is sent and a PSTN XML BearerCapability element is present the InformationTransferCapability is set to 3,1 kHz audio		
ISUP Parameter values	**ACM:** Transmission medium used = 3,1 kHz audio		
SIP Parameter values	180 Ringing <?xml version="1.0" encoding="utf-8"?> PSTN BearerCapability BCoctet3 CodingStandard>00< InformationTransferCapability>10000< …		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←	←	100 Trying
	180 Ringing ←	←	180 Ringing (ACM)
	Apply post test routine		

TP number	TP_104_017	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5 AND PICS 6.2.4/1 AND PICS 6.2.4/8		
Test Purpose name	Receipt of TMU, BC present in ATP PSTN XML BearerCapability sent in 180		
Test Purpose	Ensure that on receipt of a Transmission medium used parameter and in the ATP a Bearer Capability IE in the 180 Ringing with encapsulated ACM, a 180 Ringing is sent and a PSTN XML BearerCapability element is present the InformationTransferCapability is set as indicated in table 6.1.1.4-1		
ISUP Parameter values	**ACM:** Transmission medium used, ATP Bearer Capability IE		
SIP Parameter values	180 Ringing <?xml version="1.0" encoding="utf-8"?> PSTN BearerCapability BCoctet3 CodingStandard>00< InformationTransferCapability>ITC_value< …		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←	←	100 Trying
	180 Ringing ←	←	180 Ringing (ACM)
	Apply post test routine		

TP number	TP_104_018	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5 AND PICS 6.2.4/1 AND PICS 6.2.4/8		
Test Purpose name	Receipt of TMU, BC present in ATP PSTN XML BearerCapability sent in 183		
Test Purpose	Ensure that on receipt of a Transmission medium used parameter and in the ATP a Bearer Capability IE in the 180 Ringing with encapsulated ACM, a 183 Session Progress is sent and a PSTN XML BearerCapability element is present the InformationTransferCapability is set as indicated in table 6.1.1.4-1		
ISUP Parameter values	**ACM:** Transmission medium used, ATP Bearer Capability IE BCi Called party status = no indication		
SIP Parameter values	183 Session Progress <?xml version="1.0" encoding="utf-8"?> PSTN BearerCapability BCoctet3 CodingStandard>00< InformationTransferCapability>ITC_value< …		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←	←	100 Trying
	183 Session Progress ←	←	183 Session Progress (ACM)
	Apply post test routine		

Table 6.1.1.4-1: Mapping of TMU and Bearer capability IE to PSTN XML BearerCapability

ITC_value	**← 180 Ringing or 183 Session Progress**	**←ACM/CPG**	
ITC_value_VA_01	PSTN XML BearerCapability = "Speech"	TMU ATP	"Speech" BC "speech"
ITC_value_VA_02	PSTN XML BearerCapability = "Speech"	TMU ATP	"3,1 kHz audio" BC "speech"
ITC_value_VA_03	PSTN XML BearerCapability = "3,1 kHz audio"	TMU ATP	"Speech " BC "3,1 kHz audio"
ITC_value_VA_04	PSTN XML BearerCapability = "3,1 kHz audio"	TMU ATP	"3,1 kHz audio" BC "3,1 kHz audio"

TP number	TP_104_019	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4A
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	NOT PICS 6.2.1/5 AND NOT PICS 6.2.1/9		
Test Purpose name	ACM no indication received, no SIP response is sent		
Test Purpose	Ensure that on receipt of an early 183 Session Progress with encapsulated ACM no SIP response is sent if the INVITE does not contain a P-Early-Media header		
ISUP Parameter values	**IAM:** 3,1 kHz audio **ACM:** BCI Called party status indicator = no indication		
SIP Parameter values			
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE(IAM) ← 183 Session Progress(ACM(no indication)) **Apply post test routine**		

TP number	TP_104_020	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4A
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/9		
Test Purpose name	ACM received, P-Earl-Media header present in 183		
Test Purpose	Ensure that on receipt 183 Session Progress with an encapsulated early ACM a 183 Session Progress is sent. In the 183 session Progress a P-Early-Media header is present indicating authorization of early media		
ISUP Parameter values	**IAM:** 3,1 kHz audio **ACM:** BCI Called party status indicator = no indication		
SIP Parameter values	**INVITE:** Supported: 100rel P-Early-Media: supported 183 Session Progress P-Early-Media: < authorization of early media>		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 183 Session Progress ← ← 183 Session Progress ACM (no indication) **Apply post test routine**		

TP number	TP_104_021	**Reference**	[1], clause 7.2.1 [2], clauses 7.2.3.1.4A, table, 7.2.3.1.4A.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/9		
Test Purpose name	CPG received, P-Earl-Media header present in 183		
Test Purpose	Ensure that on receipt of CPG containing an optional backward call indicator set to In-band info or an appropriate pattern is now available a 183 Session Progress is sent. In the 183 session Progress a P-Early-Media header is present indicating authorization of early media		
ISUP Parameter values	**IAM:** 3,1 kHz audio **CPG:** oBCi In-band info or an appropriate pattern is now available		
SIP Parameter values	**INVITE:** Supported: 100rel P-Early-Media: supported 183 Session Progress P-Early-Media: < authorization of early media>		
Comments			

Message flows

SIP NNI		MGCF		SIP-I
INVITE	→		→	INVITE (IAM)
183 Session Progress	←		←	183 Session Progress (ACM)
183 Session Progress	←		←	183 Session Progress (CPG)

Apply post test routine

TP number	TP_104_022	**Reference**	[1], clause 7.2.1 [2], clauses 7.2.3.1.4A, table, 7.2.3.1.4A.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of optional Backward call indicator in encapsulated ACM into PSTN XML ProgressIndicator element value 8 sent in a 183		
Test Purpose	Ensure that on receipt of a 183 Session Progress with encapsulated ACM and the optional Backward call indicator In-band information indicator in-band information or an appropriate pattern is now available, a 183 Session Progress is sent. A PSTN XML ProgressIndicator element is present the value is set to No 8		
ISUP Parameter values	**ACM:** BCi ISDN access indicator = Terminating access ISDN BCi Called party status indicator = no indication oBCI In-band information indicator in-band information or an appropriate pattern is now available		
SIP Parameter values	183 Session Progress <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator … ProgressOctet4 ProgressDescription>**0001000**<		
Comments			

Message flows

SIP NNI		MGCF		SIP-I
INVITE	→		→	INVITE (IAM)
183 Session Progress	←		←	183 Session Progress (ACM)

Apply post test routine

TP number	TP_104_023	**Reference**	[1], clause 7.2.1 [2], clauses 7.2.3.1.4A, table, 7.2.3.1.4A.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of Backward call indicator in encapsulated ACM into PSTN XML ProgressIndicator element value 1 sent in a 183		
Test Purpose	Ensure that on receipt of a 183 Session Progress with encapsulated ACM and the Backward call indicator ISDN User Part indicator is set to ISDN User Part not used all the way, a 183 Session Progress is sent. A PSTN XML ProgressIndicator element is present the value is set to No 1 (Call is not end-to-end ISDN: "further progress information may be available in-band")		
ISUP Parameter values	**ACM:** BCI ISDN User Part indicator = ISDN User Part not used all the way BCi Called party status indicator = no indication		
SIP Parameter values	183 Session Progress <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator … ProgressOctet4 ProgressDescription>**0000001**<		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	183 Session Progress ←	←	183 Session Progress (ACM)
	Apply post test routine		

TP number	TP_104_024	**Reference**	[1], clause 7.2.1 [2], clauses 7.2.3.1.4A, table, 7.2.3.1.4A.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of Backward call indicator in encapsulated ACM into PSTN XML ProgressIndicator element value 2 sent in a 183		
Test Purpose	Ensure that on receipt of a 183 Session Progress with encapsulated ACM and the Backward call indicator ISDN User Part indicator is set to ISDN User Part used all the way and ISDN access indicator = Terminating access non-ISDN, a 183 Session Progress is sent. A PSTN XML ProgressIndicator element is present the value is set to No 2 (Destination address is non-ISDN)		
ISUP Parameter values	**ACM:** BCI ISDN User Part indicator = ISDN User Part used all the way BCi ISDN access indicator = Terminating access non-ISDN BCi Called party status indicator = no indication		
SIP Parameter values	183 Session Progress <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator … ProgressOctet4 ProgressDescription>**0000010**<		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	183 Session Progress ←	←	183 Session Progress (ACM)
	Apply post test routine		

TP number	TP_104_025	**Reference**	[1], clause 7.2.1 [2], clauses 7.2.3.1.4A, table, 7.2.3.1.4A.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of Backward call indicator into in encapsulated ACM PSTN XML ProgressIndicator element value 7 sent in a 183		
Test Purpose	Ensure that on receipt of a 183 Session Progress with encapsulated ACM and the Backward call indicator ISDN User Part indicator is set to ISDN User Part used all the way and ISDN access indicator = Terminating access ISDN, a 183 Session Progress is sent. A PSTN XML ProgressIndicator element is present the value is set to No 7		
ISUP Parameter values	**ACM:** BCI ISDN User Part indicator = ISDN User Part used all the way BCi ISDN access indicator = Terminating access ISDN BCi Called party status indicator = no indication		
SIP Parameter values	183 Session Progress <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator … ProgressOctet4 ProgressDescription>**0000111**<		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	100 Trying	←			
	183 Session Progress	←		←	183 Session Progress (ACM)
	Apply post test routine				

TP number	TP_104_026	**Reference**	[1], clause 7.2.1 [2], clauses 7.2.3.1.4A, table, 7.2.3.1.4A.2
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of optional Backward call indicator in encapsulated CPG into PSTN XML ProgressIndicator element value 8 sent in a 183		
Test Purpose	Ensure that on receipt of a 183 Session Progress with encapsulated CPG and the optional Backward call indicator In-band information indicator in-band information or an appropriate pattern is now available, a 183 Session Progress is sent. A PSTN XML ProgressIndicator element is present the value is set to No 8		
ISUP Parameter values	**CPG:** Event indicator = Progress oBCI In-band information indicator in-band information or an appropriate pattern is now available		
SIP Parameter values	183 Session Progress <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator … ProgressOctet4 ProgressDescription>**0001000**<		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
				←	183 Session Progress (ACM no indication)
	183 Session Progress	←		←	183 Session Progress (CPG)
	Apply post test routine				

TP number	TP_104_027	**Reference**	[1], clause 7.2.1 [2], clauses 7.2.3.1.4A, table, 7.2.3.1.4A.2
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of Backward call indicator in encapsulated CPG into PSTN XML ProgressIndicator element value 1 sent in a 183		
Test Purpose	Ensure that on receipt of 183 Session Progress with an encapsulated a CPG and the Backward call indicator ISDN User Part indicator is set to ISDN User Part not used all the way, a 183 Session Progress is sent. A PSTN XML ProgressIndicator element is present the value is set to No 1 (Call is not end-to-end ISDN: "further progress information may be available in-band")		
ISUP Parameter values	**CPG:** Event indicator = Progress BCI ISDN User Part indicator = ISDN User Part not used all the way		
SIP Parameter values	183 Session Progress <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator … ProgressOctet4 ProgressDescription>**0000001**<		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE(IAM)
				←	183 Session Progress (ACM)
	183 Session Progress	←		←	183 Session Progress (CPG)
	Apply post test routine				

TP number	TP_104_028	**Reference**	[1], clause 7.2.1 [2], clauses 7.2.3.1.4A, table, 7.2.3.1.4A.2
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of Backward call indicator in encapsulated CPG into PSTN XML ProgressIndicator element value 2 sent in a 183		
Test Purpose	Ensure that on receipt of a 183 Session Progress with encapsulated CPG and the Backward call indicator ISDN User Part indicator is set to ISDN User Part used all the way and ISDN access indicator = Terminating access non-ISDN, a 183 Session Progress is sent. A PSTN XML ProgressIndicator element is present the value is set to No 2 (Destination address is non-ISDN)		
ISUP Parameter values	**CPG:** Event indicator = Progress or in-band information or an appropriate pattern is now available BCI ISDN User Part indicator = ISDN User Part used all the way BCi ISDN access indicator = Terminating access non-ISDN		
SIP Parameter values	183 Session Progress <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator … ProgressOctet4 ProgressDescription>**0000010**<		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
				←	183 Session Progress (ACM)
	183 Session Progress	←		←	183 Session Progress (CPG)
	Apply post test routine				

TP number	TP_104_029	**Reference**	[1], clause 7.2.1 [2], clauses 7.2.3.1.4A, table, 7.2.3.1.4A.2
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of Backward call indicator in encapsulated CPG into PSTN XML ProgressIndicator element value 7 sent in a 183		
Test Purpose	Ensure that on receipt of a 183 Session Progress with encapsulated CPG and the Backward call indicator ISDN User Part indicator is set to ISDN User Part used all the way and ISDN access indicator = Terminating access ISDN, a 183 Session Progress is sent. A PSTN XML ProgressIndicator element is present the value is set to No 7		
ISUP Parameter values	**CPG:** Event indicator = Progress or in-band information or an appropriate pattern is now available BCI ISDN User Part indicator = ISDN User Part used all the way BCi ISDN access indicator = Terminating access ISDN		
SIP Parameter values	183 Session Progress <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator … ProgressOctet4 ProgressDescription>**0000111**<		
Comments			

Message flows

SIP NNI		**MGCF**		**SIP-I**
INVITE	→		→	(INVITE) IAM
			←	183 Session Progress (ACM)
183 Session Progress	←		←	183 Session Progress (CPG)

Apply post test routine

TP number	TP_104_033	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4, table 7a.0f
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of Progress Indicator received in a ACM/CPG into 183		
Test Purpose	Ensure that on receipt of a 183 Message with encapsulated ACM called party status no indication or CPGevent indicator in-band information or an appropriate pattern is now available containing a ATP Progress Indicator, a 183 Session Progress is sent. The Progress Indicator IE contained in the ACM or CPG ATP parameter is mapped into the PSTN XML element in the 183 Session Progress as indicated in table 6.1.1.4-2. • Progress Indicator received in an ACM called party status user no indication a 183 Session Progress is sent in the PSTN XML element contains the ProgressIndicator value PI_value • Progress Indicator received in an CPG 183 Session Progress is sent in the PSTN XML element contains the ProgressIndicator value PI_value		
ISUP Parameter values	**ACM:** CASE A BCi Called party status = no indication ATP contains a Progress Indicator IE CASE B BCi Called party status = no indication oBCi 'inband info available' **CPG:** ATP contains a Progress Indicator IE		
SIP Parameter values	183 Session Progress: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet3 CodingStandard>00< Location>yyyy< ProgressOctet4 ProgressDescription>**PI_value**<		
Comments			
Message flows	**SIP NII**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	CASE A		
	183 Session Progress ←	←	183 Session Progress (ACM no indication) ATP contains a Progress Indicator IE
	CASE B		
		←	183 Session Progress (ACM – no indication)
	183 Session Progress ←	←	183 Session Progress (CPG – PROGRESS) ATP contains a Progress Indicator IE
	Apply post test routine		

Table 6.1.1.4-2: Mapping of Progress Indicator information element to PSTN XML ProgressIndicator

PI_value	ATP Progress Indicator value	XML ProgressIndicator ProgressDescription
PI_VA_1	Call is not end-to-end ISDN; further call progress information may be available in-band	'0000001'
PI_VA_2	Destination address is non-ISDN	'0000010'
PI_VA_3	Origination address is non-ISDN	'0000011'
PI_VA_4	Call has returned to the ISDN	'0000100'
PI_VA_5	Interworking has occurred and has resulted in a telecommunication service change	'0000101'
PI_VA_6	In-band information or an appropriate pattern is now available	'0001000'

TP number	TP_104_034	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4, table 7a.0f
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of High layer compatibility received in a ACM/CPG into 183		
Test Purpose	Ensure that on receipt of a 183 Session Progress with encapsulated ACM called party status no indication or CPG event indicator in-band information or an appropriate pattern is now available, a 183 Session Progress is sent. The High layer compatibility IE contained in the ACM ATP parameter is mapped into the HighLayerCompatibility PSTN XML element in the 183 Session Progress as indicated in table 6.1.1.4-3. • High layer compatibility received in an ACM called party status no indication, a 183 Session Progress is sent in the PSTN XML element contains the HighLayerCompatibility value HLC_value • High layer compatibility received in an CPG Event indicator in-band information or an appropriate pattern is now available 183 Session Progress is sent in the PSTN XML element contains the HighLayerCompatibility value HLC_value		
ISUP Parameter values	**ACM:** CASE A BCi Called party status = no indication CASE B BCi Called party status = no indication oBCi 'inband info available' **CPG:** ATP contains a High layer compatibility IE		
SIP Parameter values	183 Session Progress: <?xml version="1.0" encoding="utf-8"?> PSTN HighLayerCompatibility HLOctet3 CodingStandard>00< Interpretation>100< PresentationMethod>01< HLOctet4 HighLayerCharacteristics>**HLC_value**<		
Comments			
Message flows	**SIP NNI** → **MGCF** → **SIP-I** INVITE → → INVITE (IAM) **CASE A** 183 Session Progress ← ← 183 Session Progress (ACM) **CASE B** ← 183 Session Progress (ACM – no indication)) 183 Session Progress ← ← 183 Session Progress (CPG - ATP contains a High layer compatibility IE) **Apply post test routine**		

Table 6.1.1.4-3: Mapping of High layer compatibility information element to PSTN XML HighLayerCharacteristic

HLC_value	DSS1 High layer characteristics identification	XML HighLayerCharacteristic
HLC_VA_1	Telephony	'0000001'
HLC_VA_2	Facsimile Group 2/3	'0000100'
HLC_VA_3	Facsimile Group 4 Class I	'0100001'
HLC_VA_4	Facsimile service Group 4, Classes II and III	'0100100'
HLC_VA_5	Syntax based Videotex	'0110010'
HLC_VA_6	International Videotex interworking via gateways or interworking units	'0110011'
HLC_VA_7	Telex service	'0110101'
HLC_VA_8	FTAM application	'1000010'
HLC_VA_9	Videotelephony	'1100000'

TP number	TP_104_035	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4, table 7a.0f
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of Low layer compatibility received in a 183 Session Progress with encapsulated ACM/CPG into 183 Session Progress		
Test Purpose	Ensure that on receipt of a 183 Session Progress with encapsulated ACM called party status no indication or CPG event indicator in-band information or an appropriate pattern is now available, a 183 Session Progress is sent. The Low layer compatibility IE contained in the ACM ATP parameter is mapped into the LowLayerCompatibility PSTN XML element in the 183 Session Progress as indicated in table 6.1.1.4-4. • Low layer compatibility received in an ACM called party status no indication, a 183 Session Progress is sent in the PSTN XML element contains the LowLayerCompatibility value ITC_value • Low layer compatibility received in an CPG Event indicator in-band information or an appropriate pattern is now available 183 Session Progress is sent in the PSTN XML element contains the LowLayerCompatibility value ITC_value		
ISUP Parameter values	**ACM:** CASE A BCi Called party status = no indication CASE B BCi Called party status = no indication oBCi 'inband info available' **CPG:** ATP contains a Low layer compatibility IE		
SIP Parameter values	183 Session Progress: <?xml version="1.0" encoding="utf-8"?> PSTN LowLayerCompatibility> LLOctet3> CodingStandard>00< InformationTransferCapability>ITC_value< LLOctet4> TransferMode>00< InformationTransferRate>10000<		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	CASE A		
	183 Session Progress ←	←	183 Session Progress (ACM)
	CASE B		
		←	183 Session Progress (ACM)
	183 Session Progress ←	←	183 Session Progress (CPG –Alerting)
	Apply post test routine		

Table 6.1.1.4-4: Mapping of Low Layer Compatibility to PSTN XML LowLayerCompatibility

ITC_value	LLC Information transfer capability	XML LLC InformationTransferCapability
ITC_VA_1	Speech	'00000'
ITC_VA_2	3,1 kHz audio	'10000'
ITC_VA_3	Unrestricted digital info	'01001'
ITC_VA_3	7 kHz audio	'10001'

TP number	TP_104_036	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4, table 7a.0f
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of Bearer Capability received in a 183 Session Progress with encapsulated ACM/CPG		
Test Purpose	Ensure that on receipt of an ACM called party status no indication or CPG event indicator in-band information or an appropriate pattern is now available, a 183 Session Progress is sent. The Bearer Capability IE contained in the ACM ATP parameter is mapped into the BearerCapability PSTN XML element in the 183 Session Progress as indicated in table 6.1.1.4-5. • Bearer Capability received in an ACM called party status subscriber free 183 Session Progress is sent in the PSTN XML element contains the BearerCapability value ITC_value • Bearer Capability received in an CPG Event indicator in-band information or an appropriate pattern is now available 183 Session Progress is sent in the PSTN XML element contains the BearerCapability value ITC_value		
ISUP Parameter values	**ACM:** CASE A BCi Called party status = no indication CASE B BCi Called party status = no indication oBCi 'inband info available' **CPG:** ATP contains a Bearer Capability IE		
SIP Parameter values	183 Session Progress: <?xml version="1.0" encoding="utf-8"?> PSTN BearerCapability BCoctet3 CodingStandard>00< InformationTransferCapability>ITC_value< BCoctet4 TransferMode>00< InformationTransferRate>10000< BCoctet5> Layer1Identification>01< UserInfoLayer1Protocol>00011<		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	CASE A		
	183 Session Progress ←	←	183 Session Progress (ACM)
	CASE B		
		←	183 Session Progress (ACM)
	183 Session Progress ←	←	183 Session Progress (CPG)
	Apply post test routine		

Table 6.1.1.4-5: Mapping of Bearer capability to PSTN XML BearerCapability

ITC_value	BC Information transfer capability	XML InformationTransferCapability
ITC_VA_1	Speech	'00000'
ITC_VA_2	3,1 kHz audio	'10000'
ITC_VA_3	Unrestricted digital inf. W/tone/ann	'10001'
ITC_VA_4	Unrestricted digital information	'01000'

TP number	TP_104_037	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4B
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria			
Test Purpose name	ACM containing CDIV information, a 181 is sent		
Test Purpose	Ensure that on receipt of a 181 Call Is Being Forwarded with encapsulated ACM containing a Redirection number, Call diversion information and Generic notification set to 'Call is diverted', a 181 Call Is Being Forwarded is sent		
ISUP Parameter values	**ACM:** BCi Called party status = no indication Redirection number Call diversion information Generic notification = 'Call is diverted'		
SIP Parameter values	181 Call Is Being Forwarded		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	181 Call Is Being Forwarded ←	←	183 Session Progress (ACM)
	Apply post test routine		

TP number	TP_104_038	**Reference**	[1], clauses 7.2.1, 7.2.3.1.4B
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/9 AND PICS 6.3.2/5		
Test Purpose name	ACM containing CDIV information and oBCi inband info available, a 181 Call Is Being Forwarded is sent a P-Early-Media present		
Test Purpose	Ensure that on receipt of a 181 Call Is Being Forwarded with encapsulated ACM containing a Redirection number, Call diversion information and Generic notification set to 'Call is diverted' and an optional backward call indicator set to In-band info or an appropriate pattern is now available, a 181 Call Is Being Forwarded is sent, a P-Early-Media is present indicating authorization of early media		
ISUP Parameter values	**ACM:** BCi Called party status = no indication Redirection number Call diversion information Generic notification = 'Call is diverted'		
SIP Parameter values	181 Call Is Being Forwarded P-Early-Media: <indicating authorization of early media>		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	181 Call Is Being Forwarded ←	←	183 Session Progress (ACM)
	Apply post test routine		

TP number	TP_104_040	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4B
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.3.2/5		
Test Purpose name	CPG containing CDIV information, a 181 is sent		
Test Purpose	Ensure that on receipt of a 181 Call Is Being Forwarded with encapsulated CPG Event Indicator set to Progress containing a Redirection number, Call diversion information and Generic notification set to 'Call is diverted', a 181 Call Is Being Forwarded is sent		
ISUP Parameter values	**CPG:** Event Indicator set to Progress Redirection number Call diversion information Generic notification = 'Call is diverted' oBCI In-band information indicator in-band information or an appropriate pattern is now available		
SIP Parameter values	181 Call Is Being Forwarded		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	180/183 ←	←	180/183 (ACM)
	181 Call Is Being Forwarded ←	←	183 Session Progress (CPG)
	Apply post test routine		

TP number	TP_104_041	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.4B
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_18x/		
Selection criteria	PICS 6.2.1/9 AND PICS 6.3.2/5		
Test Purpose name	ACM containing CDIV information and oBCi inband info available, a 181 is sent a P-Early-Media present		
Test Purpose	Ensure that on receipt of a 181 Call Is Being Forwarded with encapsulated CPG Event Indicator set to Progress containing a Redirection number, Call diversion information and Generic notification set to 'Call is diverted' and an optional backward call indicator set to In-band info or an appropriate pattern is now available, a 181 Call Is Being Forwarded is sent, a P-Early-Media is present indicating authorization of early media		
ISUP Parameter values	**CPG:** Event Indicator set to Progress Redirection number Call diversion information Generic notification = 'Call is diverted'		
SIP Parameter values	**INVITE:** Supported: 100rel P-Early-Media: < authorization of early media> 181 Call Is Being Forwarded P-Early-Media: <indicating authorization of early media>		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	180/183 ←	←	180/183 (ACM)
	181 Call Is Being Forwarded ←	←	183 Session Progress (CPG)
	Apply post test routine		

6.1.1.5 Sending of the 200 OK (INVITE)

TP number	TP_105_001	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.5
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_200_OK/		
Selection criteria			
Test Purpose name	A 200 OK with encapsulated ANM is received a 200 OK is sent		
Test Purpose	Ensure that on receipt of a 200 OK (ANM) the SUT sends a 200 OK INVITE		
ISUP Parameter values			
SIP Parameter values			
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←	←	100 Trying
	180 Ringing ←	←	180 Ringing (ACM)
	200 OK (INVITE) ←	←	200 OK (INVITE) (ANM)
	ACK →	→	ACK
	Apply post test routine		

TP number	TP_105_002	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.5
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_200_OK/		
Selection criteria			
Test Purpose name	A 200 OK with encapsulated CON is received a 200 OK is sent		
Test Purpose	Ensure that on receipt of a 200 OK (CON) the SUT sends a 200 OK (INVITE)		
ISUP Parameter values			
SIP Parameter values			
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←	←	100 Trying
	200 OK (INVITE) ←	←	200 OK (INVITE) (CON)
	ACK →	→	ACK
	Apply post test routine		

TP number	TP_105_003	**Reference**	[1], clause 7.2.1 [2], clauses 7.2.3.1.5, table, 7.2.3.1.5.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_200_OK/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Progress indicator received in 200 OK (ANM) with encapsulated ANM/CON is mapped into PSTN XML ProgressIndicator		
Test Purpose	Ensure that on receipt of a 200 OK (INVITE) with encapsulated ANM/CON and an ATP containing a Progress indicator IE set to value PI_value a, 200 OK (INVITE) is sent. the PSTN XML ProgressIndicator value is set as indicated in table 6.1.1.5-1		
ISUP Parameter values	**ANM/CON:** ATP contains a Progress Indicator IE value **PI_value**		
SIP Parameter values	200 OK INVITE: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet3 CodingStandard>00< Location<yyyy> ProgressOctet4 ProgressDescription>**PI_value**<		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	CASE A		
	180 Ringing ←	←	180 Ringing (ACM - free)
	200 OK (INVITE) ←	←	200 OK (INVITE) (ANM)
	ACK →	→	ACK
	CASE B		
	200 OK (INVITE) ←	←	200 OK (INVITE) CON
	ACK →	→	ACK
	Apply post test routine		

Table 6.1.1.5-1: Mapping of Progress Indicator information element to PSTN XML ProgressIndicator

PI_value	ATP Progress Indicator value	XML ProgressIndicator ProgressDescription
PI_VA_1	Call is not end-to-end ISDN; further call progress information may be available in-band	'0000001'
PI_VA_2	Destination address is non-ISDN	'0000010'
PI_VA_3	Origination address is non-ISDN	'0000011'
PI_VA_4	Call has returned to the ISDN	'0000100'
PI_VA_5	Interworking has occurred and has resulted in a telecommunication service change	'0000101'
PI_VA_6	In-band information or an appropriate pattern is now available	'0001000'

TP number	TP_105_004	**Reference**	[1], clause 7.2.1 [2], clauses 7.2.3.1.5, table, 7.2.3.1.5.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_200_OK/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	High layer compatibility received in 200 OK (INVITE)with encapsulated ANM/CON is mapped into PSTN XML HighLayerCompatibility		
Test Purpose	Ensure that on receipt of a 200 OK (INVITE) with encapsulated ANM/CON and an ATP containing a High layer compatibility IE set to value HLC_value, a 200 OK INVITE is sent. the PSTN XML HighLayerCompatibility value is set as indicated in table 6.1.1.5-2		
ISUP Parameter values	**ANM/CON:** ATP contains a High layer compatibility IE value **HLC_value**		
SIP Parameter values	200 OK INVITE: <?xml version="1.0" encoding="utf-8"?> PSTN HighLayerCompatibility HLOctet3 CodingStandard>00< Interpretation>100< PresentationMethod>01< HLOctet4 HighLayerCharacteristics>**HLC_value**<		
Comments			
Message flows	**SIP NNI** → **MGCF** → **SIP-I** INVITE → → INVITE (IAM) **CASE A** 180 Ringing ← ← 180 Ringing (ACM) 200 OK (INVITE) ← ← 200 OK (INVITE) (ANM) ACK → → ACK **CASE B** 200 OK (INVITE) ← ← 200 OK (INVITE) CON ACK → → ACK **Apply post test routine**		

Table 6.1.1.5-2: Mapping of High layer compatibility information element to PSTN XML HighLayerCharacteristic

HLC_value	DSS1 High layer characteristics identification	XML HighLayerCharacteristic
HLC_VA_1	Telephony	'0000001'
HLC_VA_2	Facsimile Group 2/3	'0000100'
HLC_VA_3	Facsimile Group 4 Class I	'0100001'
HLC_VA_4	Facsimile service Group 4, Classes II and III	'0100100'
HLC_VA_5	Syntax based Videotex	'0110010'
HLC_VA_6	International Videotex interworking via gateways or interworking units	'0110011'
HLC_VA_7	Telex service	'0110101'
HLC_VA_8	FTAM application	'1000010'
HLC_VA_9	Videotelephony	'1100000'

TP number	TP_105_005	**Reference**	[1], clause 7.2.1 [2], clauses 7.2.3.1.5, table, 7.2.3.1.5.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_200_OK/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Low layer compatibility received in 200 OK (ANM) with encapsulated ANM/CON is mapped into PSTN XML LowLayerCompatibility		
Test Purpose	Ensure that on receipt of a 200 OK (INVITE) with encapsulated ANM/CON and an ATP containing a Low layer compatibility IE set to value ITC_value, a 200 OK INVITE is sent. the PSTN XML LowLayerCompatibility value is set as indicated in table 6.1.1.5-3		
ISUP Parameter values	**ANM/CON:** ATP contains a Low layer compatibility IE value **ITC_value**		
SIP Parameter values	200 OK INVITE: <?xml version="1.0" encoding="utf-8"?> PSTN LowLayerCompatibility> LLOctet3> CodingStandard>00< InformationTransferCapability>**ITC_value**< LLOctet4> TransferMode>00< InformationTransferRate>10000< LLOctet5> Layer1Identification>01</ UserInfoLayer1Protocol>**ITC_value**</		
Comments	When the 'XML UserInfoLayer1Protocol' element is absent, the entire 'LLOctet5' element is absent		
ACKMessage flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	CASE A		
	180 Ringing ←	←	180 Ringing (ACM free)
	200 OK (INVITE) ←	←	200 OK (INVITE) ANM
	ACK →	→	ACK
	CASE B		
	200 OK (INVITE) ←	←	200 OK (INVITE) (CON)
	ACK →	→	ACK
	Apply post test routine		

Table 6.1.1.5-3: Mapping of Low Layer Compatibility to PSTN XML LowLayerCompatibility

ITC_value	LLC Information transfer capability	XML LLC InformationTransferCapability	XML UserInfoLayer1Protocol
ITC_VA_1	Speech	'00000'	'00011'
ITC_VA_2	3,1 kHz audio	'10000'	'00011'
ITC_VA_3	Unrestricted digital info	'01000'	absent
ITC_VA_4	7 kHz audio	'10001'	'00110'

TP number	TP_105_006	**Reference**	[1], clause 7.2.1 [2], clauses 7.2.3.1.5, table, 7.2.3.1.5.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_200_OK/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Bearer Capability received in 200 OK (INVITE) with encapsulated ANM/CON is mapped into PSTN XML BearerCapability		
Test Purpose	Ensure that on receipt of a 200 OK (INVITE) with encapsulated ANM/CON and an ATP containing a Bearer Capability IE set to value ITC_value, a 200 OK INVITE is sent. the PSTN XML BearerCapability value is set as indicated in table 6.1.1.5-4		
ISUP Parameter values	**ANM/CON:** ATP contains a Bearer Capability IE value **ITC_value**		
SIP Parameter values	200 OK INVITE: <?xml version="1.0" encoding="utf-8"?> PSTN BearerCapability BCoctet3 CodingStandard>00< InformationTransferCapability>**ITC_value**< BCoctet4 TransferMode>00< InformationTransferRate>10000< BCoctet5> Layer1Identification>01< UserInfoLayer1Protocol>**ITC_value**<		
Comments			
Message flows	**SIP NNI** → **MGCF** → **SIP-I** INVITE → → INVITE (IAM) **CASE A** 180 Ringing ← ← 180 Ringing (ACM- free) 200 OK (INVITE) ← ← 200 OK (INVITE) ANM ACK → **CASE B** 200 OK (INVITE) ← ← 200 OK (INVITE) (CON) ACK → ACK **Apply post test routine**		

Table 6.1.1.5-4: Mapping of Bearer capability to PSTN XML BearerCapability

ITC_value	BC Information transfer capability	XML InformationTransferCapability	XML UserInfoLayer1Protocol
ITC_VA_1	Speech	'00000'	'00011'
ITC_VA_2	3,1 kHz audio	'10000'	'00011'
ITC_VA_3	Unrestricted digital inf. W/tone/ann	'10001'	'00110'

TP number	TP_105_007	**Reference**	[1], clause 7.2.1 [2], clauses 7.2.3.1.5, table, 7.2.3.1.5.2
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_200_OK/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Backward call indicator mapped into PSTN XML ProgressIndicator value 1		
Test Purpose	Ensure that on receipt of a 200 OK (INVITE) with encapsulated ANM/CON and the backward call indicator is set to **ISDN User Part not used all the way**, a 200 OK INVITE is sent and the PSTN XML ProgressIndicator value is set to 1 (Call is not end-to-end ISDN: further progress information may be available in-band)		
ISUP Parameter values	**ANM/CON:** BCi ISDN User Part indicator = ISDN User Part not used all the way		
SIP Parameter values	200 OK INVITE <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator … ProgressOctet4 ProgressDescription>**0000001**<		
Comments			

Message flows

SIP NNI		**MGCF**		**SIP-I**
INVITE	→		→	INVITE (IAM)
CASE A				
180 Ringing	←		←	180 Ringing (ACM- free)
200 OK (INVITE)	←		←	200 OK (INVITE) ANM
ACK	→		→	ACK
CASE B				
200 OK (INVITE)	←		←	200 OK (INVITE) (CON)
ACK	→		→	ACK
Apply post test routine				

TP number	TP_105_008	**Reference**	[1], clause 7.2.1 [2], clauses 7.2.3.1.5, table, 7.2.3.1.5.2
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_200_OK/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Backward call indicator mapped into PSTN XML ProgressIndicator value 2		
Test Purpose	Ensure that on receipt of a 200 OK (INVITE) with encapsulated ANM/CON and the backward call indicator is set to **ISDN User Part used all the way** and **Terminating access non-ISDN**, a 200 OK INVITE is sent and the PSTN XML ProgressIndicator value is set to 2 (Destination address is non-ISDN)		
ISUP Parameter values	**ANM/CON:** BCi ISDN User Part indicator = ISDN User Part used all the way ISDN access indicator = Terminating access non-ISDN		
SIP Parameter values	200 OK INVITE <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator … ProgressOctet4 ProgressDescription>**0000010**<		
Comments			

Message flows

SIP NNI		**MGCF**		**SIP-I**
INVITE	→		→	INVITE (IAM)
CASE A				
180 Ringing	←		←	180 Ringing (ACM – free)
200 OK (INVITE)	←		←	200 OK (INVITE) (ANM)
ACK	→		→	ACK
CASE B				
200 OK (INVITE)	←		←	200 OK (INVITE) (CON)
ACK	→		→	ACK
Apply post test routine				

TP number	TP_105_009	**Reference**	[1], clause 7.2.1 [2], clauses 7.2.3.1.5, table, 7.2.3.1.5.2
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_200_OK/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Backward call indicator mapped into PSTN XML ProgressIndicator value 7		
Test Purpose	Ensure that on receipt of a 200 OK INVITE with encapsulated ANM/CON and the backward call indicator is set to **ISDN User Part used all the way** and **Terminating access ISDN**, a 200 OK INVITE is sent and the PSTN XML ProgressIndicator value is set to 7		
ISUP Parameter values	**ANM/CON:** BCi ISDN User Part indicator = ISDN User Part used all the way ISDN access indicator = Terminating access ISDN		
SIP Parameter values	200 OK INVITE <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator … ProgressOctet4 ProgressDescription>**0000111**<		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	CASE A				
	180 Ringing	←		←	180 Ringing (ACM)
	200 OK (INVITE)	←		←	200 OK (INVITE) (ANM)
	ACK	→		→	ACK
	CASE B				
	200 OK (INVITE)	←		←	200 OK (INVITE) (CON)
	ACK	→		→	ACK
	Apply post test routine				

TP number	TP_105_010	**Reference**	[1], clause 7.2.1 [2], clauses 7.2.3.1.5, table, 7.2.3.1.5.2
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_200_OK/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Optional backward call indicator mapped into PSTN XML ProgressIndicator value 8		
Test Purpose	Ensure that on receipt of a 200 OK INVITE with encapsulated ANM/CON and the optional backward call indicator is to **in-band information or an appropriate pattern is now available**, a 200 OK INVITE is sent and the PSTN XML ProgressIndicator value is set to 8 (In-band information or appropriate pattern is now available)		
ISUP Parameter values	**ANM/CON:** Optional backward call indicator In-band information indicator = in-band information or an appropriate pattern is now available		
SIP Parameter values	200 OK INVITE <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator … ProgressOctet4 ProgressDescription>**0001000**<		
Comments			

Message flows

SIP NNI		MGCF		SIP-I
INVITE	→		→	INVITE (IAM)
CASE A				
180 Ringing	←		←	180 Ringing (ACM)
200 OK (INVITE)	←		←	200 OK (INVITE) (ANM)
ACK	→		→	ACK
CASE B				
200 OK (INVITE)	←		←	200 OK (INVITE) CON
ACK	→		→	ACK
Apply post test routine				

TP number	TP_105_011	**Reference**	[1], clause 7.2.1 [2], clauses 7.2.3.1.5, table, 7.2.3.1.5.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_200_OK/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Receipt of TMU speech in 200 OK (ANM) with encapsulated ANM/CON, no BC present in ATP		
Test Purpose	Ensure that on receipt of a Transmission medium used parameter set to **speech** in the 200 OK INVITE with encapsulated ANM/CON, a 200 OK INVITE is sent and a PSTN XML BearerCapability element is present the InformationTransferCapability is set to **Speech**		
ISUP Parameter values	**IAM:** TMR = second InformationTransferCapability TMR prime = first InformationTransferCapability USI = first BearerCapability USI prime = second BearerCapability **ANM/CON:** Transmission medium used = speech		
SIP Parameter values	**INVITE:** PSTN XML MIME body <?xml version="1.0" encoding="utf-8"?> PSTN **BearerCapability** BCoctet3 CodingStandard>00< InformationTransferCapability>**00000**< …. **BearerCapability** BCoctet3 CodingStandard>00< InformationTransferCapability>**10001**< …. 200 OK INVITE <?xml version="1.0" encoding="utf-8"?> PSTN BearerCapability BCoctet3 CodingStandard>00< InformationTransferCapability>00000< …		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	CASE A				
	180 Ringing	←		←	180 Ringing (ACM – free)
	200 OK (INVITE)	←		←	200 OK (INVITE) (ANM)
	ACK	→			
	CASE B				
	200 OK (INVITE)	←		←	200 OK (CON)
	ACK	→		→	ACK
			Apply post test routine		

TP number	TP_105_012	**Reference**	[1], clause 7.2.1 [2], clauses 7.2.3.1.5, table, 7.2.3.1.5.1
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_200_OK/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Receipt of TMU 3,1 kHz audio in200 OK (ANM) with encapsulated ANM/CON, no BC present in ATP		
Test Purpose	Ensure that on receipt of a Transmission medium used parameter set to **3,1 kHz audio** in the 200 OK INVITE with encapsulated ANM/CON, a 200 OK INVITE is sent and a PSTN XML BearerCapability element is present the InformationTransferCapability is set to **3,1 kHz audio**		
ISUP Parameter values	**IAM:** TMR = second InformationTransferCapability TMR prime = first InformationTransferCapability USI = first BearerCapability USI prime = second BearerCapability **ANM/CON:** Transmission medium used = 3,1 kHz audio		
SIP Parameter values	**INVITE:** PSTN XML MIME body <?xml version="1.0" encoding="utf-8"?> PSTN **BearerCapability** BCoctet3 CodingStandard>00< InformationTransferCapability>**10000**< …. **BearerCapability** BCoctet3 CodingStandard>00< InformationTransferCapability>**10001**< …. 200 OK INVITE <?xml version="1.0" encoding="utf-8"?> PSTN BearerCapability BCoctet3 CodingStandard>00< InformationTransferCapability>10000< …		
Comments			

Message flows

SIP NNI		**MGCF**		**SIP-I**
INVITE	→		→	INVITE (IAM)
CASE A				
180 Ringing	←		←	180 Ringing (ACM)
200 OK (INVITE)	←		←	200 OK INVITE (ANM)
ACK	→			
CASE B				
200 OK (INVITE)	←		←	200 OK (INVITE) CON
ACK	→		→	ACK
		Apply post test routine		

TP number	TP_105_013	**Reference**	[1], clause 7.2.1 [2], clause 7.2.3.1.5
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_200_OK/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Receipt of TMU, BC present in ATP PSTN XML BearerCapability sent in 200 OK		
Test Purpose	Ensure that on receipt of a Transmission medium used parameter and in the ATP a Bearer Capability IE in the 200 OK INVITE with encapsulated ANM/CON, a 200 OK INVITE is sent and a PSTN XML BearerCapability element is present the InformationTransferCapability is set as indicated in table 6.1.1.5-5		
ISUP Parameter values	**IAM:** TMR = second InformationTransferCapability TMR prime = first InformationTransferCapability USI = first BearerCapability USI prime = second BearerCapability **ANM/CON:** Transmission medium used, ATP Bearer Capability IE		
SIP Parameter values	200 OK INVITE <?xml version="1.0" encoding="utf-8"?> PSTN BearerCapability BCoctet3 CodingStandard>00< InformationTransferCapability>**ITC_value**< …		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	CASE A		
	180 Ringing ←	←	180 Ringing (ACM)
	200 OK (INVITE) ←	←	200 OK (INVITE) (ANM)
	ACK →		
	CASE B		
	200 OK (INVITE) ←	←	CON
	ACK →		
	Apply post test routine		

Table 6.1.1.5-5: Mapping of TMU and Bearer capability IE to PSTN XML BearerCapability

ITC_value	← 180 Ringing or 183 Session Progress	←ACM/CPG	
ITC_value_VA_01	PSTN XML BearerCapability = "Speech"	TMU ATP	"Speech" BC "speech"
ITC_value_VA_02	PSTN XML BearerCapability = "Speech"	TMU ATP	"3,1 kHz audio" BC "speech"
ITC_value_VA_03	PSTN XML BearerCapability = "3,1 kHz audio"	TMU ATP	"Speech" BC "3,1 kHz audio"
ITC_value_VA_04	PSTN XML BearerCapability = "3,1 kHz audio"	TMU ATP	"3,1 kHz audio" BC "3,1 kHz audio"

6.1.1.6 Sending of the Release message (REL)

TP number	TP_106_001	**Reference**	[1], clause 7.2.2 [2], clause 7.2.3.1.7
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_REL/		
Selection criteria			
Test Purpose name	BYE received in confirmed dialogue no Reason header included, a BYE with encapsulated REL is sent		
Test Purpose	Ensure that on receipt of a BYE request in confirmed dialogue and no Reason header is present, a BYE with encapsulated REL message is sent. The cause indicator is set to No. 16 (normal clearing), the location is set to 'network beyond interworking point'		
ISUP Parameter values	**REL:** Cause indicator Cause Value = 16 (normal clearing) Location = network beyond interworking point		
SIP Parameter values			
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	180 Ringing ←	←	180 Ringing (ACM – free)
	200 OK (INVITE) ←	←	200 OK (INVITE) (ANM)
	ACK →		
	BYE →	→	BYE (REL)
	200 OK (BYE) ←	←	200 OK (BYE) (RLC)

TP number	TP_106_002	**Reference**	[1], clause 7.2.2 [2], clause 7.2.3.1.7
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_REL/		
Selection criteria			
Test Purpose name	BYE received in confirmed dialogue Reason header included, a BYE with encapsulated REL is sent		
Test Purpose	Ensure that on receipt of a BYE request in confirmed dialogue and a Reason header is present, a BYE with encapsulated REL message is sent. The cause indicator is set to the Reason header cause value, the location is set to 'network beyond interworking point'		
ISUP Parameter values	**REL:** Cause indicator Cause Value = **Cause_value** Location = network beyond interworking point		
SIP Parameter values	BYE: Reason: Q.850 ; cause = **Cause_value**		
Comments	The **Cause_value** is a PIXIT parameter		
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	180 Ringing ←	←	180 Ringing (ACM – free)
	200 OK (INVITE) ←	←	200 OK (INVITE) (ANM)
	ACK →	→	ACK
	BYE →	→	BYE (REL)
	200 OK (BYE) ←	←	200 OK (BYE) (RLC)

TP number	TP_106_003	**Reference**	[1], clause 7.2.2 [2], clause 7.2.3.1.7
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_REL/		
Selection criteria			
Test Purpose name	BYE received in early dialogue no Reason header included, a BYE with encapsulated REL is sent		
Test Purpose	Ensure that on receipt of a BYE request in early dialogue and no Reason header is present, a BYE with encapsulated REL message is sent. The cause indicator is set to No. 16 (normal clearing), the location is set to 'network beyond interworking point'		
ISUP Parameter values	**REL:** Cause indicator Cause Value = 16 (normal clearing) Location = network beyond interworking point		
SIP Parameter values			
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	18x	←		←	18x (ACM (no indication or free)
	BYE	→		→	BYE (REL)
	200 OK (BYE)	←		←	200 OK (BYE) RLC
	487 Request Terminated	←		←	487 Request Terminated
	ACK	→		→	ACK

TP number	TP_106_004	**Reference**	[1], clause 7.2.2 [2], clause 7.2.3.1.7
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_REL/		
Selection criteria			
Test Purpose name	BYE received in early dialogue Reason header included, a BYE with encapsulated REL is sent		
Test Purpose	Ensure that on receipt of a BYE request in early dialogue and a Reason header is present, a BYE with encapsulated REL message is sent. The cause indicator is set to the Reason header cause value, the location is set to 'network beyond interworking point'		
ISUP Parameter values	**REL:** Cause indicator Cause Value = **Cause_value** Location = network beyond interworking point		
SIP Parameter values	BYE: Reason: Q.850; cause = **Cause_value**		
Comments	The **Cause_value** is a PIXIT parameter		

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	18x	←		←	18x (ACM (no indication or free)
	BYE	→		→	BYE (REL)
	200 OK (BYE)	←		←	200 OK (BYE) RLC
	487 Request Terminated	←		←	487 Request Terminated
	ACK	→		→	ACK

TP number	TP_106_005	**Reference**	[1], clauses 7.2.2, 7.2.3.1.7
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_REL/		
Selection criteria			
Test Purpose name	CANCEL received in early dialogue no Reason header included, a CANCEL with encapsulated REL is sent		
Test Purpose	Ensure that on receipt of a CANCEL request in early dialogue and no Reason header is present, a CANCEL with encapsulated REL message is sent. The cause indicator is set to No. 16 (normal clearing), the location is set to 'network beyond interworking point'		
ISUP Parameter values	**REL:** Cause indicator Cause Value = 31 (normal unspecified) Location = network beyond interworking point		
SIP Parameter values			
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	18x ←	←	ACM 18x (ACM (no indication or free)
	CANCEL →	→	CANCEL (REL)
	200 OK (CANCEL) ←	←	200 OK (CANCEL)RLC
	487 Request Terminated ←	←	487 Request Terminated
	ACK →	→	ACK

TP number	TP_106_006	**Reference**	[1], clause 7.2.2 [2], clause 7.2.3.1.7
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_REL/		
Selection criteria			
Test Purpose name	CANCEL received in early dialogue Reason header included, a CANCEL with encapsulated REL is sent		
Test Purpose	Ensure that on receipt of a CANCEL request in early dialogue and a Reason header is present, a CANCEL with encapsulated REL message is sent. The cause indicator is set to the Reason header cause value, the location is set to 'network beyond interworking point'		
ISUP Parameter values	**REL:** Cause indicator Cause Value = **Cause_value** Location = network beyond interworking point		
SIP Parameter values	CANCEL: Reason: Q.850; cause = **Cause_value**		
Comments	The **Cause_value** is a PIXIT parameter		
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	18x ←	←	ACM 18x (ACM (no indication or free)
	CANCEL →	→	CANCEL (REL)
	200 OK (CANCEL) ←	←	200 OK (CANCEL)RLC
	487 Request Terminated ←	←	487 Request Terminated
	ACK →	→	ACK

TP number	TP_106_007	**Reference**	[1], clause 7.2.2 [2], clause 7.2.3.1.7
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_REL/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	BYE received in confirmed dialogue PSTN XML HighLayerCompatibility present, a BYE with encapsulated REL is sent containing a High layer compatibility IE		
Test Purpose	Ensure that on receipt of a BYE request in confirmed dialogue and a PSTN XML HighLayerCompatibility is present, a BYE with encapsulated REL is sent and an ATP is present containing a High layer compatibility IE. The value is mapped as indicated in table 6.1.1.6-1		
ISUP Parameter values	**REL:** ATP High layer compatibility High Layer Characteristic = HLC_value		
SIP Parameter values	BYE: <?xml version="1.0" encoding="utf-8"?> PSTN HighLayerCompatibility HLOctet3 CodingStandard>00< Interpretation>100< PresentationMethod>01< HLOctet4 HighLayerCharacteristics>**HLC_value**<		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	100 Trying	←			
	180 Ringing	←		←	180 Ringing (ACM –free)
	200 OK (INVITE)	←		←	200 OK (INVITE) (ANM)
	ACK	→			
	BYE	→		→	BYE (REL)
	200 OK (BYE)	←		←	200 OK (RLC)

TP number	TP_106_008	**Reference**	[1], clause 7.2.2 [2], clause 7.2.3.1.7
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_REL/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	BYE received in early dialogue PSTN XML HighLayerCompatibility present, a BYE with encapsulated REL is sent containing a High layer compatibility IE		
Test Purpose	Ensure that on receipt of a BYE request in early dialogue and a PSTN XML HighLayerCompatibility is present, a BYE with encapsulated REL is sent and an ATP is present containing a High layer compatibility IE. The value is mapped as indicated in table 6.1.1.6-1		
ISUP Parameter values	**REL:** ATP High layer compatibility High Layer Characteristic = HLC_value		
SIP Parameter values	BYE: <?xml version="1.0" encoding="utf-8"?> PSTN HighLayerCompatibility HLOctet3 CodingStandard>00< Interpretation>100< PresentationMethod>01< HLOctet4 HighLayerCharacteristics>**HLC_value**<		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	BYE	→		→	BYE (REL)
	200 OK (BYE)	←		←	200 OK (INVITE) RLC
	487 Request Terminated	←		←	487 Request Terminated
	ACK	→		→	ACK

TP number	TP_106_009	**Reference**	[1], clause 7.2.2 [2], clause 7.2.3.1.7
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_REL/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	CANCEL received in early dialogue PSTN XML HighLayerCompatibility present, a CANCEL with encapsulated REL is sent containing a High layer compatibility IE		
Test Purpose	Ensure that on receipt of a CANCEL request in early dialogue and a PSTN XML HighLayerCompatibility is present, a CANCEL with encapsulated REL is sent and an ATP is present containing a High layer compatibility IE. The value is mapped as indicated in table 6.1.1.6-1		
ISUP Parameter values	**REL:** ATP High layer compatibility High Layer Characteristic = HLC_value		
SIP Parameter values	CANCEL <?xml version="1.0" encoding="utf-8"?> PSTN HighLayerCompatibility HLOctet3 CodingStandard>00< Interpretation>100< PresentationMethod>01< HLOctet4 HighLayerCharacteristics>**HLC_value**<		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	CANCEL →	→	CANCEL (REL)
	200 OK (CANCEL) ←	←	200 OK (CANCEL) (RLC)
	487 Request Terminated ←	←	487 Request Terminated
	ACK →	→	ACK

Table 6.1.1.6-1: Mapping of High layer compatibility information element to PSTN XML HighLayerCharacteristic

HLC_value	DSS1 High layer characteristics identification	XML HighLayerCharacteristic
HLC_VA_1	Telephony	'0000001'
HLC_VA_2	Facsimile Group 2/3	'0000100'
HLC_VA_3	Facsimile Group 4 Class I	'0100001'
HLC_VA_4	Facsimile service Group 4, Classes II and III	'0100100'
HLC_VA_5	Syntax based Videotex	'0110010'
HLC_VA_6	International Videotex interworking via gateways or interworking units	'0110011'
HLC_VA_7	Telex service	'0110101'
HLC_VA_8	FTAM application	'1000010'
HLC_VA_9	Videotelephony	'1100000'

TP number	TP_106_010	**Reference**	[1], clause 7.2.2 [2], clause 7.2.3.1.7
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_REL/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	BYE received in confirmed dialogue PSTN XML LowLayerCompatibility present, a BYE with encapsulated REL is sent containing a Low layer compatibility IE		
Test Purpose	Ensure that on receipt of a BYE request in confirmed dialogue and a PSTN XML LowLayerCompatibility is present, a BYE with encapsulated REL is sent and an ATP is present containing a Low layer compatibility IE. The value is mapped as indicated in table 6.1.1.6-2		
ISUP Parameter values	**REL:** ATP Low layer compatibility Information Transfer Capability = **ITC_value**		
SIP Parameter values	<?xml version="1.0" encoding="utf-8"?> PSTN LowLayerCompatibility> LLOctet3> CodingStandard>00< InformationTransferCapability>**ITC_value**<		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	100 Trying	←		←	100 Trying
	180 Ringing	←		←	180 Ringing (ACM – free)
	200 OK (INVITE)	←		←	200 OK (ANM)
	ACK	→		→	ACK
	BYE	→		→	BYE (REL)
	200 OK (BYE)	←		←	200 OK (BYE) (RLC)

TP number	TP_106_011	**Reference**	[1], clause 7.2.2 [2], clause 7.2.3.1.7
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_REL/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	BYE received in early dialogue PSTN XML LowLayerCompatibility present, a BYE with encapsulated REL is sent containing a Low layer compatibility IE		
Test Purpose	Ensure that on receipt of a BYE request in early dialogue and a PSTN XML LowLayerCompatibility is present, a BYE with encapsulated REL is sent and an ATP is present containing a Low layer compatibility IE. The value is mapped as indicated in table 6.1.1.6-2		
ISUP Parameter values	**REL:** ATP Low layer compatibility Information Transfer Capability = **ITC_value**		
SIP Parameter values	BYE <?xml version="1.0" encoding="utf-8"?> PSTN LowLayerCompatibility> LLOctet3> CodingStandard>00< InformationTransferCapability>**ITC_value**< …		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	BYE	→		→	BYE (RE)L
	200 OK (BYE)	←		←	200 OK (BYE) (RLC)
	487 Request Terminated	←		←	487 Request Terminated
	ACK	→		→	ACK

TP number	TP_106_012	**Reference**	[1], clause 7.2.2 [2], clause 7.2.3.1.7
TSS reference	SIP NNI - SIP-I/Basic call/Sending_of_REL/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	CANCEL received in early dialogue PSTN XML LowLayerCompatibility present, a CANCEL with encapsulated REL is sent containing a Low layer compatibility IE		
Test Purpose	Ensure that on receipt of a CANCEL request in early dialogue and a PSTN XML LowLayerCompatibility is present, a CANCEL with encapsulated REL is sent and an ATP is present containing a Low layer compatibility IE. The value is mapped as indicated in table 6.1.1.6-2		
ISUP Parameter values	**REL:** ATP Low layer compatibility Information Transfer Capability = **ITC_value**		
SIP Parameter values	CANCEL <?xml version="1.0" encoding="utf-8"?> PSTN LowLayerCompatibility> LLOctet3> CodingStandard>00< InformationTransferCapability>**ITC_value**< …		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	CANCEL	→		→	CANCEL (REL)
	200 OK (CANCEL)	←		←	200 OK (CANCEL) (RLC)
	487 Request Terminated	←		←	487 Request Terminated
	ACK	→		→	ACK

Table 6.1.1.6-2: Mapping of Low Layer Compatibility to PSTN XML LowLayerCompatibility

ITC_value	LLC Information transfer capability	XML LLC InformationTransferCapability
ITC_VA_1	Speech	'00000'
ITC_VA_2	3,1 kHz audio	'10000'
ITC_VA_3	Unrestricted digital info	'01001'
ITC_VA_4	7 kHz audio	'10001'

6.1.1.7 Receipt of the Release Message

TP number	TP_107_001	**Reference**	[1], clause 7.2.2 [2], clause 7.2.3.1.8
TSS reference	SIP NNI - SIP-I/Basic call/Receipt_of_REL/		
Selection criteria			
Test Purpose name	A REL is received, a BYE request is sent		
Test Purpose	Ensure that on receipt of a BYE with encapsulated REL message in the confirmed dialogue, a BYE is sent. The Reason header is present and the cause value is set to the received cause value in the REL Cause indicator		
ISUP Parameter values	**REL:** Cause indicator Cause Value = **Cause_value**		
SIP Parameter values	**BYE:** Reason: Q.850 ; cause = **Cause_value**		
Comments	Cause_value is a PIXIT parameter		

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	100 Trying	←		←	100 Trying
	180 Ringing	←		←	180 Ringing (ACM – fee)
	200 OK (INVITE)	←		←	200 OK (INVITE) (ANM)
	ACK	→		→	ACK
	BYE	←		←	BYE (REL)
	200 OK (BYE)	→		→	200 OK (BYE) (RLC)

TP number	TP_107_001A	**Reference**	[1], clause 7.2.2 [2], clause 7.2.3.1.8
TSS reference	SIP NNI - SIP-I/Basic call/Receipt_of_REL/		
Selection criteria			
Test Purpose name	A REL is received, a BYE request is sent		
Test Purpose	Ensure that on receipt of a BYE with encapsulated REL message in the confirmed dialogue, a BYE is sent. Ensure that if the Reason Header field was not received, then the received ISUP Cause value being received in the encapsulated ISUP REL message shall be mapped into SIP Reason header fields as specified		
ISUP Parameter values	**REL:** Cause indicator Cause Value = **Cause_value**		
SIP Parameter values	**BYE:** Reason: Q.850; cause = **Cause_value**		
Comments	Cause_value is a PIXIT parameter		

Message flows

SIP NNI		**MGCF**		**SIP-I**
INVITE	→		→	INVITE (IAM)
100 Trying	←		←	100 Trying
180 Ringing	←		←	180 Ringing (ACM – fee)
200 OK (INVITE)	←		←	200 OK (INVITE) (ANM)
ACK	→		→	ACK
BYE	←		←	BYE (REL)
200 OK (BYE)	→		→	200 OK (BYE) (RLC)

TP number	TP_107_002	**Reference**	[1], clause 7.2.2 [2], clause 7.2.3.1.8
TSS reference	SIP NNI - SIP-I/Basic call/Receipt_of_REL/		
Selection criteria			
Test Purpose name	A SIP_final_Response with encapsulated REL is received before an early dialogue is established, a final response is sent		
Test Purpose	Ensure that on receipt of a SIP_final_Response with encapsulated REL message before an early dialogue is established a SIP final response is sent. The response code is derived from the Cause value received in the REL according the rules described in table 6.1.1.7-1. The cause value of the received REL is present in the Reason header of the sent final response		
ISUP Parameter values	**REL:** Cause indicator Cause Value = **Cause_value**		
SIP Parameter values	4xx/5xx/6xx: Reason: Q.850; cause = **Cause_value**		
Comments			

Message flows

SIP NNI		**MGCF**		**SIP-I**
INVITE	→		→	INVITE (IAM)
100 Trying	←		←	Trying
SIP_final_Response	←		←	SIP_final_Response (REL)
ACK	→		→	ACK (RLC)

TP number	TP_107_003	**Reference**	[1], clause 7.2.2 [2], clause 7.2.3.1.8
TSS reference	SIP NNI - SIP-I/Basic call/Receipt_of_REL/		
Selection criteria			
Test Purpose name	A SIP_final_Response with encapsulated REL is received after an early dialogue is established (180), a final response is sent		
Test Purpose	Ensure that on receipt of a SIP_final_Response with encapsulated REL message after an early dialogue due to sending a 180 Ringing is established a SIP final response is sent. The response code is derived from the Cause value received in the REL according the rules described in table 6.1.1.7-1. The cause value of the received REL is present in the Reason header of the sent final response		
ISUP Parameter values	**ACM:** BCi Called party status = subscriber free **REL:** Cause indicator Cause Value = **Cause_value**		
SIP Parameter values	4xx/5xx/6xx: Reason: Q.850; cause = **Cause_value**		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	180 Ringing	←		←	180 Ringing (ACM)
	SIP_final_Response	←		←	SIP_final_Response (REL)
	ACK	→		→	ACK (RLC)

TP number	TP_107_004	**Reference**	[1], clause 7.2.2 [2], clause 7.2.3.1.8
TSS reference	SIP NNI - SIP-I/Basic call/Receipt_of_REL/		
Selection criteria			
Test Purpose name	A SIP_final_Response with encapsulated REL is received after an early dialogue is established (181), a final response is sent		
Test Purpose	Ensure that on receipt of a SIP_final_Response with encapsulated REL message after an early dialogue due to sending a 181 Call Is Being Forwarded is established a SIP final response is sent. The response code is derived from the Cause value received in the REL according the rules described in table 6.1.1.7-1. The cause value of the received REL is present in the Reason header of the sent final response		
ISUP Parameter values	**ACM:** BCi Called party status = no indication Redirection number Call diversion information Generic notification = 'Call is diverted' **REL:** Cause indicator Cause Value = **Cause_value**		
SIP Parameter values	4xx/5xx/6xx: Reason: Q.850; cause = **Cause_value**		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	181 Call Is Being Forwarded	←		←	181 Call Is Being Forwarded (ACM)
	SIP_final_Response	←		←	SIP_final_Response (REL)
	ACK	→		→	(ACK) RLC

TP number	TP_107_005	**Reference**	[1], clause 7.2.2 [2], clause 7.2.3.1.8
TSS reference	SIP NNI - SIP-I/Basic call/Receipt_of_REL/		
Selection criteria			
Test Purpose name	A SIP_final_Response with encapsulated REL is received after an early dialogue is established (183), a final response is sent		
Test Purpose	Ensure that on receipt of a REL message after an early dialogue due to sending a 183 Session Progress is established a SIP final response is sent. The response code is derived from the Cause value received in the REL according the rules described in table 6.1.1.7-1. The cause value of the received REL is present in the Reason header of the sent final response		
ISUP Parameter values	**ACM:** BCi Called party status = no indication oBCi in-band info available **REL:** Cause indicator Cause Value = **Cause_value**		
SIP Parameter values	4xx/5xx/6xx: Reason: Q.850ause = **Cause_value**		
Comments			

Message flows

SIP NNI		**MGCF**		**SIP-I**
INVITE	→		→	INVITE (IAM)
183 Session Progress	←		←	183 Session Progress (ACM)
SIP_final_Response	←		←	SIP_final_Response (REL)
ACK	→		→	(ACK) RLC

TP number	TP_107_006	**Reference**	[1], clause 7.2.2 [2], clause 7.2.3.1.8
TSS reference	SIP NNI - SIP-I/Basic call/Receipt_of_REL/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	An ATP Progress indicator IE present in a SIP_final_Response with encapsulated REL is mapped into the PSTN XML ProgressIndicator in the sent final response		
Test Purpose	Ensure that on receipt of a SIP_final_Response with encapsulated REL message and Progress Indicator IE is present in an ATP, a SIP final response as indicated in table 6.1.1.7-5 is sent, a PSTN XML ProgressIndicator is contained and the Progress Description is derived from the received REL Progress indicator as indicated in table 6.1.1.7-2		
ISUP Parameter values	**REL:** ATP Progress Indicator = **PI_value**		
SIP Parameter values	4xx/5xx/6xx: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet3 CodingStandard>00< Location<yyyy> ProgressOctet4 ProgressDescription>**PI_value**<		
Comments			

Message flows

SIP NNI		**MGCF**		**SIP-I**
INVITE	→		→	(INVITE) IAM
180 Ringing	←		←	180 Ringing (ACM)
SIP_final_Response	←		←	SIP_final_Response (REL)
ACK	→		→	ACK (RLC)

TP number	TP_107_007	**Reference**	[1], clause 7.2.2 [2], clause 7.2.3.1.8
TSS reference	SIP NNI - SIP-I/Basic call/Receipt_of_REL/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	An ATP High Layer Compatibility IE present in a REL is mapped into the PSTN XML HighLayerCompatibility in the sent final response		
Test Purpose	Ensure that on receipt of a SIP_final_Response with encapsulated REL message and High Layer Compatibility IE is present in an ATP, a SIP final response as indicated in table 6.1.1.7-5 is sent, a PSTN XML HighLayerCompatibility is contained and the HighLayerCharacteristics is derived from the received REL High Layer Compatibility as indicated in table 6.1.1.7-3		
ISUP Parameter values	**REL:** ATP High Layer Compatibility = **HLC_value**		
SIP Parameter values	4xx/5xx/6xx: <?xml version="1.0" encoding="utf-8"?> PSTN HighLayerCompatibility HLOctet3 CodingStandard>00< Interpretation>100< PresentationMethod>01< HLOctet4 HighLayerCharacteristics>**HLC_value**<		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	180 Ringing ←	←	180 Ringing (ACM)
	SIP_final_Response ←	←	SIP_final_Response (REL)
	ACK →	→	(ACK) RLC

TP number	TP_107_008	**Reference**	[1], clause 7.2.2 [2], clause 7.2.3.1.8
TSS reference	SIP NNI - SIP-I/Basic call/Receipt_of_REL/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	An ATP Low Layer Compatibility IE present in a REL is mapped into the PSTN XML LowLayerCompatibility in the sent final response		
Test Purpose	Ensure that on receipt of a SIP_final_Response with encapsulated REL message and Low Layer Compatibility IE is present in an ATP, a SIP final response as indicated in table 6.1.1.7-5 is sent, a PSTN XML LowLayerCompatibility is contained and the InformationTransferCapability is derived from the received REL Low Layer Compatibility as indicated in table 6.1.1.7-4		
ISUP Parameter values	**REL:** ATP Low Layer Compatibility = **ITC_value**		
SIP Parameter values	4xx/5xx/6xx: <?xml version="1.0" encoding="utf-8"?> PSTN LowLayerCompatibility> LLOctet3> CodingStandard>00< InformationTransferCapability>**ITC_value**< LLOctet4> TransferMode>00< InformationTransferRate>10000<		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	180 Ringing ←	←	180 Ringing (ACM –free)
	SIP_final_Response ←	←	SIP_final_Response (REL)
	ACK →	→	(ACK) RLC

Table 6.1.1.7-1: Receipt of the Release message (REL)

	← SIP_final_Response	← REL
	Status code	Cause parameter
VA_01	404 Not Found	Cause value No. 1 (unallocated (unassigned) number)
VA_02	604 Does not exist anywhere	Cause value No 2 (no route to network)
VA_03	604 Does not exist anywhere	Cause value No 3 (no route to destination)
VA_04	500 Server Internal error	Cause value No. 4 (Send special information tone)
VA_05	404 Not Found	Cause value No. 5 (Misdialled trunk prefix)
VA_06	486 Busy Here	Cause value No. 17 (user busy)
VA_07	480 Temporarily unavailable	Cause value No 18 (no user responding)
VA_08	480 Temporarily unavailable	Cause value No 19 (no answer from the user)
VA_09	480 Temporarily unavailable	Cause value No. 20 (subscriber absent)
VA_10	603 Decline	Cause value No 21 (call rejected), Location = 000 / user (U)
VA_11	403 Forbidden	Cause value No 21 (call rejected) , Location not equal 000 / user (U)
VA_12	410 Gone	Cause value No 22 (number changed)
VA_13	410 Gone	Cause value No 23 (Re-route to new destination)
VA_14	433 Anonymity Disallowed	Cause value No. 24 (call rejected due to ACR supplementary service)
VA_15	483 Too many hops	Cause value No 25 (Exchange routing error)
VA_16	480 Temporarily unavailable	Cause value No 26 (Non-selected user clearing)
VA_17	502 Bad Gateway	Cause value No 27 (destination out of order)
VA_18	484 Address Incomplete	Cause value No. 28 invalid number format (address incomplete)
VA_19	501 Not Implemented	Cause value No 29 (facility rejected)
VA_20	480 Temporarily unavailable	Cause value No 31 (normal unspecified) (class default)
VA_21	486 Busy here	Cause value No 34 (No circuit/channel available) CCBS indicator = CCBS possible
VA_22	480 Temporarily unavailable	Cause value No 34 (No circuit/channel available) CCBS indicator = CCBS not possible or absent
VA_23	500 Server Internal error	Cause value No 38 (Network out of order)
VA_24	503 Service Unavailable	Cause value No 41 (Temporary failure)
VA_25	503 Service Unavailable	Cause value No 42 (Switching equipment congestion)
VA_26	500 Server Internal error	Cause value No 43 (Access information discarded)
VA_27	503 Service Unavailable	Cause value No 44 (Requested channel not available)
VA_28	500 Server Internal error	Cause value No 46 (Precedence call blocked)
VA_29	503 Service Unavailable	Cause value No 47 (Resource unavailable (class default))
VA_30	488 Not acceptable here	Cause value No 50 (requested facility no subscribed)
VA_31	603 Decline	Cause value No 55 (Incoming class barred within Closed User Group (CUG))
VA_32	603 Decline	Cause value No 57 (bearer capability not authorized)
VA_33	503 Service Unavailable	Cause value No 58 (bearer capability not presently available)
VA_34	501 Not Implemented	Cause value No 63 (service option not available, unspecified) (class default)
VA_35	500 Server Internal error	Cause value No 65 Bearer capability not implemented
VA_36	501 Not Implemented	Cause value No 69 (Requested facility not implemented)
VA_37	501 Not Implemented	Cause value No 70 (Only restricted digital information capability available)

	← SIP_final_Response	← REL
	Status code	Cause parameter
VA_38	501 Not Implemented	Cause value No 79 (Service or option not implemented(class default))
VA_39	403 Forbidden	Cause value No 87 (User not member of Closed User Group(CUG))
VA_40	606 Not acceptable	Cause value No 88 (incompatible destination)
VA_41	403 Forbidden	Cause value No 90 (Non existing Closed User Group (CUG))
VA_42	500 Server Internal error	Cause value No 91 (invalid transit network selection)
VA_43	500 Server Internal error	Cause value No 95 (invalid message) (class default)
VA_44	501 Not Implemented	Cause value No 97 (Message type non-existent or not implemented)
VA_45	501 Not Implemented	Cause value No 99 (information element/parameter non-existent or not implemented))
VA_46	501 Not Implemented	Cause value No 98 (Message not compatible with call state or message type non-existent or not implemented)
VA_47	480 Temporarily unavailable	Cause value No. 102 (recovery on timer expiry)
VA_48	501 Not Implemented	Cause value No 103 (Non-existent parameter passed on)
VA_49	501 Not Implemented	Cause value No 110 (Message with unrecognized Parameter, discarded)
VA_50	400 Bad Request	Cause value No. 111 (protocol error, unspecified) (class default)
VA_51	500 Server Internal error	Cause value No. 127 (interworking unspecified) (class default)

Table 6.1.1.7-2: Mapping of Progress Indicator information element to PSTN XML ProgressIndicator

PI_value	ATP Progress Indicator value	XML ProgressIndicator ProgressDescription
PI_VA_1	Call is not end-to-end ISDN; further call progress information may be available in-band	'0000001'
PI_VA_2	Destination address is non-ISDN	'0000010'
PI_VA_3	Origination address is non-ISDN	'0000011'
PI_VA_4	Call has returned to the ISDN	'0000100'
PI_VA_5	Interworking has occurred and has resulted in a telecommunication service change	'0000101'
PI_VA_6	In-band information or an appropriate pattern is now available	'0001000'

Table 6.1.1.7-3: Mapping of High layer compatibility information element to PSTN XML HighLayerCharacteristic

HLC_value	DSS1 High layer characteristics identification	XML HighLayerCharacteristic
HLC_VA_1	Telephony	'0000001'
HLC_VA_2	Facsimile Group 2/3	'0000100'
HLC_VA_3	Facsimile Group 4 Class I	'0100001'
HLC_VA_4	Facsimile service Group 4, Classes II and III	'0100100'
HLC_VA_5	Syntax based Videotex	'0110010'
HLC_VA_6	International Videotex interworking via gateways or interworking units	'0110011'
HLC_VA_7	Telex service	'0110101'
HLC_VA_8	FTAM application	'1000010'
HLC_VA_9	Videotelephony	'1100000'

Table 6.1.1.7-4: Mapping of Low Layer Compatibility to PSTN XML LowLayerCompatibility

ITC_value	LLC Information transfer capability	XML LLC InformationTransferCapability
ITC_VA_1	Speech	'00000'
ITC_VA_2	3,1 kHz audio	'10000'
ITC_VA_3	Unrestricted digital info	'01001'
ITC_VA_4	7 kHz audio	'10001'

Table 6.1.1.7-5: Receipt of the Release message (REL)

	← SIP_final_Response	← REL
	Status code	Cause parameter
VA_01	480 Temporarily unavailable	Cause value No 19 (no answer from the user)
VA_02	603 Decline	Cause value No 21 (call rejected), Location = 000 / user (U)
VA_03	501 Not Implemented	Cause value No 63 (service option not available, unspecified) (class default)
VA_04	480 Temporarily unavailable	Cause value No. 102 (recovery on timer expiry)
VA_05	500 Server Internal error	Cause value No. 127 (interworking unspecified) (class default)

6.1.1.8 Void

6.1.1.9 Void

6.1.1.10 Void

6.1.2 Signalling Interworking of a Call from SIP-I based circuit-switched core network towards the IP Multimedia Subsystem

6.1.2.1 Sending of INVITE

TP number	TP_201_001	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.1
TSS reference	SIP-I-SIP/Basic call/Sending_of_INVITE/		
Selection criteria			
Test Purpose name	IAM received, a INVITE is sent		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM message, an INVITE request is sent		
ISUP Parameter values			
SIP Parameter values			
Comments			
Message flows	**SIP I** **MGCF** **SIP-NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_201_004	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.1.3
TSS reference	SIP-I-SIP/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.1/11		
Test Purpose name	Information request procedure successful, Calling party number in INF received		
Test Purpose	Ensure that on receipt of an IAM and no Calling party number is present, an Information Request (INR) message is sent. On receipt of an Information (INF) message containing a calling party number the initial INVITE request is sent		
ISUP Parameter values	**IAM:** No calling party number present **INR:** Calling party address request indicator=calling party address requested **INF:** Calling party address response=calling party address included Calling party number		
SIP Parameter values			
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP-NNI**
	INVITE (IAM) →		
	183 Session Progress (INR) ←		
	INFO (INF) →	→	INVITE
	200 OK (INFO) ←	←	100 Trying
	Apply post test routine		

TP number	TP_201_005	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.1.3
TSS reference	SIP-I-SIP/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.1/11 AND PICS 6.2.1/12		
Test Purpose name	Information request procedure not successful, no Calling party number in INF received, the call is rejected		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and no Calling party number is present, an Information Request (INR) message is sent. On receipt of an Information (INF) message and no Calling party number is present, the call is rejected		
ISUP Parameter values	**IAM:** No calling party number present **INR:** Calling party address request indicator=calling party address requested **INF:** Calling party address response=calling party address not included		
SIP Parameter values			
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP-NNI**
	INVITE (IAM) →		
	183 Session Progress (INR) ←		
	INFO (INF) →		
	4xx/5xx/6xx (REL) ←		
	ACK →		
	Apply post test routine		

TP number	TP_201_006	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.1.3
TSS reference	SIP-I-SIP/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.1/11 AND NOT PICS 6.2.1/12		
Test Purpose name	Information request procedure not successful, no Calling party number in INF received, the call is continued		
Test Purpose	Ensure that on receipt of an IAM and no Calling party number is present, an Information Request (INR) message is sent. On receipt of an Information (INF) message and no Calling party number is present, the call is continued		
ISUP Parameter values	**IAM:** No calling party number present **INR:** Calling party address request indicator=calling party address requested **INF:** Calling party address response=calling party address not included		
SIP Parameter values			
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP-NNI**
	INVITE (IAM) →		
	183 Session Progress (INR) ←		
	INFO (INF) →	→	INVITE
		←	100 Trying
	Apply post test routine		

TP number	TP_201_007	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.1.3
TSS reference	SIP-I-SIP/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.1/11		
Test Purpose name	Information request procedure not successful, T 33 is expired		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and no Calling party number is present, an Information Request (INR) message is sent. If timer T33 is expired, the call is rejected		
ISUP Parameter values	**IAM:** No calling party number present **INR:** Calling party address request indicator=calling party address requested		
SIP Parameter values			
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP-NNI**
	INVITE (IAM) →		
	183 Session Progress (INR) ←	Start T_{33}	
	4xx/5xx/6xx (REL) ←	T_{33} Expiry	
	ACK →		
	Apply post test routine		

TP number	TP_201_009	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.1.4 b)
TSS reference	SIP-I-SIP/Basic call/Sending_of_INVITE/		
Selection criteria			
Test Purpose name	End of address signalling determined by receipt of the **maximum number of digits** used in the national numbering plan		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and the called party number contains **maximum number of digits used in the national numbering plan**, the initial INVITE is sent		
ISUP Parameter values			
SIP Parameter values			
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP-NNI**
	INVITE (IAM) →	→	INVITE
		←	100 Trying
	Apply post test routine		

TP number	TP_201_010	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.1.4 c)
TSS reference	SIP-I-SIP/Basic call/Sending_of_INVITE/		
Selection criteria			
Test Purpose name	End of address signalling determined by receipt of **sufficient number of digits** to route the call to the called party		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and the called party number contains a **sufficient number of digits to route the call to the called party**, the initial INVITE is sent		
ISUP Parameter values			
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **SIP-NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_201_015	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.1.4
TSS reference	SIP-I-SIP/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.3/3		
Test Purpose name	A PSTN XML SendingCompleteIndication is sent if the end of the address signalling is determined		
Test Purpose	Ensure that the end of the address signalling is determined a PSTN XML SendingCompleteIndication is sent		
ISUP Parameter values			
SIP Parameter values	INVITE <?xml version="1.0" encoding="utf-8"?> PSTN sendingCompleteIndication</		
Comments			
Message flows	**SIP-I** **MGCF** **SIP-NNI** INVITE (IAM) → → INVITE **Apply post test routine**		

TP number	TP_201_023	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.1.5
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.1/5 AND PICS 6.2.4/1 AND PICS 6.2.4/8		
Test Purpose name	Mapping of USI and USI prime into PSTN XML BearerCapability element		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM that includes a USI and USI Prime parameter then the SUT: • Map the USI Prime into the second Bearer Capability stated in the XML BearerCapability element and • The first offered codec is the CLEARMODE codec • Map the USI into the first Bearer Capability stated in the XML BearerCapability element and • The second offered codec is a Audio codec		
ISUP Parameter values	**IAM:** USI=speech or 3,1 kHz audio USI prime=unrestricted digital info with T/A TMR Prime: 64 kBit/s preferred ATP(HLC Video Telephony)		
SIP Parameter values	**INVITE:** <?xml version="1.0" encoding="utf-8"?> PSTN BearerCapability BCoctet3 CodingStandard>00< InformationTransferCapability>mapped from USI< …. BearerCapability BCoctet3 CodingStandard>00< InformationTransferCapability>mapped from USI prime< …. SDP: m=audio <proper port number> RTP/AVP CLEARMODE 8 …		
Comments			
Message flows	**SIP-I** **MGCF** **SIP-NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_201_024	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria			
Test Purpose name	Called party number is mapped into Request URI in the sent INVITE request		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM the called party number is mapped into the Request URI of the sent INVITE request: • If the nature of address indicator is set to 'National (significant) number' then the country code of the network in which the SUT is located and a leading '+' is inserted before the number digits received in the Called party number • If the nature of address set to 'International number' a '+' is inserted before the number digits received in the Called party number		
ISUP Parameter values	**IAM:** Called party number= National (significant) number or International number		
SIP Parameter values	**INVITE: Request URI** sip: '+CC' <called party number digits>@hostportion; user=phone or tel: '+CC' <called party number digits> if the called party number is a **national number** sip: '+' <called party number digits>@hostportion; user=phone or tel: '+' <called party number digits> if the called party number is an **international number**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP-NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_201_025	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria			
Test Purpose name	Called party number is mapped into To header in the sent INVITE request		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM the called party number is mapped into the To header of the sent INVITE request: • If the nature of address indicator is set to 'National (significant) number' then the country code of the network in which the SUT is located and a leading '+' is inserted before the number digits received in the Called party number • If the nature of address set to 'International number' a '+' is inserted before the number digits received in the Called party number		
ISUP Parameter values	**IAM:** Called party number= National (significant) number or International number		
SIP Parameter values	**INVITE: To** sip: '+CC' <called party number digits>@hostportion; user=phone or tel: '+CC' <called party number digits> if the called party number is a **national number** sip: '+' <called party number digits>@hostportion; user=phone or tel: '+' <called party number digits> if the called party number is an **international number**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP-NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_201_026	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2.2
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.4/3		
Test Purpose name	Mapping of TMR speech into SDP		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM the **TMR speech** is mapped into the SDP m-line a a attributes		
ISUP Parameter values	**IAM:** TMR=speech		
SIP Parameter values	**INVITE:** SDP m=audio <port #> RTP/AVP 0 [additional codes] a=rtpmap: 0 PCMU/8000 OR m=audio <port #> RTP/AVP 8 [additional codes] a=rtpmap: 8 PCMA/8000 OR m=audio <port #> RTP/AVP <dynamic-PT> [additional codes] a=rtpmap: <dynamic-PT> PCMU/8000 OR m=audio <port #> RTP/AVP <dynamic-PT> [additional codes] a=rtpmap: <dynamic-PT> PCMA/8000		
Comments			
Message flows	**SIP-I** **MGCF** **SIP-NNI** IAM → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_201_026A	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2.2
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.4/4		
Test Purpose name	Mapping of TMR 3,1 kHz audio into SDP		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM the **TMR 3,1 kHz audio** is mapped into the SDP m-line a attributes		
ISUP Parameter values	**IAM:** TMR=TMR_value		
SIP Parameter values	**INVITE:** SDP m=audio <port #> RTP/AVP 0 [additional codes] a=rtpmap: 0 PCMU/8000 OR m=audio <port #> RTP/AVP 8 [additional codes] a=rtpmap: 8 PCMA/8000 OR m=audio <port #> RTP/AVP <dynamic-PT> [additional codes] a=rtpmap: <dynamic-PT> PCMU/8000 OR m=audio <port #> RTP/AVP <dynamic-PT> [additional codes] a=rtpmap: <dynamic-PT> PCMA/8000		
Comments			
Message flows	**SIP-I** **MGCF** **SIP-NNI** IAM → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_201_026B	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2.2
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.4/2		
Test Purpose name	Mapping of TMR 64 kBit/s unrestricted into SDP		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM the **TMR 64 kBit/s unrestricted** is mapped into the SDP m-line a attributes		
ISUP Parameter values	**IAM:** TMR=64 kBit/s unrestricted		
SIP Parameter values	**INVITE:** SDP m=audio <port #> RTP/AVP <dynamic-PT> a=rtpmap: <dynamic-PT> CLEARMODE/8000		
Comments			
Message flows	**SIP-I** **MGCF** **SIP-NNI** IAM → → INVITE ← 100 Trying **Apply post test routine**		

Table 6.1.2.1-1: Void

TP number	TP_201_027	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2.2
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria			
Test Purpose name	AMR codec included		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM an INVITE is sent. If the received IAM contains a TMR set to speech or 3,1 kHz audio, the SDP in the sent INVITE contains an AMR codec		
ISUP Parameter values	**IAM:** TMR=speech or 3,1 kHz audio		
SIP Parameter values	**INVITE:** SDP: m=audio <proper port number> RTP/AVP … Dynamic PT a = <rtpmap Dynamic PT> AMR		
Comments			
Message flows	**SIP-I** **MGCF** **SIP-NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_201_028	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2.2
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.4/3		
Test Purpose name	Mapping of USI parameter Information Transfer Capability speech		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM the USI Information Transfer Capability **speech** and User Information Layer 1 Protocol Indicator *"G.711 μ-law" or "G.711 A-law* is mapped into the SDP m-line **audio** codec PCMA or PCMU		
ISUP Parameter values	**IAM:** User service information USI Information Transfer Capability **speech** Information Layer 1 Protocol Indicator G.711 μ-law or G.711 A-law		
SIP Parameter values	**INVITE:** SDP m=<port> RTP/AVP 8 a= rtpmap: 8 PCMA/8000 or m=audio <port> RTP/AVP 0 a= rtpmap:0 PCMU/8000		
Comments			
Message flows	**SIP-I** **MGCF** **SIP-NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_201_028A	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2.2
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.4/7		
Test Purpose name	Mapping of USI parameter Information Transfer Capability 3.1 kHz audio and HLC Facsimile Group 2/3		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM the USI Information Transfer Capability **3.1 kHz audio** and User Information Layer 1 Protocol Indicator *"G.711 μ-law" or "G.711 A-law* and ATP HLC "**Facsimile Group 2/3**" is mapped into the SDP m-line **image** udptl or tcptl.		
ISUP Parameter values	**IAM:** User service information USI Information Transfer Capability 3.1 kHz audio ATP High Layer Compatibility High Layer Characteristics Facsimile Group 2/3		
SIP Parameter values	**INVITE:** SDP m=image udptl t38 or m=image tcptl t38		
Comments			
Message flows	**SIP-I** **MGCF** **SIP-NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_201_028B	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2.2
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.4/2		
Test Purpose name	Mapping of USI parameter Information Transfer Capability UDI		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM the USI Information Transfer Capability **Unrestricted digital information** is mapped into the SDP m-line **audio** codec CLEARMODE		
ISUP Parameter values	**IAM:** User service information USI Information Transfer Capability Unrestricted digital information		
SIP Parameter values	**INVITE:** SDP m=<media> RTP/AVP <Dynamic payload type> a= rtpmap: <Dynamic payload type> CLEARMODE/8000		
Comments			
Message flows	**SIP-I** **MGCF** **SIP-NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

Table 6.1.2.1-2: Void

TP number	TP_201_029	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2.3A
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria			
Test Purpose name	Mapping of Calling party's category into cpc parameter		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM the calling party's category **CPC_value** is mapped into the 'cpc' parameter in the P-Asserted-Identity and the Accept-Language header in the sent INVITE as described in table 6.1.2.1-3		
ISUP Parameter values	**IAM:** Calling party's category		
SIP Parameter values	**INVITE:** P-Asserted-Identity		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

Table 6.1.2.1-3: Mapping of Calling's party category into 'cpc' parameter and Accept-Language header

CPC_value	**ISUP IAM parameter**	**SIP Parameters**	
	Calling party's category	**"cpc" URI parameter in P-Asserted-Identity**	**Accept-Language**
VA_01	operator, language French	Operator	fr
VA_02	operator, language English	Operator	en
VA_03	operator, language German	Operator	de
VA_04	operator, language Russian	Operator	ru
VA_05	operator, language Spanish	Operator	es
VA_06	ordinary calling subscriber	Ordinary	
VA_07	Test call	Test	
VA_08	Payphone	Payphone	
VA_09	calling party's category unknown at this time	Unknown	
VA_10	mobile terminal located in the home PLMN	mobile-hplmn	
VA_11	mobile terminal located in a visited PLMN	mobile-vplmn	
VA_12	emergency service call per ANSI Standard	emergency	

TP number	TP_201_030	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2.4
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.1/8		
Test Purpose name	HOP counter procedure supported		
Test Purpose	Ensure that on receipt of the HOP counter parameter, the value is mapped into the Max-Forwards header. The value of the Max-Forwards header is created from the HOP counter value by applying a given factor		
ISUP Parameter values	**IAM:** HOP		
SIP Parameter values	**INVITE:** Max-Forwards		
Comments	The factor used to map from Hop Counter to Max-Forwards for a given call will depend on call origin, and will be provisioned at the O-MGCF based on network topology, trust domain rules, and bilateral agreement.		
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_201_031	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2.5
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria			
Test Purpose name	The O-MGCF inserts an IMS Communication Service Identifier		
Test Purpose	For speech and video calls, the SUT shall insert an IMS Communication Service Identifier, indicating the IMS Multimedia Telephony Communication Service		
ISUP Parameter values			
SIP Parameter values	**INVITE:** Contact: icsi-ref Accept-Contact: P-Asserted-Service: urn:urn-7:3gpp-service.ims.icsi.mmtel		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_201_032	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2.6
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.1/9		
Test Purpose name	Support of P-Early-Media header		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM a P-Early-Media header is present in the sent INVITE request		
ISUP Parameter values			
SIP Parameter values	**INVITE:** P-Early-Media: supported		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_201_033	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2.7
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of High Layer Compatibility IE into PSTN XML HighLayerCompatibility		
Test Purpose	Ensure stat on receipt of an INVITE with encapsulated IAM and an ATP parameter is present containing a High Layer Compatibility IE a PSTN XML HighLayerCompatibility element is present derived according the HLC_VA as indicated in table 6.1.2.1-4		
ISUP Parameter values	**IAM:** ATP High Layer Compatibility High Layer Characteristics=**HLC_VA**		
SIP Parameter values	**INVITE:** PSTN XML MIME body <?xml version="1.0" encoding="utf-8"?> PSTN HighLayerCompatibility HLOctet3 CodingStandard>00< Interpretation>100< PresentationMethod>01< HLOctet4 HighLayerCharacteristics>**HLC_VA**<		
Comments			
Message flows	**SIP-I** → **MGCF** → **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

Table 6.1.2.1-4: Mapping of ISUP ATP High layer compatibility into PSTN XML HighLayerCharacteristic

HLC_VA	DSS1 High layer characteristics identification	XML HighLayerCharacteristic
HLC_VA_1	Telephony	'0000001'
HLC_VA_2	Facsimile Group 2/3	'0000100'
HLC_VA_3	Facsimile Group 4 Class I	'0100001'
HLC_VA_4	Facsimile service Group 4, Classes II and III	'0100100'
HLC_VA_5	Syntax based Videotex	'0110010'
HLC_VA_6	International Videotex interworking via gateways or interworking units	'0110011'
HLC_VA_7	Telex service	'0110101'
HLC_VA_8	FTAM application	'1000010'

TP number	TP_201_034	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2.7
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of Low Layer Compatibility IE into PSTN XML LowLayerCompatibility		
Test Purpose	Ensure stat on receipt of an INVITE with encapsulated IAM and an ATP parameter is present containing a Low Layer Compatibility IE a PSTN XML LowLayerCompatibility element is present derived according the ITC_VA as indicated in table 6.1.2.1-5		
ISUP Parameter values	**IAM:** ATP Low Layer Compatibility InformationTransferCapability=**ITC_VA**		
SIP Parameter values	**INVITE:** <?xml version="1.0" encoding="utf-8"?> PSTN LowLayerCompatibility> LLOctet3> CodingStandard>00< InformationTransferCapability>**ITC_VA**< LLOctet4> TransferMode>00< InformationTransferRate>10000<		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

Table 6.1.2.1-5: Mapping of ISUP ATP Low Layer Compatibility into PSTN XML LowLayerCompatibility

ITC_VA	LLC Information transfer capability	XML LLC InformationTransferCapability
ITC_VA_1	Speech	'00000'
ITC_VA_2	3,1 kHz audio	'10000'
ITC_VA_3	Unrestricted digital info	'01001'
ITC_VA_4	7 kHz audio	'10001'

TP number	TP_201_035	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2.7
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of Bearer Capability IE into PSTN XML BearerCapability		
Test Purpose	Ensure stat on receipt of an INVITE with encapsulated IAM and an USI parameter is present ,a PSTN XML BearerCapability element is present derived according the ITC_value as indicated in table 6.1.2.1-6		
ISUP Parameter values	**IAM:** USI Information Transfer Capability=**ITC_value**		
SIP Parameter values	**INVITE:** <?xml version="1.0" encoding="utf-8"?> PSTN BearerCapability BCoctet3 CodingStandard>00< InformationTransferCapability>ITC_value< BCoctet4 TransferMode>00< InformationTransferRate>10000<		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

Table 6.1.2.1-6: Mapping of ISUP User Service Information into PSTN XML BearerCapability

ITC_value	USI Information transfer capability	XML InformationTransferCapability
VA_01	Speech	'00000'
VA_02	3,1 kHz audio	'10000'
VA_03	unrestricted digital information	'01000'

TP number	TP_201_036	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2.7
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.1/5 AND PICS 6.2.1/22		
Test Purpose name	Mapping of ISUP UTI parameter into PSTN XML BearerCapability		
Test Purpose	Ensure stat on receipt of an INVITE with encapsulated IAM and an User Teleservice Information parameter is present, a PSTN XML HighLayerCompatibility element is present derived according the HLC_value as indicated in table 6.1.2.1-7		
ISUP Parameter values	**IAM:** UTI High Layer Characteristics>**HLC_value**		
SIP Parameter values	**INVITE:** PSTN XML MIME body <?xml version="1.0" encoding="utf-8"?> PSTN HighLayerCompatibility HLOctet3 CodingStandard>00< Interpretation>100< PresentationMethod>01< HLOctet4 HighLayerCharacteristics>**HLC_value**<		
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →		→ INVITE
			← 100 Trying
		Apply post test routine	

Table 6.1.2.1-7: Mapping of User Teleservice Information into PSTN XML HighLayerCharacteristic

HLC_value	DSS1 High layer characteristics identification	XML HighLayerCharacteristic
VA_01	Telephony	'0000001'
VA_02	Facsimile Group 2/3	'0000100'
VA_03	Facsimile Group 4 Class I	'0100001'
VA_04	Facsimile service Group 4, Classes II and III	'0100100'
VA_05	Syntax based Videotex	'0110010'
VA_06	International Videotex interworking via gateways or interworking units	'0110011'
VA_07	Telex service	'0110101'
VA_08	FTAM application	'1000010'
VA_09	Videotelephony	'1100000'

TP number	TP_201_037	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2.8
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of Forward call indicator into PSTN XML ProgressIndicator		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM the ISDN User Part indicator and the ISDN access indicator of the Forward call indicator are mapped into a PSTNXML ProgressIndicator element according the roles PI_value in table 6.1.2.1-8		
ISUP Parameter values	**IAM:** Forward call indicator ISDN User Part indicator ISDN access indicator		
SIP Parameter values	**INVITE:** PSTM XML MIME body <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet3 CodingStandard>00< Location>yyyy< ProgressOctet4 ProgressDescription>**PI_value**<		
Comments	The Progress indicator value 6 is not specified in Q.931		
Message flows	**SIP–I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

Table 6.1.2.1-8: Mapping of Forward call indicator into PSTN XML ProgressIndicator

PI_value	**Forward call indicators parameter**		**PSTN XML body with Progress indicator No**	
	ISDN User Part indicator	**ISDN access indicator**		
VA_01	0 (ISDN User Part not used all the way)		'0000001'	Call is not end-to-end ISDN; further call progress information may be available in-band
VA_02	1 ("ISDN User Part used all the way")	0 ("originating access non - ISDN")	'0000011'	Origination address is non-ISDN
VA_03	1 ("ISDN User Part used all the way")	1 ("originating access ISDN")	'0000110'	

TP number	TP_201_038	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2.7
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of Progress Indicator IE into PSTN XML ProgressIndicator		
Test Purpose	Ensure stat on receipt of an INVITE with encapsulated IAM and an ATP parameter is present containing a Progress Indicator IE a PSTN XML ProgressIndicator element is present derived according the PI_VA as indicated in table 6.1.2.1-9		
ISUP Parameter values	**IAM:** ATP Progress Indicator Progress Description=**PI_VA**		
SIP Parameter values	**INVITE:** <?xml version="1.0" encoding="utf-8"?> PSTN **ProgressIndicator** ProgressOctet3 CodingStandard>00< Location>0000< ProgressOctet4 ProgressDescription>**PI_VA**<		
Comments			
Message flows	**SIP-I-** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

Table 6.1.2.1-9: Mapping of ISUP ATP Progress Indicator into PSTN XML ProgressIndicator

PI_VA	ATP Progress Indicator value	XML ProgressIndicator ProgressDescription
PI_VA_1	Call is not end-to-end ISDN; further call progress information may be available in-band	'0000001'
PI_VA_2	Destination address is non-ISDN	'0000010'
PI_VA_3	Origination address is non-ISDN	'0000011'
PI_VA_4	Call has returned to the ISDN	'0000100'
PI_VA_5	Interworking has occurred and has resulted in a telecommunication service change	'0000101'
PI_VA_6	In-band information or an appropriate pattern is now available	'0001000'

TP number	TP_201_039	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2A1.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.2/1		
Test Purpose name	Number Portability Separate Directory Number Addressing Method is used		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and the Called Directory Number is present **Nature of address indicator:** "Network routing number in national (significant) number format" or "National (significant) number" or "Network routing number in network specific number format", an INVITE us sent The **userpart** of the **request URI** is derived from the Called Directory Number. '+CC' is inserted before the digitstring: • The **rn parameter** of the **request URI** is derived from the Called Party Number. '+CC' is inserted before the digitstring • The **npdi** URI parameter is added to the **request URI** The userpart of the **To header** field is derived from the Called Directory Number. '+CC' is inserted before the digitstring: • The **rn parameter** of the **request URI** is derived from the Called Party Number. '+CC' is inserted before the digitstring • The **npdi** URI parameter is added to the **request URI**		
ISUP Parameter values	**IAM:** Called party number "National (significant) number" Called Directory Number **Nature of address indicator:** "Network routing number in national (significant) number format" or "National (significant) number" or "Network routing number in network specific number format"		
SIP Parameter values	**INVITE:** Request line <+CC Called Directory Number>; rn= +CC Called party number;npdi To: <+CC Called Directory Number>; rn= +CC Called party number;npdi		
Comments			
Message flows	**SIP-** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_201_040	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2A1.2
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.2/2		
Test Purpose name	Number Portability Concatenated Addressing Method is used.		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and the Called Directory Number is not present, the **Nature of address indicator of the Called party number** is set to: "Network routing number concatenated with called directory number" or "National (significant) number", an INVITE us sent The **userpart** of the **request URI** is derived from the Called Party Number - the prefix representing the Portability routing number is removed. '+CC' is inserted before the digitstring: • The **rn parameter** of the **request URI** is derived from the Called Party Number. The digits follow the prefix representing the Portability Routing Number are removed from the digitstring. '+CC' is inserted before the digitstring • The **npdi** URI parameter is added to the **request URI** The userpart of the **To header** field is derived from the Called Party Number- the prefix representing the Portability routing number is removed. '+CC' is inserted before the digitstring: • The **rn parameter** of the **request URI** is derived from the Called Party Number. The digits follow the prefix representing the Portability Routing Number are removed from the digitstring. '+CC' is inserted before the digitstring • The **npdi** URI parameter is added to the **request URI**		
ISUP Parameter values	**IAM:** Called party number **Nature of address indicator:** "Network routing number concatenated with called directory number" or "National (significant) number"		
SIP Parameter values	**INVITE:** Request line <+CC Called Party Number>; rn= <+CC Portability Routing Number>;npdi To: <+CC Called Party Number>; rn= <+CC Portability Routing Number>;npdi		
Comments			
Message flows	**SIP-I** → **MGCF** → **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_201_041	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2A1.3
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.2/3		
Test Purpose name	Number Portability Separate Network Routing Number Addressing Method is used.		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and the Network Routing Number is present **Nature of address indicator:** "Network routing number in national (significant) number format" or "Network routing number in network specific number format", an INVITE us sent The **userpart** of the **request URI** is derived from the Called Party Number. '+CC' is inserted before the digitstring: • The **rn parameter** of the **request URI** is derived from the Network Routing Number. '+CC' is inserted before the digitstring • The **npdi** URI parameter is added to the **request URI** The userpart of the **To header** field is derived from the Called Party Number. '+CC' is inserted before the digitstring: • The **rn parameter** of the **request URI** is derived from the Network Routing Number. '+CC' is inserted before the digitstring • The **npdi** URI parameter is added to the **request URI**		
ISUP Parameter values	**IAM:** Called party number "National (significant) number" Network Routing Number **Nature of address indicator:** "Network routing number in national (significant) number format" or "National (significant) number" or "Network routing number in network specific number format"		
SIP Parameter values	**INVITE:** Request line <+CC Called Party Number>; rn= <+CC Network Routing Number>;npdi To: <+CC Called Party Number>; rn= <+CC Network Routing Number>;npdi		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_201_042	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.2B.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_INVITE/		
Selection criteria	PICS 6.2.2/5 AND PICS 6.2.2/8		
Test Purpose name	Mapping of ISUP carrier selection information into 'cic' URI parameter		
Test Purpose	Ensure that on receipt of an IAM and a Transit Network Selection parameter is present, the value of the Transit Network Selection parameter is sent in the **cic** URI parameter of the **Request URI** of the sent INVITE request		
ISUP Parameter values	**IAM:** Transit Network Selection		
SIP Parameter values	**INVITE:** Request URI sip: <called party number;cic=TNS value		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

Table 6.1.2.1-10: Void

6.1.2.2 Updating Precondition Information

TP number	TP_202_001	**Reference**	[1], clause 7.3.4
TSS reference	SIP-I - SIP NNI /Basic call/ Updating Precondition Information /		
Selection criteria	PICS 7.2.1/3		
Test Purpose name	Update received after INVITE was sent		
Test Purpose	For each early SIP dialogue for which a provisional response has been received from the succeeding node indicating support for preconditions the MGCF, using an UPDATE or a PRACK request, shall send a confirmation that all the required preconditions have been met.		
ISUP Parameter values			
SIP Parameter values			
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →		→ INVITE
	100 Trying ←		← 100 Trying
	183 Session Progress ←		← 183 Session Progress
	PRACK →		→ PRACK
	200 OK (PRACK) ←		← 200 OK (PRACK)
	UPDATE →		→ UPDATE
	200 OK(UPDATE) ←		← 200 OK(UPDATE)
	Apply post test routine		

TP number	TP_202_002	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.12
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_4xx-5xx-6xx/		
Selection criteria			
Test Purpose name	Mapping of unsuccessful final responses to ISUP/BICC Release messages		
Test Purpose	A 580 Precondition failure response has been received from the succeeding IMS node as a response either to the INVITE request, to the UPDATE request or to the PRACK request. All early dialogues are considered terminated upon reception of the 580 Precondition failure response to the INVITE request. The MGCF shall release the call with REL message with Cause Code '127 Interworking' to be sent to the SIP-I based circuit-switched core network. The MGCF shall encapsulate the REL message into the 480 Temporarily unavailable response and send it to the SIP-I based circuit-switched 3GPP core network.		
ISUP Parameter values	**REL:** 127 (interworking unspecified)		
SIP Parameter values	SIP_Response		
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →		→ INVITE
	100 Trying ←		← 100 Trying
	183 Session Progress ←		← 183 Session Progress
	Case A		
	PRACK →		→ PRACK
	200 OK (PRACK) ←		← 200 OK (PRACK)
	480 Temporarily unavailable (127-interworking unspecified) (REL) ←		← 580 Precondition failure
	ACK (RLC) →		→ ACK
	Case B		
	PRACK →		→ PRACK
	200 OK (PRACK) ←		← 200 OK (PRACK)
	UPDATE →		→ UPDATE
	200 OK(UPDATE) ←		← 200 OK(UPDATE)
	480 Temporarily unavailable (127-interworking unspecified) (REL) ←		← 580 Precondition failure
	ACK (RLC) →		→ ACK

6.1.2.3 Sending of ACM and awaiting answer indication

TP number	TP_203_002	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.4
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria			
Test Purpose name	An ACM is sent after a 180 Ringing was received		
Test Purpose	Ensure that on receipt of a 180 Ringing provisional response without P-Early-Media header, the SUT sends a 180 Ringing with an encapsulated ACM. The Called party's status indicator is set to 'subscriber free'. The ringing tone is sent by the SUT		
ISUP Parameter values	**ACM:** Called party's status indicator =subscriber free		
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 180 Ringing (ACM) ← ← 180 Ringing ← *Ringing tone* **Apply post test routine**		

TP number	TP_203_003	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.4
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/9		
Test Purpose name	180 received, a P-Early-Media header is present		
Test Purpose	Ensure that on receipt of a 180 Ringing provisional response with P-Early-Media header does not authorize the backward early media, the SUT sends a 180 Ringing with an encapsulated ACM. The Called party's status indicator is set to 'subscriber free'. The ringing tone is sent by the SUT		
ISUP Parameter values	**ACM:** Called party's status indicator =subscriber free		
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 100 Trying ← ← 100 Trying 180 Ringing (ACM) ← ← 180 Ringing ← *Ringing tone* **Apply post test routine**		

TP number	TP_203_004	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.4
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/9 AND PICS 6.2.1/14		
Test Purpose name	180 received, a P-Early-Media header not authorize early media is present		
Test Purpose	Ensure that on receipt of a 180 Ringing provisional response with P-Early-Media header does not authorize the backward early media, the SUT sends a 180 Ringing with an encapsulated ACM. The Called party's status indicator is set to 'subscriber free'. Based on local knowledge that the call is transited to a PSTN network the SUT does not generate the awaiting answer indication.		
ISUP Parameter values	**ACM:** Called party's status indicator =subscriber free		
SIP Parameter values	180 P-Early-Media: inactive 180 (ACM)		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 180 Ringing (ACM - free) ← ← 180 Ringing ← ← *Early media* **Apply post test routine**		

TP number	TP_203_005	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.4
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/9		
Test Purpose name	181 received, a P-Early-Media header authorize early media is present		
Test Purpose	Ensure that on receipt of a 181 Call is Being Forwarded and a P-Early-Media is present authorizing backward early media, a 181 Call is being forwarded or 183 Session Progress with an encapsulated ACM is sent. The Called party's status indicator is set to 'no indication' and an optional backward call indicator is present, the In-band information indicator is set to 'in-band information or appropriate pattern is now available'. The SUT does not generate the awaiting answer indication		
ISUP Parameter values	**ACM:** Called party's status indicator =no indication oBCi = in-band information or appropriate pattern is now available		
SIP Parameter values	181 P-Early-Media: sendonly 181/183 (ACM)		
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →	→	INVITE
		←	100 Trying
		←	181 Call is Being Forwarded
	CASE A		
	181 Call is Being Forwarded (ACM no indication) ←		
	CASE B		
	183 Session Progress (ACM no indication) ←		
	←	←	*Early media*
	Apply post test routine		

TP number	TP_203_006	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.4
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/9		
Test Purpose name	183 received, a P-Early-Media header authorize early media is present		
Test Purpose	Ensure that on receipt of a 183 Session Progress and a P-Early-Media header is present authorizing backward early media, a 183 Session Progress with an encapsulated ACM is sent. The Called party's status indicator is set to 'no indication' and an optional backward call indicator is present, the In-band information indicator is set to 'in-band information or appropriate pattern is now available'. The SUT does not generate the awaiting answer indication		
ISUP Parameter values	**ACM:** Called party's status indicator =no indication oBCi = in-band information or appropriate pattern is now available		
SIP Parameter values	183 P-Early-Media: sendonly 183 (ACM)		
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →	→	INVITE
		←	100 Trying
	183 Session Progress (ACM no indication) ←	←	183 Session Progress
	←	←	*Early media*
	Apply post test routine		

TP number	TP_203_008	Reference	[1], clause 7.3.1 [2], clause 7.2.3.2.4
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/15		
Test Purpose name	MGW plays out early media associated with the Alert-Info header		
Test Purpose	Ensure that the MGW plays a early media associated with the URL in an Alert-Info header contained in a received 180 Ringing response		
ISUP Parameter values			
SIP Parameter values	180: Alert-Info: < Media resource URL>		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 180 Ringing (ACM free) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_203_010	Reference	[1], clause 7.3.1 [2], clause 7.2.3.2.4
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/9 AND PICS 6.2.1/16		
Test Purpose name	The SUT initiates the sending of awaiting answer indication		
Test Purpose	Ensure that the SUT initiates the sending of awaiting answer indication as indicated in a P-Early-Media received in a 183 Session Progress and the P-Early-Media header authorizes backward early media		
ISUP Parameter values			
SIP Parameter values	183: P-Early-Media: sendonly		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 183 Session Progress (ACM) ← ← 183 Session Progress ← ← *Early media* **Apply post test routine**		

TP number	TP_203_011	Reference	[1], clause 7.3.1 [2], clause 7.2.3.2.5.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria			
Test Purpose name	180 received, coding of Backward call indicator in ACM TMR speech or 3,1 kHz audio		
Test Purpose	INVITE with encapsulated IAM with Transmission Medium Requirement indicator=speech or 3,1 kHz received. Ensure that on receipt of a 180 Ringing response, a 183 Session Progress with an encapsulated ACM is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = subscriber free (01) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = interworking encountered (1) • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = ISDN user part not used all the way (0) • ISDN access indicator = terminating access non-ISDN (0) • Echo control device indicator = incoming echo control device included (1)		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=speech or 3,1 kHz		
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 180 Ringing (ACM) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_203_012	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria			
Test Purpose name	**181** received, coding of Backward call indicator in ACM TMR speech or 3,1 kHz audio		
Test Purpose	INVITE with encapsulated IAM with Transmission Medium Requirement indicator=speech or 3,1 kHz received. Ensure that on receipt of a 181 Call is Being forwarded response, a 181 Being Forwarded or 183 Session Progress with encapsulated ACM is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = no indication (00) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = interworking encountered (1) • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = ISDN user part not used all the way (0) • ISDN access indicator = terminating access non-ISDN (0) • Echo control device indicator = incoming echo control device included (1)		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=speech or 3,1 kHz		
SIP Parameter values	181/183 (ACM): Backward call indicator		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying ← 181 Call is Being forwarded **CASE A** 181 Call is Being forwarded (ACM) ← **CASE B** 183 Session Progress (ACM) ← **Apply post test routine**		

TP number	TP_203_013	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/9 AND NOT PICS 6.2.1/18		
Test Purpose name	183 received, coding of Backward call indicator in ACM TMR speech or 3,1 kHz audio		
Test Purpose	INVITE with encapsulated IAM with Transmission Medium Requirement indicator=speech or 3,1 kHz received. Ensure that on receipt of a 183 Session Progress response with P-Early-Media header, a 183 Session Progress with an encapsulated ACM is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = no indication (00) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = interworking encountered (1) • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = ISDN user part not used all the way (0) • ISDN access indicator = terminating access non-ISDN (0) • Echo control device indicator = incoming echo control device included (1)		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=speech or 3,1 kHz		
SIP Parameter values	183: P-Early-Media: sendonly 183 (ACM)		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 183 Session Progress (ACM) ← ← 183 Session Progress **Apply post test routine**		

TP number	TP_203_014	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.4/2 AND NOT PICS 6.2.1/18		
Test Purpose name	180 received, coding of Backward call indicator in ACM TMR 64 kBit/s unrestricted		
Test Purpose	INVITE with encapsulated IAM with Transmission Medium Requirement indicator=64 kBit/s unrestricted received. Ensure that on receipt of a 180 Ringing response, a 180 Ringing with an encapsulated ACM is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = subscriber free (01) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = interworking encountered (1) • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = ISDN user part not used all the way (0) • ISDN access indicator = terminating access non-ISDN (0) • Echo control device indicator = incoming echo control device not included (0)		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=64 kBit/s unrestricted		
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 180 Ringing (ACM) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_203_015	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.4/2 AND NOT PICS 6.2.1/18		
Test Purpose name	181 received, coding of Backward call indicator in ACM TMR 64 kBit/s unrestricted		
Test Purpose	INVITE with encapsulated IAM with Transmission Medium Requirement indicator=64 kBit/s unrestricted received. Ensure that on receipt of a 181 Call is Being forwarded response, a 181 Being Forwarded or 183 Session Progress with encapsulated ACM is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = no indication (00) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = interworking encountered (1) • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = ISDN user part not used all the way (0) • ISDN access indicator = terminating access non-ISDN (0) • Echo control device indicator = incoming echo control device not included (0)		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=64 kBit/s unrestricted		
SIP Parameter values	181/183 (ACM): Backward call indicator		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** IAM → → INVITE ← 100 Trying ← 181 Call is Being forwarded **CASE A** 181 Call is Being forwarded (ACM) ← **CASE B** 183 Session Progress (ACM) ← **Apply post test routine**		

TP number	TP_203_016	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.4/2 AND NOT PICS 6.2.1/18 AND PICS 6.2.1/9		
Test Purpose name	183 received, coding of Backward call indicator in ACM TMR 64 kBit/s unrestricted		
Test Purpose	INVITE with encapsulated IAM with Transmission Medium Requirement indicator=64 kBit/s unrestricted received. Ensure that on receipt of a 183 Session Progress response, a 183 Session Progress with an encapsulated ACM is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = no indication (00) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = interworking encountered (1) • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = ISDN user part not used all the way (0) • ISDN access indicator = terminating access non-ISDN (0) • Echo control device indicator = incoming echo control device not included (0)		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=64 kBit/s unrestricted		
SIP Parameter values	183: P-Early-Media: sendonly 183 (ACM)		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 183 Session Progress (ACM) ← ← 183 Session Progress **Apply post test routine**		

TP number	TP_203_017	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.4/2 AND PICS 6.2.1/18		
Test Purpose name	180 received, coding of Backward call indicator in ACM TMR 64 kBit/s unrestricted		
Test Purpose	INVITE with encapsulated IAM with Transmission Medium Requirement indicator=64 kBit/s unrestricted received. Ensure that on receipt of a 180 Ringing response, a 180 Ringing with an encapsulated ACM is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = subscriber free (01) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = **no interworking encountered (0)** • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = **ISDN user part used all the way (1)** • ISDN access indicator = **terminating access ISDN (1)** • Echo control device indicator = incoming echo control device not included (0)		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=64 kBit/s unrestricted		
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 180 Ringing (ACM) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_203_018	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.4/2 AND PICS 6.2.1/18		
Test Purpose name	181 received, coding of Backward call indicator in ACM TMR 64 kBit/s unrestricted		
Test Purpose	INVITE with encapsulated IAM with Transmission Medium Requirement indicator=64 kBit/s unrestricted received. Ensure that on receipt of a 181 Call is Being forwarded response, a 181 Being Forwarded or 183 Session Progress with encapsulated ACM is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = no indication (00) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = **no interworking encountered (0)** • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = **ISDN user part used all the way (1)** • ISDN access indicator = **terminating access ISDN (1)** • Echo control device indicator = incoming echo control device not included (0)		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=64 kBit/s unrestricted		
SIP Parameter values	181/183 (ACM): Backward call indicator		
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM)	→	→ INVITE ← 100 Trying ← 181 Call is Being forwarded
	CASE A 181 Call is Being forwarded (ACM)	←	
	CASE B 183 Session Progress (ACM)	←	
	Apply post test routine		

TP number	TP_203_019	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.4/2 AND PICS 6.2.1/18 AND PICS 6.2.1/9		
Test Purpose name	183 received, coding of Backward call indicator in ACM TMR 64 kBit/s unrestricted		
Test Purpose	INVITE with encapsulated IAM with Transmission Medium Requirement indicator=64 kBit/s unrestricted received. Ensure that on receipt of a 183 Session Progress response, a 183 Session Progress with an encapsulated ACM is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = no indication (00) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = **no interworking encountered (0)** • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = **ISDN user part used all the way (1)** • ISDN access indicator = **terminating access ISDN (1)** • Echo control device indicator = incoming echo control device not included (0)		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=64 kBit/s unrestricted		
SIP Parameter values	183: P-Early-Media: sendonly 183 (ACM)		
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM)	→	→ INVITE ← 100 Trying
	183 Session Progress (ACM)	←	← 183 Session Progress
	Apply post test routine		

TP number	TP_203_020	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria			
Test Purpose name	180 received, coding of Backward call indicator in ACM HLC "Facsimile Group 2/3".		
Test Purpose	INVITE with encapsulated IAM with Transmission Medium Requirement indicator=3,1 kHz and High Layer Compatibility= Facsimile Group 2/3 received. Ensure that on receipt of a 180 Ringing response, a 180 Ringing with an encapsulated ACM is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = subscriber free (01) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = interworking encountered (1) • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = ISDN user part not used all the way (0) • ISDN access indicator = terminating access non-ISDN (0) • Echo control device indicator = **incoming echo control device not included (0)**		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=3,1 kHz High Layer Compatibility= Facsimile Group 2/3		
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **ISUP** INVITE (IAM) → → INVITE ← 100 Trying 180 Ringing (ACM) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_203_021	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria			
Test Purpose name	181 received, coding of Backward call indicator in ACM HLC "Facsimile Group 2/3".		
Test Purpose	INVITE with encapsulated IAM with Transmission Medium Requirement indicator=3,1 kHz and High Layer Compatibility= Facsimile Group 2/3 received. Ensure that on receipt of a 181 Call is Being forwarded response, a 181 Being Forwarded or 183 Session Progress with encapsulated ACM is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = no indication (00) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = interworking encountered (1) • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = ISDN user part not used all the way (0) • ISDN access indicator = terminating access non-ISDN (0) • Echo control device indicator = **incoming echo control device not included (0)**		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=3,1 kHz High Layer Compatibility= Facsimile Group 2/3		
SIP Parameter values	181/183 (ACM): Backward call indicator		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying ← 181 Call is Being forwarded **CASE A** 181 Call is Being forwarded (ACM) ← **CASE B** 183 Session Progress (ACM) ← **Apply post test routine**		

TP number	TP_203_022	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/9		
Test Purpose name	183 received, coding of Backward call indicator in ACM HLC "Facsimile Group 2/3".		
Test Purpose	INVITE with encapsulated IAM with Transmission Medium Requirement indicator=3,1 kHz and High Layer Compatibility= Facsimile Group 2/3 received. Ensure that on receipt of a 183 Session Progress response, a 183 Session Progress with an encapsulated ACM is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = no indication (00) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = interworking encountered (1) • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = ISDN user part not used all the way (0) • ISDN access indicator = terminating access non-ISDN (0) • Echo control device indicator = **incoming echo control device not included (0)**		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=3,1 kHz High Layer Compatibility= Facsimile Group 2/3		
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 183 Session Progress (ACM) ← ← 183 Session Progress **Apply post test routine**		

TP number	TP_203_023	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 1 into Backward call indicator in ACM		
Test Purpose	Ensure that on receipt of a 180 Ringing and the PSTN XML ProgressIndicator is present, the value 1 is mapped into the Backward call indicator present in the encapsulated ACM: ISDN User Part indicator • ISDN User Part not used all the way (0)		
ISUP Parameter values	**ACM:** ISDN User Part indicator **ISDN User Part not used all the way**		
SIP Parameter values	180: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000001**<		
Comments	Progress Information: 'Call is not end-to-end ISDN: further call progress information may be available in-band'		
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 180 Ringing (ACM) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_203_024	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 2 in 180 into Backward call indicator in ACM		
Test Purpose	Ensure that on receipt of a 180 Ringing and the PSTN XML ProgressIndicator is present, the value 2 is mapped into the Backward call indicator present in the encapsulated ACM: ISDN User Part indicator • ISDN User Part used all the way (1) ISDN access indicator • Terminating access non-ISDN (0)		
ISUP Parameter values	**ACM:** ISDN User Part indicator **ISDN User Part used all the way** ISDN access indicator **Terminating access non-ISDN**		
SIP Parameter values	180: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000010**<		
Comments	Progress Information: 'Destination address is non-ISDN'		
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 180 Ringing (ACM) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_203_025	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 7 in 180 into Backward call indicator in ACM		
Test Purpose	Ensure that on receipt of a 180 Ringing and the PSTN XML ProgressIndicator is present, the value 7 is mapped into the Backward call indicator present in the encapsulated ACM: ISDN User Part indicator • ISDN User Part used all the way (1) ISDN access indicator • Terminating access ISDN (1) Interworking indicator • no interworking encountered (0)		
ISUP Parameter values	**ACM:** ISDN User Part indicator **ISDN User Part used all the way** ISDN access indicator **Terminating access ISDN** Interworking indicator **no interworking encountered**		
SIP Parameter values	180: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000111**<		
Comments	Progress Information: value not specified. Meaning 'terminating user is ISDN'		
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 180 Ringing (ACM) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_203_026	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 8 in 180 into optional Backward call indicator in ACM		
Test Purpose	Ensure that on receipt of a 180 Ringing and the PSTN XML ProgressIndicator is present, the value 8 is mapped into the Optional backward call indicator present in the encapsulated ACM: Optional backward call indicators In-band information indicator • in-band information or an appropriate pattern is now available		
ISUP Parameter values	**ACM:** Optional backward call indicators In-band information indicator in-band information or an appropriate pattern is now available		
SIP Parameter values	180: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0001000**<		
Comments	Progress Information 'In-band information or an appropriate pattern is now available'		
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 180 Ringing (ACM) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_203_027	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/5 AND PICS 6.2.1/9		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 1 in 183 into Backward call indicator in ACM		
Test Purpose	Ensure that on receipt of a 183 Session Progress and the PSTN XML ProgressIndicator is present, the value 1 is mapped into the Backward call indicator present in the encapsulated ACM: ISDN User Part indicator • ISDN User Part not used all the way (0)		
ISUP Parameter values	**ACM:** ISDN User Part indicator **ISDN User Part not used all the way**		
SIP Parameter values	183: P-Early-Media: sendonly <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000001**<		
Comments	Progress Information: 'Call is not end-to-end ISDN: further call progress information may be available in-band'		
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 183 Session Progress (ACM) ← ← 183 Session Progress **Apply post test routine**		

TP number	TP_203_028	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/5 AND PICS 6.2.1/9		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 2 in 183 into Backward call indicator in ACM		
Test Purpose	Ensure that on receipt of a 183 Session Progress and the PSTN XML ProgressIndicator is present, the value 2 is mapped into the Backward call indicator present in the encapsulated ACM: ISDN User Part indicator • ISDN User Part used all the way (1) ISDN access indicator • Terminating access non-ISDN (0)		
ISUP Parameter values	**ACM:** ISDN User Part indicator **ISDN User Part used all the way** ISDN access indicator **Terminating access non-ISDN**		
SIP Parameter values	183: P-Early-Media: sendonly <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000010**<		
Comments	Progress Information: 'Destination address is non-ISDN'		
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM)	→	→ INVITE
			← 100 Trying
	183 Session Progress (ACM)	←	← 183 Session Progress
		Apply post test routine	

TP number	TP_203_029	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/5 AND PICS 6.2.1/9		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 7 in 183 into Backward call indicator in ACM		
Test Purpose	Ensure that on receipt of a 183 Session Progress and the PSTN XML ProgressIndicator is present, the value 7 is mapped into the Backward call indicator present in the encapsulated ACM: ISDN User Part indicator • ISDN User Part used all the way (1) ISDN access indicator • Terminating access ISDN (1) Interworking indicator • no interworking encountered (0)		
ISUP Parameter values	**ACM:** ISDN User Part indicator **ISDN User Part used all the way** ISDN access indicator **Terminating access non-ISDN** Interworking indicator **no interworking encountered**		
SIP Parameter values	183: P-Early-Media: sendonly <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000111**<		
Comments	Progress Information: value not specified. Meaning 'terminating user is ISDN'		
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM)	→	→ INVITE
			← 100 Trying
	183 Session Progress (ACM)	←	← 183 Session Progress
		Apply post test routine	

TP number	TP_203_030	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/5 AND PICS 6.2.1/9		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 8 in 183 into Backward call indicator in ACM		
Test Purpose	Ensure that on receipt of a 183 Session Progress and the PSTN XML ProgressIndicator is present, the value 8 is mapped into the Optional backward call indicator present in the encapsulated ACM: Optional backward call indicators In-band information indicator • in-band information or an appropriate pattern is now available		
ISUP Parameter values	**ACM:** Optional backward call indicators In-band information indicator in-band information or an appropriate pattern is now available		
SIP Parameter values	183: P-Early-Media: sendonly <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0001000**<		
Comments	Progress Information 'In-band information or an appropriate pattern is now available'		
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM)	→	→ INVITE
			← 100 Trying
	183 Session Progress (ACM)	←	← 183 Session Progress
		Apply post test routine	

TP number	TP_203_031	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.2
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/9		
Test Purpose name	Mapping of P-Early-Media header in 183 into Optional backward call indicator in ACM		
Test Purpose	Ensure that on receipt of a 183 Session Progress and the P-Early-Media header authorizing backward early media is mapped into the Backward call indicator present in the encapsulated ACM: Optional backward call indicators In-band information indicator • in-band information or an appropriate pattern is now available		
ISUP Parameter values	**ACM:** Optional backward call indicators In-band information indicator in-band information or an appropriate pattern is now available		
SIP Parameter values	183: P-Early-Media: sendonly		
Comments	Progress Information 'In-band information or an appropriate pattern is now available'		
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM)	→	→ INVITE
			← 100 Trying
	183 Session Progress (ACM)	←	← 183 Session Progress
		Apply post test routine	

TP number	TP_203_032	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.2
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/9		
Test Purpose name	Mapping of P-Early-Media header in 181 into Optional backward call indicator in ACM		
Test Purpose	Ensure that on receipt of a 181 Call is Being Forwarded and the P-Early-Media authorizing backward early media is mapped into the Backward call indicator present in the encapsulated ACM: Optional backward call indicators In-band information indicator • in-band information or an appropriate pattern is now available		
ISUP Parameter values	**ACM:** Optional backward call indicators In-band information indicator in-band information or an appropriate pattern is now available		
SIP Parameter values	183: P-Early-Media: sendonly		
Comments	Progress Information 'In-band information or an appropriate pattern is now available'		
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →		→ INVITE
			← 100 Trying
	181 Call is Being Forwarded (ACM) ←		← 181 Call is Being Forwarded
	Apply post test routine		

TP number	TP_203_033	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.4
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 1 in 180 into the Access Transport Parameter		
Test Purpose	Ensure that on receipt of a 180 Ringing and the PSTN XML ProgressIndicator is present, the value 1 is mapped into the Access Transport Parameter containing the Progress Indicator value 1 in the ACM: Access Transport Parameter Progress Indicator • Progress Description='0000001'		
ISUP Parameter values	**ACM:** Access Transport Progress Indicator Progress Description='0000001'		
SIP Parameter values	180: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000001**<		
Comments	Progress Information: 'Call is not end-to-end ISDN: further call progress information may be available in-band'		
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →		→ INVITE
			← 100 Trying
	180 Ringing (ACM) ←		← 180 Ringing
	Apply post test routine		

TP number	TP_203_034	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.4
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 2 in 180 into the Access Transport Parameter		
Test Purpose	Ensure that on receipt of a 180 Ringing and the PSTN XML ProgressIndicator is present, the value 2 is mapped into the Access Transport Parameter containing the Progress Indicator value 2 in the encapsulated ACM: Access Transport Parameter Progress Indicator • Progress Description='0000010'		
ISUP Parameter values	**ACM:** Access Transport Progress Indicator Progress Description='0000010'		
SIP Parameter values	180: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000010**<		
Comments	Progress Information: 'Destination address is non-ISDN'		
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 180 Ringing (ACM) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_203_035	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.4
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	PSTN XML ProgressIndicator 7 in 180 is not mapped into the Access Transport Parameter		
Test Purpose	Ensure that on receipt of a 180 Ringing and the PSTN XML ProgressIndicator is present, the value 7 is not mapped into the Access Transport Parameter in the encapsulated ACM		
ISUP Parameter values	**ACM:** No Access Transport Parameter present		
SIP Parameter values	180: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000111**<		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 180 Ringing (ACM) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_203_036	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.4
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 8 in 180 into the Access Transport Parameter		
Test Purpose	Ensure that on receipt of a 180 Ringing and the PSTN XML ProgressIndicator is present, the value 8 is mapped into the Access Transport Parameter containing the Progress Indicator value 8 in the encapsulated ACM: Access Transport Parameter Progress Indicator • Progress Description='0001000'		
ISUP Parameter values	**ACM:** Access Transport Progress Indicator Progress Description='0001000'		
SIP Parameter values	180: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0001000**<		
Comments	Progress Information 'In-band information or an appropriate pattern is now available'		
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 180 Ringing (ACM) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_203_037	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.4
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/5 AND PICS 6.2.1/9		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 1 in 183 into the Access Transport Parameter		
Test Purpose	Ensure that on receipt of a 183 Session Progress and the P-Early-Media header and PSTN XML ProgressIndicator is present, the value 1 is mapped into the Access Transport Parameter containing the Progress Indicator value 1 in the encapsulated ACM: Access Transport Parameter Progress Indicator • Progress Description='0000001'		
ISUP Parameter values	**ACM:** Access Transport Progress Indicator Progress Description='0000001'		
SIP Parameter values	183: P-Early-Media: sendonly <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000001**<		
Comments	Progress Information: 'Call is not end-to-end ISDN: further call progress information may be available in-band'		
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 183 Session Progress (ACM) ← ← 183 Session Progress **Apply post test routine**		

TP number	TP_203_038	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.4
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/5 AND PICS 6.2.1/9		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 2 in 183 into the Access Transport Parameter		
Test Purpose	Ensure that on receipt of a 183 Session Progress and the P-Early-Media header and PSTN XML ProgressIndicator is present, the value 2 is mapped into the Access Transport Parameter containing the Progress Indicator value 2 in the encapsulated ACM: Access Transport Parameter Progress Indicator • Progress Description='0000010'		
ISUP Parameter values	**ACM:** Access Transport Progress Indicator Progress Description='0000010'		
SIP Parameter values	183: P-Early-Media: sendonly <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000010**<		
Comments	Progress Information: 'Destination address is non-ISDN'		
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 183 Session Progress (ACM) ← ← 183 Session Progress **Apply post test routine**		

TP number	TP_203_039	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.4
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/5 AND PICS 6.2.1/9		
Test Purpose name	PSTN XML ProgressIndicator 7 in 183 is not mapped into the Access Transport Parameter		
Test Purpose	Ensure that on receipt of a 183 Session Progress and the PSTN XML ProgressIndicator is present, the value 7 is not mapped into the Access Transport Parameter in the encapsulated ACM		
ISUP Parameter values	**ACM:** No Access Transport Parameter present		
SIP Parameter values	183: P-Early-Media: sendonly <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000111**<		
Comments	Progress Information: value not specified. Meaning 'terminating user is ISDN'		
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 183 Session Progress (ACM) ← ← 183 Session Progress **Apply post test routine**		

TP number	TP_203_040	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.5.4
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_18x with encapsulated ACM/		
Selection criteria	PICS 6.2.1/5 AND PICS 6.2.1/9		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 8 in 183 into the Access Transport Parameter		
Test Purpose	Ensure that on receipt of a 183 Session Progress and the P-Early-Media header and PSTN XML ProgressIndicator is present, the value 8 is mapped into the Access Transport Parameter containing the Progress Indicator value 8 in the encapsulated ACM: Access Transport Parameter Progress Indicator • Progress Description='0001000'		
ISUP Parameter values	**ACM:** Access Transport Progress Indicator Progress Description='0001000'		
SIP Parameter values	183: P-Early-Media: sendonly <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0001000**<		
Comments	Progress Information 'In-band information or an appropriate pattern is now available'		
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →		→ INVITE
			← 100 Trying
	183 Session Progress (ACM) ←		← 183 Session Progress
	Apply post test routine		

6.1.2.4 Sending of the Call Progress message (CPG)

TP number	TP_204_002	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.6
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	PICS 6.2.1/9		
Test Purpose name	181 received, CPG is sent		
Test Purpose	Ensure that on receipt of a 181 Call is Being Forwarded a 181 Call is Being Forwarded with encapsulated PG is sent. The Event information parameter in the CPG is set to 'progress'		
ISUP Parameter values	**CPG:** Event indication=progress		
SIP Parameter values	181: P-Early-Media: sendonly		
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →		→ INVITE
	180 Ringing (ACM) ←		← 180 Ringing
	181 Call is Being Forwarded (CPG) ←		← 181 Call is Being Forwarded
	early media		*early media*
	Apply post test routine		

TP number	TP_204_003	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.6
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	PICS 6.2.1/9		
Test Purpose name	Early media is not authorized if no P-Early-Media header is present in the 180		
Test Purpose	Ensure that on receipt of a 180 Ringing a 180 Ringing with an encapsulated CPG is sent. If the 180 Ringing contains a P-Early-Media header not authorizing early media, the SUT initiates sending of awaiting answer indication		
ISUP Parameter values			
SIP Parameter values	183: P-Early-Media header present 180: P-Early-Media: inactive		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 183 Session Progress (ACM) ← ← 183 Session Progress 180 Ringing CPG ← ← 180 Ringing *ringing tone* **Apply post test routine**		

TP number	TP_204_004	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.6
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	PICS 6.2.1/9		
Test Purpose name	Early media is not authorized if P-Early-Media header does not authorize early media in the 180		
Test Purpose	Ensure that on receipt of a 180 Ringing a 180 Ringing with an encapsulated CPG is sent. If the 180 Ringing contains a P-Early-Media header not authorizing early media, the SUT initiates sending of awaiting answer indication		
ISUP Parameter values			
SIP Parameter values	180: P-Early-Media: inactive		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 183 Session Progress (ACM) ← ← 183 Session Progress 180 Ringing (CPG) ← ← 180 Ringing *ringing tone* **Apply post test routine**		

TP number	TP_204_005	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.6
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	PICS 6.2.1/9		
Test Purpose name	Early media is authorized if P-Early-Media header authorize early media in the 180		
Test Purpose	Ensure that on receipt of a 180 Ringing a 180 Ringing with an encapsulated CPG is sent. If the 180 Ringing contains a P-Early-Media header authorizing early media, the SUT terminates sending of awaiting answer indication and connects through the early media in backward direction		
ISUP Parameter values			
SIP Parameter values	180: P-Early-Media: sendonly		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITZE (IAM) → → INVITE 183 Session Progress (ACM) ← ← 183 Session Progress 180 Ringing (CPG) ← ← 180 Ringing *early media* *early media* **Apply post test routine**		

TP number	TP_204_006	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.6
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	PICS 6.2.1/14		
Test Purpose name	The SUT has the knowledge that the call is transited to a PSTN network, the awaiting answer indication is not generated		
Test Purpose	Ensure that the SUT does not generate the awaiting answer indication if it has the local knowledge that the call is transited to a PSTN network and the early media is not authorized		
ISUP Parameter values			
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 183 Session Progress (ACM) ← ← 183 Session Progress 180 Ringing (CPG) ← ← 180 Ringing *early media* *early media* **Apply post test routine**		

TP number	TP_204_007	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.6
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	PICS 6.2.1/9		
Test Purpose name	Early media is authorized if P-Early-Media header authorize early media in the 183		
Test Purpose	Ensure that on receipt of a 183 Session Progress a 183 Session Progress with an encapsulated CPG is sent. If the 183 Session Progress contains a P-Early-Media header authorizing early media, the SUT terminates sending of awaiting answer indication and connects through the early media in backward direction		
ISUP Parameter values			
SIP Parameter values	183: P-Early-Media: sendonly		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 180 Ringing (ACM – free) ← ← 180 Ringing 183 Session Progress (CPG) ← ← 183 Session Progress *early media* *early media* **Apply post test routine**		

TP number	TP_204_008	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.6
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	PICS 6.2.1/9		
Test Purpose name	Early media is authorized if P-Early-Media header authorize early media in the 181		
Test Purpose	Ensure that on receipt of a 181 Call is Being Forwarded a 181 Call is Being Forwarded with encapsulated CPG is sent. If the 181 Call is Being Forwarded contains a P-Early-Media header authorizing early media, the SUT terminates sending of awaiting answer indication and connects through the early media in backward direction		
ISUP Parameter values			
SIP Parameter values	181: P-Early-Media: sendonly		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 180 Ringing (ACM) ← ← 180 Ringing **CASE A** ← 181 Call is Being Forwarded 183 Session Progress (CPG) **CASE B** 181 Call is Being Forwarded (CPG) ← *early media* *early media* **Apply post test routine**		

TP number	TP_204_009	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.6
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	PICS 6.2.1/9		
Test Purpose name	The SUT change the authorization of early media as indicated in the P-Early-Media received in 180		
Test Purpose	Ensure that the SUT terminates the sending of awaiting answer indication and connect through early media if the P-Early-Media header indicates authorization in the received 180 Ringing response and early media was not authorized before		
ISUP Parameter values			
SIP Parameter values	183: P-Early-Media: inactive 180: P-Early-Media: sendonly		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NN** INVITE(IAM) → → INVITE 183 Session Progress(ACM) ← ← 183 Session Progress *ringing tone* 180 Ringing(CPG) ← ← 180 Ringing *early media* *early media* **Apply post test routine**		

TP number	TP_204_010	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.6
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	PICS 6.2.1/9		
Test Purpose name	The SUT change the authorization of early media as indicated in the P-Early-Media received in 180		
Test Purpose	Ensure that the SUT initiates the sending of awaiting answer indication and removes authorization of early media if the P-Early-Media header indicates **no authorization** of early media received in the 180 Ringing and early media was authorized before		
ISUP Parameter values			
SIP Parameter values	183: P-Early-Media: sendonly 180: P-Early-Media: inactive		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 183 Session Progress ← ← 183 Session Progress (ACM – no indication) *early media* *early media* 180 Ringing (CPG) ← ← 180 Ringing *ringing tone* **Apply post test routine**		

TP number	TP_204_011	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.6.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	PICS 6.2.1/5 AND PICS 6.2.1/9		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 1 in 183 into ATP in the CPG		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 1 in a 183 Session Progress, a 183 Session Progress with encapsulated CPG is sent and an Access Transport Parameter is present containing a Progress Indicator #1		
ISUP Parameter values	**CPG:** Access Transport Progress Indicator Progress Description='0000001'		
SIP Parameter values	183: P-Early-Media: sendonly <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000001**<		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 180 Ringing (ACM) ← ← 180 Ringing 183 Session Progress ← ← 183 Session Progress (CPG) **Apply post test routine**		

TP number	TP_204_012	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.6.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	PICS 6.2.1/5 AND PICS 6.2.1/9		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 2 in 183 into ATP in the CPG		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 2 in a 183 Session Progress, a 183 Session Progress with encapsulated CPG is sent and an Access Transport Parameter is present containing a Progress Indicator #2		
ISUP Parameter values	**CPG:** Access Transport Progress Indicator Progress Description='0000010'		
SIP Parameter values	183: P-Early-Media: sendonly <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000010**<		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 180 Ringing (ACM) ← ← 180 Ringing 183 Session Progress (CPG) ← ← 183 Session Progress **Apply post test routine**		

TP number	TP_204_013	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.6
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	PICS 6.2.1/5 AND PICS 6.2.1/9		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 4 in 183 into ATP in the CPG		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 4 in a 183 Session Progress, a 183 Session Progress with encapsulated CPG is sent and an Access Transport Parameter is present containing a Progress Indicator #4		
ISUP Parameter values	**CPG:** Access Transport Progress Indicator Progress Description='0000100'		
SIP Parameter values	180: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000001** or ProgressDescription>**0000010** 183: P-Early-Media: sendonly <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000100**<		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 180 Ringing (ACM) ← ← 180 Ringing 183 Session Progress (CPG) ← ← 183 Session Progress **Apply post test routine**		

TP number	TP_204_014	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.6
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	PICS 6.2.1/5 AND PICS 6.2.1/9		
Test Purpose name	No mapping of PSTN XML ProgressIndicator 7 in 183 into ATP in the CPG		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 7 in a 183 Session Progress, a CPG is sent and no Access Transport Parameter is present containing a Progress Indicator #7		
ISUP Parameter values	**CPG:** Access Transport not present		
SIP Parameter values	180: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000001**< or ProgressDescription>**0000010**< 183: P-Early-Media: sendonly <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000111**<		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 180 Ringing ← ← 180 Ringing (ACM – free) 183 Session Progress ← ← 183 Session Progress (CPG) **Apply post test routine**		

TP number	TP_204_015	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.6
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	PICS 6.2.1/5 AND PICS 6.2.1/9		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 8 in 183 into Event information in the CPG		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 8 in a 183 Session Progress, a 183 Session Progress with encapsulated CPG is sent and Event information parameter is set to 'In-band information or appropriate pattern is now available'		
ISUP Parameter values	**CPG:** Event information= In-band information or appropriate pattern is now available		
SIP Parameter values	183: P-Early-Media: sendonly <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0001000**<		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 180 Ringing (ACM) ← ← 180 Ringing 183 Session Progress ← ← 183 Session Progress (CPG) **Apply post test routine**		

TP number	TP_204_017	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.6.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	PICS 6.2.1/5 AND PICS 6.2.1/9		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 1 in 180 into ATP in the CPG		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 1 in a 180 Ringing, a 180 Ringing with encapsulated CPG is sent and an Access Transport Parameter is present containing a Progress Indicator #1		
ISUP Parameter values	**CPG:** Access Transport Progress Indicator Progress Description='0000001'		
SIP Parameter values	180: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000001**<		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP NNI** INVITE (IAM) → Ti/w1 started 183 Session Progress (ACM – no indication) ← Ti/w1 expired → INVITE 180 Ringing (CPG) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_204_018	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.6.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 2 in 180 into ATP in the CPG		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 2 in a 180 Ringing, a 180 Ringing with encapsulated CPG is sent and an Access Transport Parameter is present containing a Progress Indicator #2		
ISUP Parameter values	**CPG:** Access Transport Progress Indicator Progress Description='0000010'		
SIP Parameter values	180: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000010**<		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → Ti/w1 started 183 Session Progress (ACM) ← Ti/w1 expired → INVITE 180 Ringing (CPG) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_204_019	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.6
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 4 in 180 into ATP in the CPG		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 4 in a 180 Ringing a 180 Ringing with encapsulated CPG is sent and an Access Transport Parameter is present containing a Progress Indicator #4		
ISUP Parameter values	**CPG:** Access Transport Progress Indicator Progress Description='0000100'		
SIP Parameter values	180: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000001**< or ProgressDescription>**0000010**< 180: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000100**<		
Comments			

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
	183 Session Progress (ACM)	←		←	183 Session Progress
	180 Ringing (CPG)	←		←	180 Ringing
	Apply post test routine				

TP number	TP_204_020	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.6
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	No mapping of PSTN XML ProgressIndicator 7 in 180 into ATP in the CPG		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 7 in a 180 Ringing, a 180 Ringing with encapsulated CPG is sent and no Access Transport Parameter is present containing a Progress Indicator #7		
ISUP Parameter values	**CPG:** Access Transport not present		
SIP Parameter values	183: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000111**<		
Comments			

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
	180 Ringing (ACM)	←		←	180 Ringing
	183 Session Progress (CPG)	←		←	183 Session Progress
	Apply post test routine				

TP number	TP_204_021	**Reference**	[2], clause 7.2.3.2.6
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 8 in 180 into Event information in the CPG		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 8 in a 180 Ringing, a 180 Ringing with encapsulated CPG is sent and Event information parameter is set to 'In-band information or appropriate pattern is now available'		
ISUP Parameter values	**CPG:** Event information= In-band information or appropriate pattern is now available		
SIP Parameter values	183: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0001000**<		
Comments			

Message flows

SIP-I		MGCF		SIP NNI
INVITE (IAM)	→	Ti/w1 started		
183 Session Progress (ACM)	←	Ti/w1 expired	→	INVITE
180 Ringing (CPG)	←		←	180 Ringing

Apply post test routine

TP number	TP_204_023	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.7
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	PICS 6.2.1/9		
Test Purpose name	Mapping of P-Early-Media header into Event information parameter in CPG		
Test Purpose	Ensure that on receipt of a 183 Session Progress and a P-Early-Media header is present authorizing early media, a 183 Session Progress with encapsulated CPG is sent. The Event information parameter is set to 'In-band information or appropriate pattern is now available'		
ISUP Parameter values	**CPG:** Event information= In-band information or appropriate pattern is now available		
SIP Parameter values	183: P-Early-Media: sendonly		
Comments			

Message flows

SIP-I		MGCF		SIP NNI
INVITE (IAM)	→	Ti/w1 started		
183 Session Progress (ACM)	←	Ti/w1 expired	→	INVITE
183 Session Progress (CPG)	←		←	183 Session Progress

Apply post test routine

TP number	TP_204_024	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.7.4
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	NOT PICS 6.2.1/18		
Test Purpose name	180 received, coding of Backward call indicator in CPG TMR speech or 3,1 kHz audio		
Test Purpose	IAM with Transmission Medium Requirement indicator=speech or 3,1 kHz received. Ensure that on receipt of a 180 Ringing response, a 180 Ringing with encapsulated CPG is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = subscriber free (01) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = interworking encountered (1) • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = ISDN user part not used all the way (0) • ISDN access indicator = terminating access non-ISDN (0) • Echo control device indicator = incoming echo control device included (1)		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=speech or 3,1 kHz **ACM:** Backward call indicator Called party's status indicator = no indication		
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → Ti/w1 started 183 Session Progress (ACM) ← Ti/w1 expired → INVITE 180 Ringing (CPG) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_204_025	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.7.4
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	PICS 6.2.4/2 AND NOT PICS 6.2.1/18		
Test Purpose name	180 received, coding of Backward call indicator in CPG TMR 64 kBit/s unrestricted		
Test Purpose	IAM with Transmission Medium Requirement indicator=64 kBit/s unrestricted received. Ensure that on receipt of a 180 Ringing response, a 180 Ringing with encapsulated CPG is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = subscriber free (01) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = interworking encountered (1) • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = ISDN user part not used all the way (0) • ISDN access indicator = terminating access non-ISDN (0) • Echo control device indicator = **incoming echo control device not included (0)**		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=64 kBit/s unrestricted **ACM:** Backward call indicator Called party's status indicator = no indication		
SIP Parameter values			
Comments			
Message flows	**SIP SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → Ti/w1 started 183 Session Progress (ACM) ← Ti/w1 expired → INVITE 180 Ringing (CPG) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_204_026	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.7.4
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria	PICS 6.2.4/2 AND PICS 6.2.1/18		
Test Purpose name	180 received, coding of Backward call indicator in CPG TMR 64 kBit/s unrestricted		
Test Purpose	IAM with Transmission Medium Requirement indicator=64 kBit/s unrestricted received. Ensure that on receipt of a 180 Ringing response, a 180 Ringing with encapsulated CPG is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = subscriber free (01) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = **no interworking encountered (0)** • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = **ISDN user part used all the way (1)** • ISDN access indicator = **terminating access ISDN (1)** • Echo control device indicator = incoming echo control device not included (0)		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=64 kBit/s unrestricted **ACM:** Backward call indicator Called party's status indicator = no indication		
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → Ti/w1 started 183 Session Progress (ACM) ← Ti/w1 expired → INVITE 180 Ringing (CPG) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_204_027	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.7.4
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_CPG in encapsulated 18x message/		
Selection criteria			
Test Purpose name	180 received, coding of Backward call indicator in CPG HLC "Facsimile Group 2/3"		
Test Purpose	IAM with Transmission Medium Requirement indicator=3,1 kHz and High Layer Compatibility= Facsimile Group 2/3 received. Ensure that on receipt of a 180 Ringing response, a 180 Ringing with encapsulated CPG is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = subscriber free (01) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = interworking encountered (1) • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = ISDN user part not used all the way (0) • ISDN access indicator = terminating access non-ISDN (0) • Echo control device indicator = **incoming echo control device not included (0)**		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=3,1 kHz High Layer Compatibility= Facsimile Group 2/3 **ACM:** Backward call indicator Called party's status indicator = no indication		
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → Ti/w1 started 183 Session Progress (ACM) ← Ti/w1 expired → INVITE 180 Ringing (CPG) ← ← 180 Ringing **Apply post test routine**		

6.1.2.5 Sending of the Answer Message (ANM)

TP number	TP_205_001	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.8
TSS reference	SIP-I - SIP NNI/Basic call/200 OK INVITE with encapsulated ANM /		
Selection criteria			
Test Purpose name	Sending of ANM when 200 OK INVITE was received		
Test Purpose	Ensure that upon receipt of the first 200 OK (INVITE), if the Address Complete Message (ACM) has already been sent, the SUT sends the Answer Message (ANM)		
ISUP Parameter values			
SIP Parameter values			
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →		→ INVITE
			← 100 Trying
	180 Ringing (ACM) ←		← 180 Ringing
	200 OK (INVITE) (ANM) ←		← 200 OK (INVITE)
	ACK →		→ ACK
	Apply post test routine		

TP number	TP_205_002	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.8
TSS reference	SIP-I - SIP NNI/Basic call/200 OK INVITE with encapsulated ANM 200 OK INVITE with encapsulated ANM /		
Selection criteria	NOT PICS 6.2.1/18		
Test Purpose name	200 OK received, coding of Backward call indicator in ANM TMR speech or 3,1 kHz audio		
Test Purpose	INVITE with encapsulated IAM with Transmission Medium Requirement indicator=speech or 3,1 kHz received. Ensure that on receipt of a 200 OK INVITE final response, a 200 OK INVITE with encapsulated ANM is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = no indication (00) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = interworking encountered (1) • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = ISDN user part not used all the way (0) • ISDN access indicator = terminating access non-ISDN (0) • Echo control device indicator = Incoming echo control device included (1)		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=speech or 3,1 kHz **ACM:** Backward call indicator Called party's status indicator = no indication		
SIP Parameter values	183: P-Early-Media: sendonly		
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →	Ti/w1 started	
	183 Session Progress (ACM) ←	Ti/w1 expired	→ INVITE
			← 183 Session Progress
	200 OK (INVITE) (ANM) ←		← 200 OK (INVITE)
	ACK →		→ ACK
	Apply post test routine		

TP number	TP_205_003	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.8
TSS reference	SIP-I - SIP NNI/Basic call/200 OK INVITE with encapsulated ANM /		
Selection criteria	PICS 6.2.4/2 AND NOT PICS 6.2.1/18		
Test Purpose name	200 OK received, coding of Backward call indicator in ANM TMR 64 kBit/s unrestricted		
Test Purpose	INVITE with encapsulated IAM with Transmission Medium Requirement indicator=64 kBit/s unrestricted received. Ensure that on receipt of a 200 OK INVITE final response, an 200 OK INVITE with encapsulated ANM is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = no indication (00) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = interworking encountered (1) • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = ISDN user part not used all the way (0) • ISDN access indicator = terminating access non-ISDN (0) • Echo control device indicator = **Incoming echo control device not included (0)**		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=64 kBit/s unrestricted **ACM:** Backward call indicator Called party's status indicator = no indication		
SIP Parameter values	183: P-Early-Media: sendonly		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → Ti/w1 started 183 Session Progress (ACM) ← Ti/w1 expired → INVITE ← 183 Session Progress 200 OK (INVITE)(ANM) ← ← 200 OK (INVITE) ACK → → ACK **Apply post test routine**		

TP number	TP_205_004	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.8
TSS reference	SIP-I - SIP NNI/Basic call/200 OK INVITE with encapsulated ANM /		
Selection criteria	PICS 6.2.4/2 AND PICS 6.2.1/18		
Test Purpose name	200 OK received, coding of Backward call indicator in ANM TMR 64 kBit/s unrestricted		
Test Purpose	INVITE with encapsulated IAM with Transmission Medium Requirement indicator=64 kBit/s unrestricted received. Ensure that on receipt of a 200 OK INVITE final response, an 200 OK INVITE with encapsulated ANM is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = no indication (00) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = **no interworking encountered (0)** • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = **ISDN user part used all the way (1)** • ISDN access indicator = **terminating access ISDN (1)** • Echo control device indicator = Incoming echo control device not included (0)		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=64 kBit/s unrestricted **ACM:** Backward call indicator Called party's status indicator = no indication		
SIP Parameter values	183: P-Early-Media: sendonly		
Comments			
Message flows	**SIP-I** — **MGCF** — **SIP NNI** INVITE (IAM) → Ti/w1 started Session Progress (ACM) ← Ti/w1 expired → INVITE ← 183 Session Progress 200 OK (INVITE) (ANM) ← → 200 OK (INVITE) ACK → → ACK **Apply post test routine**		

TP number	TP_205_005	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.8
TSS reference	SIP-I - SIP NNI/Basic call/200 OK INVITE with encapsulated ANM /		
Selection criteria	PICS 6.2.1/9		
Test Purpose name	200 OK received, coding of Backward call indicator in ANM HLC "Facsimile Group 2/3"		
Test Purpose	INVITE with encapsulated IAM with Transmission Medium Requirement indicator=3,1 kHz and High Layer Compatibility= Facsimile Group 2/3 received. Ensure that on receipt of a 200 OK INVITE final response, a 200 OK INVITE with encapsulated ANM is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = no indication (00) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = interworking encountered (1) • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = ISDN user part not used all the way (0) • ISDN access indicator = terminating access non-ISDN (0) • Echo control device indicator = **Incoming echo control device not included (0)**		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=3,1 kHz High Layer Compatibility= Facsimile Group 2/3 **ACM:** Backward call indicator Called party's status indicator = no indication		
SIP Parameter values	183: P-Early-Media: sendonly		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → Ti/w1 started Session Progress (ACM) ← Ti/w1 expired → INVITE ← 183 Session Progress 200 OK (INVITE) (ANM) ← ← 200 OK (INVITE) ACK → → ACK **Apply post test routine**		

TP number	TP_205_006	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.9.2
TSS reference	SIP-I - SIP NNI/Basic call/200 OK INVITE with encapsulated ANM /		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 1 in 200 OK into ATP in the ANM		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 1 in a 200 OK INVITE, an ANM is sent and an Access Transport Parameter is present containing a Progress Indicator #1		
ISUP Parameter values	**ANM:** Access Transport Progress Indicator Progress Description='0000001'		
SIP Parameter values	200 OK: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000001**<		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 180 Ringing (ACM – free) ← ← 180 Ringing 200 OK (INVITE) ANM ← ← 200 OK (INVITE) ACK → → ACK **Apply post test routine**		

TP number	TP_205_007	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.9.2
TSS reference	SIP-I - SIP NNI/Basic call/200 OK INVITE with encapsulated ANM /		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 2 in 200 OK into ATP in the ANM		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 2 in a 200 OK INVITE, a 200 OK INVITE with encapsulated ANM is sent and an Access Transport Parameter is present containing a Progress Indicator #2		
ISUP Parameter values	**ANM:** Access Transport Progress Indicator Progress Description='0000010'		
SIP Parameter values	200 OK: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000010**<		
Comments			

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
				←	100 Trying
	180 Ringing (ACM)	←		←	180 Ringing
	200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
	ACK	→		→	ACK
	Apply post test routine				

TP number	TP_205_008	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.9.2
TSS reference	SIP-I - SIP NNI/Basic call/200 OK INVITE with encapsulated ANM /		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 4 in 200 OK into ATP in the ANM		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 4 in a 200 OK INVITE, a 200 OK INVITE with encapsulated ANM is sent and an Access Transport Parameter is present containing a Progress Indicator #4		
ISUP Parameter values	**ANM:** Access Transport Progress Indicator Progress Description='0000100'		
SIP Parameter values	200 OK: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000100**<		
Comments			

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
				←	100 Trying
	180 Ringing (ACM)	←		←	180 Ringing
	200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
	ACK	→		→	ACK
	Apply post test routine				

TP number	TP_205_009	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.9.2
TSS reference	SIP-I - SIP NNI/Basic call/200 OK INVITE with encapsulated ANM /		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 5 in 200 OK into ATP in the ANM		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 5 in a 200 OK INVITE, a 200 OK INVITE with encapsulated ANM is sent and an Access Transport Parameter is present containing a Progress Indicator #5		
ISUP Parameter values	**IAM:** USI=speech or 3,1 kHz audio, USI prime=unrestricted digital info with T/A, TMR=64 kbit/s preferred, TMR prime = speech or 3,1 kHz audio **ANM:** Access Transport Progress Indicator Progress Description='0000101'		
SIP Parameter values	200 OK: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000101**<		
Comments			

Message flows

SIP-I		MGCF		SIP NNI
INVITE (IAM)	→		→	INVITE
			←	100 Trying
180 Ringing (ACM)	←		←	180 Ringing
200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
ACK	→		→	ACK

Apply post test routine

TP number	TP_205_010	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.9.2
TSS reference	SIP-I - SIP NNI/Basic call/200 OK INVITE with encapsulated ANM /		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	No mapping of PSTN XML ProgressIndicator 7 in 200 OK into ATP in the ANM		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 7 in a 200 OK INVITE, a 200 OK INVITE with encapsulated ANM is sent and **no** Access Transport Parameter is present containing a Progress Indicator #7. The Backward call indicator is set to the following values: ISDN User Part indicator **ISDN User Part used all the way** ISDN access indicator **Terminating access ISDN** Interworking indicator **no interworking encountered**		
ISUP Parameter values	**ANM:** Access Transport not present Backward call indicator ISDN User Part indicator **ISDN User Part used all the way** ISDN access indicator **Terminating access ISDN** Interworking indicator **no interworking encountered**		
SIP Parameter values	200 OK: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000111**<		
Comments			

Message flows

SIP-I		**MGCF**		**SIP NNI**
INVITE (IAM)	→		→	INVITE
			←	100 Trying
180 Ringing (	←		←	180 Ringing
(ACM - free)				
200 OK (INVITE)	←		←	200 OK (INVITE)
(ANM)				
ACK	→		→	ACK

Apply post test routine

TP number	TP_205_011	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.9.2
TSS reference	SIP-I - SIP NNI/Basic call/200 OK INVITE with encapsulated ANM /		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML HighLayerCompatibility in 200 OK into ATP in ANM		
Test Purpose	Ensure that on receipt of 200 OK INVITE and a PSTN XML HighLayerCompatibility element is present a 200 OK INVITE with encapsulated ANM is sent and a Access Transport Parameter is present containing a High layer compatibility IE and the value is set to the value HLC_VA as indicated in table 6.1.2.5-1		
ISUP Parameter values	**ANM:** Access Transport High layer compatibility High layer characteristics identification = **HLC_VA**		
SIP Parameter values	200 OK: PSTN XML MIME body <?xml version="1.0" encoding="utf-8"?> PSTN HighLayerCompatibility HLOctet3 CodingStandard>00< Interpretation>100< PresentationMethod>01< HLOctet4 HighLayerCharacteristics>**HLC_VA**<		
Comments			

Message flows

SIP-I		**MGCF**		**SIP NNI**
INVITE (IAM)	→		→	INVITE
			←	100 Trying
180 Ringing (ACM)	←		←	180 Ringing
200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
ACK	→		→	ACK
Apply post test routine				

Table 6.1.2.5-1: Mapping of PSTN XML HighLayerCharacteristic into ISUP ATP High layer compatibility

HLC_VA	XML HighLayerCharacteristic	DSS1 High layer characteristics identification
HLC_VA_1	'0000001'	Telephony
HLC_VA_2	'0000100'	Facsimile Group 2/3
HLC_VA_3	'0100001'	Facsimile Group 4 Class I
HLC_VA_4	'0100100'	Facsimile service Group 4, Classes II and III
HLC_VA_5	'0110010'	Syntax based Videotex
HLC_VA_6	'0110011'	International Videotex interworking via gateways or interworking units
HLC_VA_7	'0110101'	Telex service
HLC_VA_8	'1000010'	FTAM application
HLC_VA_9	'1100000'	Videotelephony

TP number	TP_205_012	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.9.2
TSS reference	SIP-I - SIP NNI/Basic call/200 OK INVITE with encapsulated ANM /		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML BearerCapability in 200 OK into ATP in ANM		
Test Purpose	Ensure that on receipt of 200 OK INVITE and a PSTN XML BearerCapability element is present, a 200 OK INVITE with encapsulated ANM is sent and a Access Transport Parameter is present containing a Bearer Capability IE and the value is set to the value ITC_value as indicated in table 6.1.2.5-1		
ISUP Parameter values	**IAM:** USI=speech or 3,1 kHz audio, USI prime=unrestricted digital info with T/A, TMR=64 kbit/s preferred, TMR prime = speech or 3,1 kHz audio **ANM:** Access Transport Bearer Capability Information Transfer Capability = **ITC_value**		
SIP Parameter values	200 OK: <?xml version="1.0" encoding="utf-8"?> PSTN BearerCapability BCoctet3 CodingStandard>00< InformationTransferCapability> **ITC_value** < BCoctet4 TransferMode>00< InformationTransferRate>10000<		
Comments			

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
				←	100 Trying
	180 Ringing (ACM)	←		←	180 Ringing
	200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
	ACK	→		→	ACK
	Apply post test routine				

Table 6.1.2.5-2: Mapping of PSTN XML BearerCapability into ISUP ATP Bearer Capability

ITC_value	XML InformationTransferCapability	BC Information transfer capability
VA_01	'00000'	Speech
VA_02	'10000'	3,1 kHz audio
VA_03	'10001'	Unrestricted digital information with tones/announcements

TP number	TP_205_013	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.9.3
TSS reference	SIP-I - SIP NNI/Basic call/200 OK INVITE with encapsulated ANM /		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML BearerCapability into Transmission medium used parameter		
Test Purpose	Ensure that on receipt of a PSTN XML BearerCapability element in a 200 OK INVITE a Transmission Medium Used parameter is present in the sent 200 OK INVITE with encapsulated ANM message. The value of the PSTN XML InformationTransferCapability value TMU_VA_BC is mapped into the value of the Transmission Medium Used parameter TMU_VA_TMU as described in table 6.1.2.5-3		
ISUP Parameter values	**IAM:** USI=speech or 3,1 kHz audio, USI prime=unrestricted digital info with T/A, TMR=64 kbit/s preferred, TMR prime = speech or 3,1 kHz audio **ANM:** TMU: **TMU_VA_TMU**		
SIP Parameter values	200 OK: <?xml version="1.0" encoding="utf-8"?> PSTN BearerCapability BCoctet3 CodingStandard>00< InformationTransferCapability>**TMU_VA_BC**< ….		
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →		→ INVITE
			← 100 Trying
	180 Ringing (ACM – free) ←		← 180 Ringing
	200 OK (INVITE) (ANM) ←		← 200 OK (INVITE)
	ACK →		→ ACK
	Apply post test routine		

Table 6.1.2.5-3: Mapping of PSTN XML BearerCapability into ISUP TMU parameter

TMU_VA	PSTN XML BearerCapability TMU_VA_BC	TMU value TMU_VA_TMU
TMU_VA_01	'00000'	'speech'
TMU_VA_02	'10000'	'3,1 kHz audio'
TMU_VA_03	'10001'	No mapping (see note 1)
TMU_VA_04	Not present (see note 2)	'3,1 kHz audio'
NOTE 1: The value of 'UDITA' is sent when fallback does not occur. NOTE 2: The absence of a PSTN XML attachment indicates that a non ISDN destination is reached.		

6.1.2.6 Sending of the 200 OK (INVITE) with encapsulated Connect message (CON)

TP number	TP_206_001	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.11
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_200_OK_INVITE_with_encapsulated CON/		
Selection criteria			
Test Purpose name	Sending of CON message after 200 OK was received		
Test Purpose	Ensure that on receipt of a 200 OK INVITE and no ACM was sent, a 200 OK INVITE with encapsulated CON message is sent		
ISUP Parameter values			
SIP Parameter values			
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →		→ INVITE
			← 100 Trying
	200 OK (INVITE) (CON) ←		← 200 OK (INVITE)
	ACK →		→ ACK
	Apply post test routine		

TP number	TP_206_002	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.11.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_200_OK_INVITE_with_encapsulated CON/		
Selection criteria	NOT PICS 6.2.1/18		
Test Purpose name	200 OK received, coding of Backward call indicator in CON TMR speech or 3,1 kHz audio		
Test Purpose	IAM with Transmission Medium Requirement indicator=speech or 3,1 kHz received. Ensure that on receipt of a 200 OK INVITE final response, a 200 OK INVITE with encapsulated CON is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = no indication (00) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = interworking encountered (1) • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = ISDN user part not used all the way (0) • ISDN access indicator = terminating access non-ISDN (0) • Echo control device indicator = Incoming echo control device included (1)		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=speech or 3,1 kHz **CON:** Backward call indicator Called party's status indicator = no indication		
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 200 OK (INVITE)CON ← ← 200 OK (INVITE) ACK → → ACK **Apply post test routine**		

TP number	TP_206_003	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.11.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_200_OK_INVITE_with_encapsulated CON/		
Selection criteria	PICS 6.2.4/2 AND NOT PICS 6.2.1/18		
Test Purpose name	200 OK received, coding of Backward call indicator in CON TMR 64 kBit/s unrestricted		
Test Purpose	IAM with Transmission Medium Requirement indicator=64 kBit/s unrestricted received. Ensure that on receipt of a 200 OK INVITE final response, a 200 OK INVITE with encapsulated CON is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = no indication (00) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = interworking encountered (1) • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = ISDN user part not used all the way (0) • ISDN access indicator = terminating access non-ISDN (0) • Echo control device indicator = **Incoming echo control device not included (0)**		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=64 kBit/s unrestricted **CON:** Backward call indicator Called party's status indicator = no indication		
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 200 OK (INVITE)CON ← ← 200 OK (INVITE) ACK → → ACK **Apply post test routine**		

TP number	TP_206_004	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.11.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_200_OK_INVITE_with_encapsulated CON/		
Selection criteria	PICS 6.2.4/2 AND PICS 6.2.1/18		
Test Purpose name	200 OK received, coding of Backward call indicator in ANM TMR 64 kBit/s unrestricted		
Test Purpose	IAM with Transmission Medium Requirement indicator=64 kBit/s unrestricted received. Ensure that on receipt of a 200 OK INVITE final response, a 200 OK INVITE with encapsulated CON is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = no indication (00) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = **no interworking encountered (0)** • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = **ISDN user part used all the way (1)** • ISDN access indicator = **terminating access ISDN (1)** • Echo control device indicator = Incoming echo control device not included (0)		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=64 kBit/s unrestricted **CON:** Backward call indicator Called party's status indicator = no indication		
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 200 OK (INVITE) CON ← ← 200 OK (INVITE) ACK → → ACK **Apply post test routine**		

TP number	TP_206_005	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.11.1
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_200_OK_INVITE_with_encapsulated CON/		
Selection criteria			
Test Purpose name	200 OK received, coding of Backward call indicator in CON HLC "Facsimile Group 2/3"		
Test Purpose	IAM with Transmission Medium Requirement indicator=3,1 kHz and High Layer Compatibility= Facsimile Group 2/3 received. Ensure that on receipt of a 200 OK INVITE final response, a 200 OK INVITE with encapsulated CON is sent and the Backward call indicator is set to the following values: • Charge indicator = charge (10) • Called party's status indicator = no indication (00) • Called party's category indicator = no indication (00) • End-to-end method indicator = no end-to-end method available (00) • Interworking indicator = interworking encountered (1) • End-to-end information indicator = no end-to-end information available (0) • ISDN user part/BICC indicator = ISDN user part not used all the way (0) • ISDN access indicator = terminating access non-ISDN (0) • Echo control device indicator = **Incoming echo control device not included (0)**		
ISUP Parameter values	**IAM:** Transmission Medium Requirement indicator=3,1 kHz High Layer Compatibility= Facsimile Group 2/3 **CON:** Backward call indicator Called party's status indicator = no indication		
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 200 OK (INVITE) CON ← ← 200 OK (INVITE) ACK → → ACK **Apply post test routine**		

TP number	TP_206_006	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.11.2
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_200_OK_INVITE_with_encapsulated CON/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 1 in 200 OK into ATP in the CON		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 1 in a 200 OK INVITE, a 200 OK INVITE with encapsulated CON is sent and an Access Transport Parameter is present containing a Progress Indicator #1		
ISUP Parameter values	**CON:** Access Transport Progress Indicator Progress Description='0000001'		
SIP Parameter values	200 OK: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000001**<		
Comments			

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
				←	100 Trying
	200 OK (INVITE) CON	←		←	200 OK (INVITE)
	ACK	→		→	ACK
	Apply post test routine				

TP number	TP_206_007	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.11.2
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_200_OK_INVITE_with_encapsulated CON/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 2 in 200 OK into ATP in the CON		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 2 in a 200 OK INVITE, a 200 OK INVITE with encapsulated CON is sent and an Access Transport Parameter is present containing a Progress Indicator #2		
ISUP Parameter values	**CON:** Access Transport Progress Indicator Progress Description='0000010'		
SIP Parameter values	200 OK: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000010**<		
Comments			

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
				←	100 Trying
	200 OK (INVITE) (CON)	←		←	200 OK (INVITE)
				→	ACK
	Apply post test routine				

TP number	TP_206_008	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.11.2
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_200_OK_INVITE_with_encapsulated CON/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 4 in 200 OK into ATP in the CON		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 4 in a 200 OK INVITE, a 200 OK INVITE with encapsulated CON is sent and an Access Transport Parameter is present containing a Progress Indicator #4		
ISUP Parameter values	**CON:** Access Transport Progress Indicator Progress Description='0000100'		
SIP Parameter values	200 OK: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000100**<		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 200 OK (INVITE)(CON) ← ← 200 OK (INVITE) ACK → → ACK **Apply post test routine**		

TP number	TP_206_009	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.11.2
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_200_OK_INVITE_with_encapsulated CON/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 5 in 200 OK into ATP in the CON		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 5 in a 200 OK INVITE, a 200 OK INVITE with encapsulated CON is sent and an Access Transport Parameter is present containing a Progress Indicator #5		
ISUP Parameter values	**IAM:** USI=speech or 3,1 kHz audio, USI prime=unrestricted digital info with T/A, TMR=64 kbit/s preferred, TMR prime = speech or 3,1 kHz audio **CON:** Access Transport Progress Indicator Progress Description='0000101'		
SIP Parameter values	200 OK: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000101**<		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 200 OK (INVITE) (CON) ← ← 200 OK (INVITE) ACK → → ACK **Apply post test routine**		

TP number	TP_206_010	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.11.2
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_200_OK_INVITE_with_encapsulated CON/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	No mapping of PSTN XML ProgressIndicator 7 in 200 OK into ATP in the CON		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 7 in a 200 OK INVITE, a 200 OK INVITE with encapsulated CON is sent and **no** Access Transport Parameter is present containing a Progress Indicator #7. The Backward call indicator is set to the following values: ISDN User Part indicator **ISDN User Part used all the way** ISDN access indicator **Terminating access non-ISDN** Interworking indicator **no interworking encountered**		
ISUP Parameter values	**CON:** Access Transport not present Backward call indicator ISDN User Part indicator **ISDN User Part used all the way** ISDN access indicator **Terminating access non-ISDN** Interworking indicator **no interworking encountered**		
SIP Parameter values	200 OK: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000111**<		
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →	→	INVITE
		←	100 Trying
	200 OK (INVITE) (CON) ←	←	200 OK (INVITE)
	ACK →	→	ACK
	Apply post test routine		

TP number	TP_206_011	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.11.2
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_200_OK_INVITE_with_encapsulated CON/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML HighLayerCompatibility in 200 OK into ATP in CON		
Test Purpose	Ensure that on receipt of 200 OK INVITE and a PSTN XML HighLayerCompatibility element is present a 200 OK INVITE with encapsulated CON is sent and a Access Transport Parameter is present containing a High layer compatibility IE and the value is set to the value HLC_VA as indicated in table 6.1.2.5-1		
ISUP Parameter values	**CON:** Access Transport High layer compatibility High layer characteristics identification = **HLC_VA**		
SIP Parameter values	200 OK: PSTN XML MIME body <?xml version="1.0" encoding="utf-8"?> PSTN HighLayerCompatibility HLOctet3 CodingStandard>00< Interpretation>100< PresentationMethod>01< HLOctet4 HighLayerCharacteristics>**HLC_VA**<		
Comments			

Message flows	**SIP-I**		**MGCF**		**IP NNIP**
	INVITE (IAM)	→		→	INVITE
				←	100 Trying
	200 OK (INVITE) (CON)	←		←	200 OK (INVITE)
	ACK	→		→	ACK
	Apply post test routine				

TP number	TP_206_012	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.11.2
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_200_OK_INVITE_with_encapsulated CON/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML BearerCapability in 200 OK into ATP in CON		
Test Purpose	Ensure that on receipt of 200 OK INVITE and a PSTN XML BearerCapability element is present, a 200 OK INVITE with encapsulated CON is sent and a Access Transport Parameter is present containing a Bearer Capability IE and the value is set to the value ITC_value as indicated in table 6.1.2.5-1		
ISUP Parameter values	**CON:** Access Transport Bearer Capability Information Transfer Capability = **ITC_value**		
SIP Parameter values	200 OK: <?xml version="1.0" encoding="utf-8"?> PSTN BearerCapability BCoctet3 CodingStandard>00< InformationTransferCapability> **ITC_value** < BCoctet4 TransferMode>00< InformationTransferRate>10000<		
Comments			

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
				←	100 Trying
	200 OK (INVITE) (CON)	←		←	200 OK (INVITE)
	ACK	→		→	ACK
	Apply post test routine				

TP number	TP_206_013	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.11
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_200_OK_INVITE_with_encapsulated CON/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML BearerCapability into Transmission medium used parameter		
Test Purpose	Ensure that on receipt of a PSTN XML BearerCapability element in a 200 OK INVITE a Transmission Medium Used parameter is present in the sent 200 OK INVITE with encapsulated CON message. The value of the PSTN XML InformationTransferCapability value TMU_VA_BC is mapped into the value of the Transmission Medium Used parameter TMU_VA_TMU as described in table 6.1.2.5-3		
ISUP Parameter values	**IAM:** USI=speech or 3,1 kHz audio, USI prime=unrestricted digital info with T/A, TMR=64 kbit/s preferred, TMR prime = speech or 3,1 kHz audio **CON:** TMU: **TMU_VA_TMU**		
SIP Parameter values	200 OK: <?xml version="1.0" encoding="utf-8"?> PSTN BearerCapability BCoctet3 CodingStandard>00< InformationTransferCapability>**TMU_VA_BC**< ….		
Comments			

Message flows

SIP-I		**MGCF**		**SIP NNI**
INVITE (IAM)	→		→	INVITE
			←	100 Trying
200 OK (INVITE) (CON)	←		←	200 OK (INVITE)
ACK	→		→	ACK

Apply post test routine

TP number	TP_206_014	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.11A
TSS reference	SIP-I - SIP NNI/Basic call/Sending_of_200_OK_INVITE_with_encapsulated CON/		
Selection criteria	PICS 6.2.1/19		
Test Purpose name	Receipt of a reINVITE request		
Test Purpose	Ensure that on receipt of a reINVITE received from the SIP network containing a Call-Info header, the SUT instruct the MGW to send the associated media to the PSTN leg of the communication		
ISUP Parameter values			
SIP Parameter values	INVITE2: Call-Info: <media resource URL>		
Comments			

Message flows

SIP-I		**MGCF**		**SIP NNI**
INVITE (IAM)	→		→	INVITE1
180 Ringing (ACM free)	←		←	180 Ringing
200 OK INVITE (ANM)	←		←	200 OK INVITE
ACK	→		→	ACK
INVITE	←		←	INVITE
200 OK INVITE2			→	200 OK INVITE2
ACK	←		←	ACK
	media			

Apply post test routine

6.1.2.7 Receipt of Status Codes 3xx, 4xx, 5xx or 6xx

TP number	TP_207_001	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.12
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_4xx-5xx-6xx/		
Selection criteria			
Test Purpose name	Mapping of unsuccessful final responses to ISUP/BICC Release messages		
Test Purpose	Ensure that on receipt of an unsuccessful final response **SIP_Response** before an early dialogue is established, a SIP_Response with encapsulated Release message Cause value **REL_cause** is sent on the ISUP/BICC leg of the connection. The mapping is according the table 6.1.2.7-1. The location value in the REL message is set to 'network beyond interworking point'		
ISUP Parameter values	**REL:** Cause = REL_cause		
SIP Parameter values	SIP_Response		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying SIP_Response (REL) ← ← SIP_Response ACK (RLC) → → ACK		

Table 6.1.2.7-1: Received status codes on SIP side of O-MGCF mapping to REL

SIP_Response_VA	←REL (cause code) REL_cause	←4xx/5xx/6xx SIP Message SIP_Response
VA_01	111 (protocol error, unspecified)	400 Bad Request
VA_02	127 (interworking unspecified)	401 Unauthorized
VA_03	127 (interworking unspecified)	402 Payment Required
VA_04	79 (Service or option not implemented, unspecified)	403 Forbidden
VA_05	1 (Unallocated number)	404 Not Found
VA_06	127 (interworking unspecified)	405 Method Not Allowed
VA_07	127 (interworking unspecified)	406 Not Acceptable
VA_08	127 (interworking unspecified)	407 Proxy authentication required
VA_09	102 (recovery on timer expiry)	408 Request Timeout
VA_10	22 (Number changed)	410 Gone
VA_11	127 (interworking unspecified)	413 Request Entity too long
VA_12	111 (protocol error, unspecified)	414 Request-URI too long
VA_13	127 (interworking unspecified)	415 Unsupported Media type
VA_14	111 (protocol error, unspecified)	416 Unsupported URI scheme
VA_15	79 (Service or option not implemented, unspecified)	417 Unknown Resource-Priority
VA_16	111 (protocol error, unspecified)	420 Bad Extension
VA_17	111 (protocol error, unspecified)	421 Extension required
VA_18	31 (Normal, unspecified)	422 Session Interval Too Small
VA_19	127 (interworking unspecified)	423 Interval Too Brief
VA_20	24 (call rejected due to ACR supplementary service)	433 Anonymity Disallowed.
VA_21	20 Subscriber absent	480 Temporarily Unavailable
VA_22	127 (interworking unspecified)	440 Max-Breadth Exceeded
VA_23	127 (interworking unspecified)	481 Call/Transaction does not exist
VA_24	127 (interworking unspecified)	482 Loop detected
VA_25	25 (Exchange routing error)	483 Too many hops
VA_26	28 (Invalid Number format)	484 Address Incomplete
VA_27	Cause value No. 1 (unallocated (unassigned) number)	485 Ambiguous
VA_28	17 (User busy)	486 Busy Here
VA_29	127 (Interworking unspecified) or not interworked	487 Request terminated
VA_30	50 (requested facility no subscribed)	488 Not acceptable here
VA_31	127 (interworking unspecified)	493 Undecipherable
VA_32	127 (interworking unspecified)	500 Server Internal error
VA_33	79 (service or option not implemented)	501 Not implemented
VA_34	27 (Destination out of order)	502 Bad Gateway
VA_35	127 (interworking unspecified)	503 Service Unavailable
VA_36	102 (Recovery on timer expiry)	504 Server timeout
VA_37	127 (interworking unspecified)	505 Version not supported
VA_38	127 (interworking unspecified)	513 Message too large
VA_39	127 (interworking unspecified)	580 Precondition failure
VA_40	17 (User busy)	600 Busy Everywhere
VA_41	21 (Call rejected)	603 Decline
VA_42	2 (No route to specified transit network)	604 Does not exist anywhere
VA_43	88 (incompatible destination)	606 Not acceptable

TP number	TP_207_002	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.12
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_4xx-5xx-6xx/		
Selection criteria			
Test Purpose name	Mapping of unsuccessful final responses to REL after 180 was received		
Test Purpose	Ensure that on receipt of an unsuccessful final response **SIP_Response** with encapsulated (REL) after an early dialogue was established due to the receipt of a 180 Ringing, a REL is sent. The Cause value of the REL is mapped from the received status code as indicated in table 6.1.2.7-2. The location value in the REL message is set to 'network beyond interworking point'		
ISUP Parameter values	**REL:** Cause = REL_cause		
SIP Parameter values	SIP_Response		
Comments			

Message flows

SIP-I		**MGCF**		**SIP NNI**
INVITE (IAM)	→		→	INVITE
			←	100 Trying
180 Ringing (ACM)			←	180 Ringing
SIP_Response (REL)	←		←	SIP_Response
ACK (RLC)	→		→	ACK

TP number	TP_207_003	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.12
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_4xx-5xx-6xx/		
Selection criteria			
Test Purpose name	Mapping of unsuccessful final responses to REL after 181 was received		
Test Purpose	Ensure that on receipt of an unsuccessful final response **SIP_Response** with encapsulated (REL) after an early dialogue was established due to the receipt of a 181 Call is Being Forwarded, a REL is sent. The Cause value of the REL is mapped from the received status code as indicated in table 6.1.2.7-2. The location value in the REL message is set to 'network beyond interworking point'		
ISUP Parameter values	**REL:** Cause = REL_cause		
SIP Parameter values	SIP_Response		
Comments			

Message flows

SIP-I		**MGCF**		**SIP NNI**
INVITE (IAM)	→		→	INVITE
			←	100 Trying
181 Call is Being Forwarded (ACM)			←	181 Call is Being Forwarded
SIP_Response (REL)	←		←	SIP_Response
ACK (RLC)	→		→	ACK

TP number	TP_207_004	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.12
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_4xx-5xx-6xx/		
Selection criteria			
Test Purpose name	Mapping of unsuccessful final responses to REL after 183 was received		
Test Purpose	Ensure that on receipt of an unsuccessful final response **SIP_Response** with encapsulated (REL)after an early dialogue was established due to the receipt of a 183 Session Progress, a REL is sent. The Cause value of the REL is mapped from the received status code as indicated in table 6.1.2.7-2. The location value in the REL message is set to 'network beyond interworking point'		
ISUP Parameter values	**REL:** Cause = REL_cause		
SIP Parameter values	SIP_Response		
Comments			

Message flows

SIP-I		**MGCF**		**SIP NNI**
IAM	→		→	INVITE
			←	100 Trying
183 Session Progress	←		←	183 Session Progress
SIP_Response (REL)	←		←	SIP_Response
ACK (RLC)	→		→	ACK

Table 6.1.2.7-2: Received status codes on SIP side of O-MGCF mapping to REL

SIP_Response_VA	←REL (cause code) REL_cause	←4xx/5xx/6xx SIP Message SIP_Response
VA_01	111 (protocol error, unspecified)	400 Bad Request
VA_02	127 (interworking unspecified)	402 Payment Required
VA_03	79 (Service or option not implemented, unspecified)	403 Forbidden
VA_04	127 (interworking unspecified)	406 Not Acceptable
VA_05	102 (recovery on timer expiry)	408 Request Timeout
VA_06	22 (Number changed)	410 Gone
VA_07	127 (interworking unspecified)	423 Interval Too Brief
VA_08	20 Subscriber absent	480 Temporarily Unavailable
VA_09	127 (interworking unspecified)	481 Call/Transaction does not exist
VA_10	127 (interworking unspecified)	482 Loop detected
VA_11	25 (Exchange routing error)	483 Too many hops
VA_12	1 (Unallocated (unassigned) number)	485 Ambiguous
VA_13	50 (requested facility no subscribed)	488 Not acceptable here
VA_14	127 (interworking unspecified)	500 Server Internal error
VA_15	79 (service or option not implemented)	501 Not implemented
VA_16	27 (Destination out of order)	502 Bad Gateway
VA_17	102 (Recovery on timer expiry)	504 Server timeout
VA_18	21 (Call rejected)	603 Decline
VA_19	2 (No route to specified transit network)	604 Does not exist anywhere
VA_20	88 (incompatible destination)	606 Not acceptable

TP number	TP_207_005	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.12
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_4xx-5xx-6xx/		
Selection criteria			
Test Purpose name	Mapping of Reason header into Cause value of REL		
Test Purpose	Ensure that on receipt of an unsuccessful final response SIP_Response and a Reason header is present set to cause SIP_cause, this value is used in the corresponding REL message. The mapping is indicated in table 6.1.2.7-3. The location value in the REL message is set to 'network beyond interworking point'		
ISUP Parameter values	**REL:** Cause= SIP_cause		
SIP Parameter values	SIP_Response: Reason: cause= SIP_cause		
Comments	The use of different cause values in the Reason header is recommended. The cause value should be adequate to the response code.		
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →	→	INVITE
		←	100 Trying
	SIP_Response (REL) ←	←	SIP_Response
	ACK (RLC) →	→	ACK

Table 6.1.2.7-3: Received status codes on SIP side of O-MGCF mapping to REL

SIP_Response_VA	←REL (cause code) SIP_cause	←4xx/5xx/6xx SIP Message SIP_Response
VA_01	SIP_cause	400 Bad Request
VA_02	SIP_cause	401 Unauthorized
VA_03	SIP_cause	402 Payment Required
VA_04	SIP_cause	403 Forbidden
VA_05	SIP_cause	404 Not Found
VA_06	SIP_cause	405 Method Not Allowed
VA_07	SIP_cause	406 Not Acceptable
VA_08	SIP_cause	407 Proxy authentication required
VA_09	SIP_cause	408 Request Timeout
VA_10	SIP_cause	410 Gone
VA_11	SIP_cause	413 Request Entity too long
VA_12	SIP_cause	414 Request-URI too long
VA_13	SIP_cause	415 Unsupported Media type
VA_14	SIP_cause	416 Unsupported URI scheme
VA_15	SIP_cause	417 Unknown Resource-Priority
VA_16	SIP_cause	420 Bad Extension
VA_17	SIP_cause	421 Extension required
VA_18	SIP_cause	422 Session Interval Too Small
VA_19	SIP_cause	423 Interval Too Brief
VA_20	SIP_cause	433 Anonymity Disallowed.
VA_21	SIP_cause	440 Max-Breadth Exceeded
VA_22	SIP_cause	480 Temporarily Unavailable
VA_23	SIP_cause	481 Call/Transaction does not exist
VA_24	SIP_cause	482 Loop detected
VA_25	SIP_cause	483 Too many hops
VA_26	SIP_cause	484 Address Incomplete
VA_27	SIP_cause	485 Ambiguous
VA_28	SIP_cause	486 Busy Here
VA_29	SIP_cause	487 Request terminated
VA_30	SIP_cause	488 Not acceptable here
VA_31	SIP_cause	493 Undecipherable
VA_32	SIP_cause	500 Server Internal error
VA_33	SIP_cause	501 Not implemented
VA_34	SIP_cause	502 Bad Gateway
VA_35	SIP_cause	503 Service Unavailable
VA_36	SIP_cause	504 Server timeout
VA_37	SIP_cause	505 Version not supported
VA_38	SIP_cause	513 Message too large
VA_39	SIP_cause	580 Precondition failure
VA_40	SIP_cause	600 Busy Everywhere
VA_41	SIP_cause	603 Decline
VA_42	SIP_cause	604 Does not exist anywhere
VA_43	SIP_cause	606 Not acceptable

TP number	TP_207_006	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.12
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_4xx-5xx-6xx/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 1 in an unsuccessful final response into ATP in the REL		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 1 in an unsuccessful final response as indicated in table 6.1.2.7-4, a SIP_Response with encapsulated REL is sent and an Access Transport Parameter is present containing a Progress Indicator #1		
ISUP Parameter values	**REL:** Access Transport Progress Indicator Progress Description='0000001'		
SIP Parameter values	SIP_Response: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000001**<		
Comments			

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
	100 Trying	←		←	100 Trying
	SIP_Response (REL)	←		←	SIP_Response
	ACK (RLC)	→		→	ACK

TP number	TP_207_007	**Reference**	[1], clauses 7.2.1, 7.3.1 [2], clause 7.2.3.2.12
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_4xx-5xx-6xx/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 2 in an unsuccessful final response into ATP in the REL		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 2 in an unsuccessful final response as indicated in table 6.1.2.7-4, a SIP_Response with encapsulated REL is sent and an Access Transport Parameter is present containing a Progress Indicator #2		
ISUP Parameter values	**REL:** Access Transport Progress Indicator Progress Description='0000010'		
SIP Parameter values	SIP_Response: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000010**<		
Comments			

Message flows	**SIP-I**		**MGCF**		**SIP-NNI**
	IAM	→		→	INVITE
				←	100 Trying
	SIP_Response (REL)	←		←	SIP_Response
	ACK (RLC)	→		→	ACK

TP number	TP_207_008	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.12
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_4xx-5xx-6xx/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 4 in an unsuccessful final response into ATP in the REL		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 4 in an unsuccessful final response as indicated in table 6.1.2.7-4, a SIP_Response with encapsulated REL is sent and an Access Transport Parameter is present containing a Progress Indicator #4		
ISUP Parameter values	**REL:** Access Transport Progress Indicator Progress Description='0000100'		
SIP Parameter values	SIP_Response: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000100**<		
Comments			

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
				←	100 Trying
	SIP_Response (REL)	←		←	SIP_Response
	ACK (RLC)	→		→	ACK

TP number	TP_207_009	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.12
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_4xx-5xx-6xx/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 5 in an unsuccessful final response into ATP in the REL		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 5 in an unsuccessful final response as indicated in table 6.1.2.7-4, a SIP_Response with encapsulated REL is sent and an Access Transport Parameter is present containing a Progress Indicator #5		
ISUP Parameter values	**IAM:** USI=speech or 3,1 kHz audio, USI prime=unrestricted digital info with T/A, TMR=64 kbit/s preferred, TMR prime = speech or 3,1 kHz audio **REL:** Access Transport Progress Indicator Progress Description='0000101'		
SIP Parameter values	SIP_Response: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000101**<		
Comments			

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
				←	100 Trying
	SIP_Response (REL)	←		←	SIP_Response
	ACK (RLC)	→		→	ACK

Table 6.1.2.7-4: Received status codes on SIP side of O-MGCF mapping to REL

SIP_Response_VA	←4xx/5xx/6xx SIP Message SIP_Response
VA_01	400 Bad Request
VA_02	403 Forbidden
VA_03	406 Not Acceptable
VA_04	408 Request Timeout
VA_05	410 Gone
VA_06	480 Temporarily Unavailable
VA_07	488 Not acceptable here
VA_08	500 Server Internal error
VA_09	502 Bad Gateway
VA_10	504 Server timeout
VA_11	603 Decline
VA_12	606 Not acceptable

TP number	TP_207_010	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.12
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_4xx-5xx-6xx/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML HighLayerCompatibility in an unsuccessful final response into ATP in REL		
Test Purpose	Ensure that on receipt of an unsuccessful final response and a PSTN XML HighLayerCompatibility element is present a SIP_Response as indicated in table 6.1.2.7-4 with encapsulated REL is sent and a Access Transport Parameter is present containing a High layer compatibility IE and the value is set to the value HLC_VA as indicated in table 6.1.2.5-1		
ISUP Parameter values	**REL:** Access Transport High layer compatibility High layer characteristics identification = **HLC_VA**		
SIP Parameter values	SIP_Response: PSTN XML MIME body <?xml version="1.0" encoding="utf-8"?> PSTN HighLayerCompatibility HLOctet3 CodingStandard>00< Interpretation>100< PresentationMethod>01< HLOctet4 HighLayerCharacteristics>**HLC_VA**<		
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →	→	INVITE
		←	100 Trying
	SIP_Response (REL) ←	←	SIP_Response
	ACK (RLC) →	→	ACK

TP number	TP_207_011	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.12
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_4xx-5xx-6xx/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML BearerCapability in an unsuccessful final response into ATP in REL		
Test Purpose	Ensure that on receipt of an unsuccessful final response and a PSTN XML BearerCapability element is present, a SIP_Response as indicated in table 6.1.2.7-4 with encapsulated REL is sent and a Access Transport Parameter is present containing a Bearer Capability IE and the value is set to the value ITC_value as indicated in table 6.1.2.5-2		
ISUP Parameter values	**REL:** Access Transport Bearer Capability Information Transfer Capability = **ITC_value**		
SIP Parameter values	SIP_Response: <?xml version="1.0" encoding="utf-8"?> PSTN BearerCapability BCoctet3 CodingStandard>00< InformationTransferCapability> **ITC_value** < BCoctet4 TransferMode>00< InformationTransferRate>10000<		
Comments			

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
				←	100 Trying
	SIP_Response (REL)	←		←	SIP_Response
	ACK (RLC)	→		→	ACK

TP number	TP_207_012	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.12
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_4xx-5xx-6xx/		
Selection criteria	PICS 6.2.1/20		
Test Purpose name	Play media provided in an Error-Info header received in an unsuccessful final response		
Test Purpose	Ensure that the SUT instructs the MGW to play out media associated with an URL present in an Error-Info header received in an unsuccessful final response as indicated in table 6.1.2.7-4		
ISUP Parameter values			
SIP Parameter values	SIP_Response: Error-Info: <Media re source URL>		
Comments			

Message flows	**SIP-I**		**MGCF**		**ISUP**
	INVITE (IAM)	→		→	INVITE
	100 Trying	←		←	100 Trying
				←	SIP_Response
	183 Session Progress			→	ACK
	The MGC plays media				
	SIP_Response	←			
	ACK	→			
	Apply post test routine				

Table 6.1.2.7-5: Void

TP number	TP_207_015	**Reference**	[1], clause 7.3.1 [2], clauses 7.2, 7.2.3.2.1
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_4xx-5xx-6xx/		
Selection criteria	PICS 6.2.1/3		
Test Purpose name	580 response to an UPDATE within an early dialog		
Test Purpose	Ensure that on receipt of a 580 Precondition Failure final response after an UPDATE request was sent in the early dialogue, a REL is sent and the Cause value is set to 127		
ISUP Parameter values	**IAM:** Nature of connection indicator= continuity check required on this circuit or continuity check performed on previous circuit **COT:** Continuity indicator=continuity check successful **REL:** Cause=127		
SIP Parameter values	**INVITE:** Supported: precondition, 100rel SDP a=curr:qos local none a=curr:qos remote none a=des:qos mandatory local sendrecv a=des:qos none remote sendrecv 183: Require: 100rel SDP a=curr:qos local none a=curr:qos remote none a=des:qos mandatory local sendrecv a=des:qos mandatory remote sendrecv a=conf:qos remote sendrecv UPDATE: SDP a=curr:qos local sendrecv a=curr:qos remote none a=des:qos mandatory local sendrecv a=des:qos mandatory remote sendrecv		
Comments			

Message flows

SIP-I		**MGCF**		**SIP NNI**
INVITE (IAM)	→		→	INVITE
100 Trying	←		←	100 Trying
183 Session Progress	←		←	183 Session Progress
PRACK	→		→	PRACK
200 OK (PRACK)	←		←	200 OK (PRACK)
UPDATE	→		→	UPDATE
580 Precondition Failure (REL)	←		←	580 Precondition Failure
ACK (RLC)	→		→	ACK
Apply post test routine				

6.1.2.8 Receipt of a BYE

TP number	TP_208_001	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.13
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_BYE/		
Selection criteria			
Test Purpose name	BYE received, REL is sent		
Test Purpose	Ensure that on receipt of a BYE message and no reason header is present, a BYE with encapsulated REL is sent. The Cause value of the REL is set to #16, the location is set to 'network beyond interworking point'		
ISUP Parameter values			
SIP Parameter values			
Comments			

Message flows

SIP-I		MGCF		SIP NNI
INVITE (IAM)	→		→	INVITE
			←	100 Trying
180 Ringing (ACM – free)	←		←	180 Ringing
200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
ACK	→		→	ACK
BYE (REL)	←		←	BYE
200 OK (BYE) RLC	→		→	200 OK (BYE)

TP number	TP_208_002	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.13
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_BYE/		
Selection criteria			
Test Purpose name	BYE received a Reason header is present, REL Cause derived from the Reason cause value		
Test Purpose	Ensure that on receipt of a BYE request and a Reason header is present, a BYE with encapsulated REL is sent. The Cause parameter is derived from cause parameter in the Reason header		
ISUP Parameter values	**REL:** Cause=<Reason cause>		
SIP Parameter values	BYE: Reason: cause		
Comments			

Message flows

SIP-I		MGCF		SIP NNI
INVITE (IAM)	→		→	INVITE
			←	100 Trying
180 Ringing (ACM free)	←		←	180 Ringing
ANM (200 OK) INVITE	←		←	200 OK (INVITE)
ACK			→	ACK
BYE (REL)	←		←	BYE
200 OK (BYE) (RLC)	→		→	200 OK (BYE)

TP number	TP_208_003	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.13
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_BYE/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 1 in a BYE into ATP in the REL		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 1 in a BYE request, a BYE with encapsulated REL is sent and an Access Transport Parameter is present containing a Progress Indicator #1		
ISUP Parameter values	**REL:** Access Transport Progress Indicator Progress Description='0000001'		
SIP Parameter values	BYE: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000001**<		
Comments			

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
				←	100 Trying
	180 Ringing (ACM – free)	←		←	180 Ringing
	200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
	ACK	→		→	ACK
	BYE (REL)	←		←	BYE
	200 OK (BYE) (RLC)	→		→	200 OK (BYE)

TP number	TP_208_004	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.13
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_BYE/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 2 in a BYE into ATP in the REL		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 2 in a BYE request, a BYE with encapsulated REL is sent and an Access Transport Parameter is present containing a Progress Indicator #2		
ISUP Parameter values	**REL:** Access Transport Progress Indicator Progress Description='0000010'		
SIP Parameter values	BYE: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000010**<		
Comments			

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
				←	100 Trying
	180 Ringing (ACM - free)	←		←	180 Ringing
	200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
	ACK	→		→	ACK
	BYE (REL)	←		←	BYE
	200 OK (BYE) (RLC)	→		→	200 OK (BYE)

TP number	TP_208_005	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.13
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_BYE/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 4 in a BYE into ATP in the REL		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 4 in a BYE request, a BYE with encapsulated REL is sent and an Access Transport Parameter is present containing a Progress Indicator #4		
ISUP Parameter values	**REL:** Access Transport Progress Indicator Progress Description='0000100'		
SIP Parameter values	BYE: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000100**<		
Comments			

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
				←	100 Trying
	180 Ringing (ACM)	←		←	180 Ringing
	200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
	ACK	→		→	ACK
	BYE (REL)	←		←	BYE
	200 OK (BYE) (RLC)	→		→	200 OK (BYE)

TP number	TP_208_006	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.13
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_BYE/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML ProgressIndicator 5 in a BYE into ATP in the REL		
Test Purpose	Ensure that on receipt of a PSTN XML ProgressIndicator value 5 in a BYE request, a BYE with encapsulated REL is sent and an Access Transport Parameter is present containing a Progress Indicator #5		
ISUP Parameter values	**IAM:** USI=speech or 3,1 kHz audio, USI prime=unrestricted digital info with T/A, TMR=64 kbit/s preferred, TMR prime = speech or 3,1 kHz audio **REL:** Access Transport Progress Indicator Progress Description='0000101'		
SIP Parameter values	BYE: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000101**<		
Comments			

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	IAM	→		→	INVITE
				←	100 Trying
	180 Ringing (ACM – free)	←		←	180 Ringing
	200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
	ACK	→		→	ACK
	BYE (REL)	←		←	BYE
	200 OK (BYE) (RLC)	→		→	200 OK (BYE)

TP number	TP_208_007	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.13
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_BYE/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML HighLayerCompatibility in a BYE into ATP in REL		
Test Purpose	Ensure that on receipt of BYE request and a PSTN XML HighLayerCompatibility element is present a BYE with encapsulated REL is sent and a Access Transport Parameter is present containing a High layer compatibility IE and the value is set to the value HLC_VA as indicated in table 6.1.2.5-1		
ISUP Parameter values	**REL:** Access Transport High layer compatibility High layer characteristics identification = **HLC_VA**		
SIP Parameter values	BYE: PSTN XML MIME body <?xml version="1.0" encoding="utf-8"?> PSTN HighLayerCompatibility HLOctet3 CodingStandard>00< Interpretation>100< PresentationMethod>01< HLOctet4 HighLayerCharacteristics>**HLC_VA**<		
Comments			

Message flows

SIP-I		**MGCF**		**SIP NNI**
INVITE (IAM)	→		→	INVITE
			←	100 Trying
180 Ringing (ACM)	←		←	180 Ringing
200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
ACK	→		→	ACK
BYE (REL)	←		←	BYE
200 OK (BYE) (RLC)	→		→	200 OK (BYE)

TP number	TP_208_008	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.13
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_BYE/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of PSTN XML BearerCapability in a BYE into ATP in REL		
Test Purpose	Ensure that on receipt of a BYE request and a PSTN XML BearerCapability element is present, a BYE with encapsulated REL is sent and a Access Transport Parameter is present containing a Bearer Capability IE and the value is set to the value ITC_value as indicated in table 6.1.2.5-2		
ISUP Parameter values	**REL:** Access Transport Bearer Capability Information Transfer Capability = **ITC_value**		
SIP Parameter values	BYE: <?xml version="1.0" encoding="utf-8"?> PSTN BearerCapability BCoctet3 CodingStandard>00< InformationTransferCapability> **ITC_value** < BCoctet4 TransferMode>00< InformationTransferRate>10000<		
Comments			

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	IAM	→		→	INVITE
				←	100 Trying
	180 Ringing (ACM – free)	←		←	180 Ringing
	200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
	ACK	→		→	ACK
	BYE (REL)	←		←	BYE
	200 OK (BYE) (RLC)	→		→	200 OK (BYE)

6.1.2.9 Receipt of the Release Message

TP number	TP_209_001	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.14
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_REL/		
Selection criteria			
Test Purpose name	REL received before an early dialogue was established, a CANCEL is sent		
Test Purpose	Ensure that on receipt of a CANCEL/BYE with encapsulated REL message before an early dialogue was established, a CANCEL request is sent and the Reason header is present, the cause value is derived from the Cause value in the received REL		
ISUP Parameter values	**REL:** Cause value		
SIP Parameter values	CANCEL: Reason: cause=<Cause value>		
Comments			

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
	100 Trying	←		←	100 Trying
	CANCEL/BYE (REL)	→		→	CANCEL
	200 OK (CANCEL) (RLC)	←		←	200 OK (CANCEL)
	487 Request Terminated	←		←	487 Request Terminated
	ACK	→		→	ACK

TP number	TP_209_002	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.14
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_REL/		
Selection criteria			
Test Purpose name	REL received after an early dialogue with 180 was established, a CANCEL is sent		
Test Purpose	Ensure that on receipt of a CANCEL/BYE with encapsulated REL message after an early dialogue due to a 180 Ringing response was established, a CANCEL request is sent and the Reason header is present, the cause value is derived from the Cause value in the received REL		
ISUP Parameter values	**REL:** Cause value		
SIP Parameter values	CANCEL: Reason: cause=<Cause value>		
Comments			

Message flows

SIP-I		**MGCF**		**SIP NNI**
INVITE (IAM)	→		→	INVITE
			←	100 Trying
180 Ringing (ACM – free)	←		←	180 Ringing
CANCEL/BYE (REL)	→		→	CANCEL
200 OK (CANCEL) (RLC)	←		←	200 OK (CANCEL)
487 Request Terminated	←		←	487 Request Terminated
ACK	→		→	ACK

TP number	TP_209_003	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.14
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_REL/		
Selection criteria			
Test Purpose name	REL received after an early dialogue with 181 was established, a CANCEL is sent		
Test Purpose	Ensure that on receipt of a CANCEL/BYE with encapsulated REL message after an early dialogue due to a 181 Call is Being Forwarded response was established, a CANCEL request is sent and the Reason header is present, the cause value is derived from the Cause value in the received REL		
ISUP Parameter values	**REL:** Cause value		
SIP Parameter values	CANCEL: Reason: cause=<Cause value>		
Comments			

Message flows

SIP-I		**MGCF**		**SIP NNI**
INVITE (IAM)	→		→	INVITE
			←	100 Trying
181 Being forwarded (ACM)	←		←	181 Being forwarded
CANCEL/BYE (REL)	→		→	CANCEL
200 OK (CANCEL) (RLC)	←		←	200 OK (CANCEL)
487 Request Terminated	←		←	487 Request Terminated
ACK	→		→	ACK

TP number	TP_209_004	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.14
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_REL/		
Selection criteria			
Test Purpose name			
Test Purpose	REL received after an early dialogue with 182 was established, a CANCEL is sent		
ISUP Parameter values	Ensure that on receipt of a CANCEL/BYE with encapsulated REL message after an early dialogue due to a 182 Queued response was established, a CANCEL request is sent and the Reason header is present, the cause value is derived from the Cause value in the received REL		
SIP Parameter values	**REL:** Cause value		
Comments	CANCEL: Reason: cause=<Cause value>		

Message flows

SIP-I		**MGCF**		**SIP NNI**
INVITE (IAM)	→		→	INVITE
	←		←	100 Trying
182 Queued (ACM)	←		←	182 Queued
CANCEL/BYE (REL)	→		→	CANCEL
200 OK (CANCEL) (RLC)	←		←	200 OK (CANCEL)
487 Request Terminated	←		←	487 Request Terminated
ACK	→		→	ACK

TP number	TP_209_005	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.14
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_REL/		
Selection criteria			
Test Purpose name	REL received after an early dialogue with 183 was established, a CANCEL is sent		
Test Purpose	Ensure that on receipt of a CANCEL/BYE with encapsulated REL message after an early dialogue due to a 183 Session Progress response was established, a CANCEL request is sent and the Reason header is present, the cause value is derived from the Cause value in the received REL		
ISUP Parameter values	**REL:** Cause value		
SIP Parameter values	CANCEL: Reason: cause=<Cause value>		
Comments			

Message flows

SIP-I		**MGCF**		**SIP NNI**
INVITE (IAM)	→		→	INVITE
100 Trying	←		←	100 Trying
183 Session Progress (ACM)	←		←	183 Session Progress
CANCEL/BYE (REL)	→		→	CANCEL
200 OK (CANCEL) (RLC)	←		←	200 OK (CANCEL)
487 Request Terminated	←		←	487 Request Terminated
ACK	→		→	ACK

TP number	TP_209_006	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.14
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_REL/		
Selection criteria			
Test Purpose name	REL received in the confirmed dialogue a BYE is sent		
Test Purpose	Ensure that on receipt of a BYE with encapsulated REL message in the confirmed dialogue, a BYE request is sent and the Reason header is present, the cause value is derived from the Cause value in the received REL		
ISUP Parameter values	**REL:** Cause value		
SIP Parameter values	BYE: Reason: cause=<Cause value>		
Comments			

Message flows

SIP-I		**MGCF**		**IP NNI**
INVITE (IAM)	→		→	INVITE
100 Trying	←		←	100 Trying
180 Ringing (ACM – free)	←		←	180 Ringing
200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
ACK	→		→	ACK
BYE (REL)	→		→	BYE
200 OK (BYE) (RLC)	←		←	200 OK (BYE)

TP number	TP_209_007	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.14
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_REL/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of REL ATP Progress Indicator #1 into PSTN XML ProgressIndicator #1 in the BYE		
Test Purpose	Ensure that on receipt of a BYE with encapsulated REL message and a ATP containing a Progress Indicator #2 in the confirmed dialogue, a BYE request is sent and a PSTN XML ProgressIndicator is present, the ProgressDescription is set to #1		
ISUP Parameter values	**REL:** Access Transport Progress Indicator Progress Description='0000001'		
SIP Parameter values	BYE: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000001**<		
Comments			

Message flows

SIP NNISIP-I		**MGCF**		**SIP NNI**
INVITE (IAM)	→		→	INVITE
			←	100 Trying
180 Ringing (ACM)	←		←	180 Ringing
200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
ACK	→		→	ACK
BYE (REL)	→		→	BYE
200 OK (BYE) (RLC)	←		←	200 OK (BYE)

TP number	TP_209_008	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.14
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_REL/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of REL ATP Progress Indicator #2 into PSTN XML ProgressIndicator #2 in the BYE		
Test Purpose	Ensure that on receipt of a BYE with encapsulated REL message and a ATP containing a Progress Indicator #2 in the confirmed dialogue, a BYE request is sent and a PSTN XML ProgressIndicator is present, the ProgressDescription is set to #2		
ISUP Parameter values	**REL:** Access Transport Progress Indicator Progress Description='0000010'		
SIP Parameter values	BYE: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000010**<		
Comments			

Message flows	**SIP NNISIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
				←	100 Trying
	180 Ringing (ACM – free)	←		←	180 Ringing
	200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
	ACK	→		→	ACK
	BYE (REL)	→		→	BYE
	200 OK (BYE) (RLC)	←		←	200 OK (BYE)

TP number	TP_209_009	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.14
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_REL/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of REL ATP Progress Indicator #4 into PSTN XML ProgressIndicator #4 in the BYE		
Test Purpose	Ensure that on receipt of a BYE with encapsulated REL message and a ATP containing a Progress Indicator #4 in the confirmed dialogue, a BYE request is sent and a PSTN XML ProgressIndicator is present, the ProgressDescription is set to #4		
ISUP Parameter values	**REL:** Access Transport Progress Indicator Progress Description='0000100'		
SIP Parameter values	BYE: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000100**<		
Comments			

Message flows	**SIP NNISIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
				←	100 Trying
	180 Ringing (ACM)	←		←	180 Ringing
	200 OK (ANM)	←		←	200 OK (INVITE)
	ACK	→		→	ACK
	BYE (REL)	→		→	BYE
	200 OK (BYE) (RLC)	←		←	200 OK (BYE)

TP number	TP_209_010	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.14
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_REL/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of REL ATP Progress Indicator #5 into PSTN XML ProgressIndicator #5 in the BYE		
Test Purpose	Ensure that on receipt of a BYE with encapsulated REL message and an ATP containing a Progress Indicator #5 in the confirmed dialogue, a BYE request is sent and a PSTN XML ProgressIndicator is present, the ProgressDescription is set to #5		
ISUP Parameter values	**REL:** Access Transport Progress Indicator Progress Description='0000101'		
SIP Parameter values	BYE: <?xml version="1.0" encoding="utf-8"?> PSTN ProgressIndicator ProgressOctet4 ProgressDescription>**0000101**<		
Comments			

Message flows		**MGCF**		**SIP NNI**
	INVITE (IAM)	→	→	INVITE
			←	100 Trying
	180 Ringing (ACM)	←	←	180 Ringing
	200 OK (INVITE)(ANM)	←	←	200 OK (INVITE)
	ACK	→	→	ACK
	BYE (REL)	→	→	BYE
	200 OK (BYE) (RLC)	←	←	200 OK (BYE)

TP number	TP_209_011	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.14
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_REL/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of REL ATP High layer compatibility into PSTN XML HighLayerCompatibility in the BYE		
Test Purpose	Ensure that on receipt of a BYE with encapsulated REL message and an ATP containing a High layer compatibility IE in the confirmed dialogue, a BYE request is sent and a PSTN XML HighLayerCompatibility is present, the HighLayerCharacteristics is set to **HLC_VA** as indicated in table 6.1.2.1-4		
ISUP Parameter values	**REL:** Access Transport High layer compatibility High layer characteristics identification = **HLC_VA**		
SIP Parameter values	BYE: PSTN XML MIME body <?xml version="1.0" encoding="utf-8"?> PSTN HighLayerCompatibility HLOctet3 CodingStandard>00< Interpretation>100< PresentationMethod>01< HLOctet4 HighLayerCharacteristics>**HLC_VA**<		
Comments			

Message flows	**SIP NNISIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
				←	100 Trying
	180 Ringing (ACM – free)	←		←	180 Ringing
	200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
	ACK	→		→	ACK
	BYE (REL)	→		→	BYE
	200 OK (BYE) (RLC)	←		←	200 OK (BYE)

TP number	TP_209_012	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.14
TSS reference	SIP-I - SIP NNI/Basic call/Receipt_of_REL/		
Selection criteria	PICS 6.2.1/5		
Test Purpose name	Mapping of REL ATP Bearer Capability into PSTN XML Bearer Capability in the BYE		
Test Purpose	Ensure that on receipt of a BYE with encapsulated REL message and an ATP containing a Bearer Capability IE in the confirmed dialogue, a BYE request is sent and a PSTN XML Bearer Capability is present, the InformationTransferCapability is set to **ITC_value** as indicated in table 6.1.2.1-6		
ISUP Parameter values	**REL:** Access Transport Bearer Capability Information Transfer Capability = **ITC_value**		
SIP Parameter values	BYE: <?xml version="1.0" encoding="utf-8"?> PSTN BearerCapability BCoctet3 CodingStandard>00< InformationTransferCapability>**ITC_value**< BCoctet4 TransferMode>00< InformationTransferRate>10000<		
Comments			

Message flows	**SIP NNISIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
	100 Trying	←		←	100 Trying
	180 Ringing (ACM)	←		←	180 Ringing
	200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
	ACK	→		→	ACK
	BYE (REL)	→		→	BYE
	200 OK (BYE) (RLC)	←		←	200 OK (BYE)

6.1.2.10 Void

6.1.2.11 Autonomous Release at O-MGCF

TP number	TP_211_003	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.16
TSS reference	SIP-I - SIP NNI/Basic call/Autonomous_Release/		
Selection criteria			
Test Purpose name	Call is released to due message compatibility instruction 'Release call' received in the early dialogue		
Test Purpose	Ensure that on receipt of an unknown ISUP message in the early dialogue and the message compatibility is set to 'release call' an ISUP REL message is sent and the Cause indicator is set to value 97. In addition a SIP CANCEL request is sent and a Reason header field is present		
ISUP Parameter values	??? = unknown message: Message compatibility information: Release call indicator=release call **REL:** Cause=97		
SIP Parameter values	CANCEL: Reason:		
Comments	For an unknown message use a message type unknown in the SUT.		

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
	180 Ringing (ACM – free)	←		←	180 Ringing
	INFO(???)	→			
	500 Server Internal Error (REL#97)	←		→	CANCEL
	ACK (RLC)	→		←	200 OK (CANCEL)
				←	487 Request Terminated
				→	ACK

TP number	TP_211_004	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.16
TSS reference	SIP-I - SIP NNI/Basic call/Autonomous_Release/		
Selection criteria			
Test Purpose name	Call is released to due message compatibility instruction 'Release call' received in the confirmed dialogue		
Test Purpose	Ensure that on receipt of an unknown ISUP message in the confirmed dialogue and the message compatibility is set to 'release call' an ISUP REL message is sent and the Cause indicator is set to value 97. In addition a SIP BYE request is sent and a Reason header field is present		
ISUP Parameter values	??? = unknown message: Message compatibility information: Release call indicator=release call **REL:** Cause=97		
SIP Parameter values	BYE: Reason:		
Comments	For an unknown message use a message type unknown in the SUT.		
Message flows	**SIP NNISIP-I**	**MGCF**	**ISUP**
	INVITE (IAM) →	→	INVITE
	180 Ringing ←	←	180 Ringing
	(ACM – free)		
	200 OK (INVITE) ←	←	200 OK (INVITE)
	ACK →	→	ACK
	INFO(???) →		
	BYE (REL#97) ←	→	BYE
	200 OK BYE (RLC) →	←	200 OK (BYE)

TP number	TP_211_005	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.16
TSS reference	SIP-I - SIP NNI/Basic call/Autonomous_Release/		
Selection criteria			
Test Purpose name	Call is released to due parameter compatibility instruction 'Release call' received in the early dialogue		
Test Purpose	Ensure that on receipt of a CPG in the early dialogue and an unknown parameter is present the parameter compatibility instruction is set to 'release call' an ISUP REL message is sent and the Cause indicator is set to value 99 or 110. In addition a SIP CANCEL request is sent and a Reason header field is present.		
ISUP Parameter values	**CPG:** Parameter compatibility information: Release call indicator=release call **REL:** Cause=99 or 110		
SIP Parameter values	CANCEL: Reason:		
Comments	For an unknown parameter use a parameter type unknown in the SUT.		
Message flows	**SIP NNISIP-I**	**MGCF**	**ISUP**
	INVITE (IAM) →	→	INVITE
	180 Ringing ←	←	180 Ringing
	(ACM –free)		
	183 Session Progress (CPG) →		
	500 Server Internal Error (REL#99/110) ←	→	CANCEL
	ACK (RLC) →	←	200 OK (CANCEL)
		←	487 Request Terminated
		→	ACK

TP number	TP_211_006	**Reference**	[1], clause 7.3.1 [2], clause 7.2.3.2.16
TSS reference	SIP-I - SIP NNI/Basic call/Autonomous_Release/		
Selection criteria			
Test Purpose name	Call is released to due parameter compatibility instruction 'Release call' received in the confirmed dialogue		
Test Purpose	Ensure that on receipt of a CPG in the confirmed dialogue and an unknown parameter is present the parameter compatibility instruction is set to 'release call' an ISUP REL message is sent and the Cause indicator is set to value 99 or 110. In addition a SIP BYE request is sent and a Reason header field is present		
ISUP Parameter values	**CPG:** Parameter compatibility information: Release call indicator=release call **REL:** Cause=99 or 110		
SIP Parameter values	BYE: Reason:		
Comments	For an unknown parameter use a parameter type unknown in the SUT.		
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE (IAM) →	→	INVITE
	180 Ringing ←	←	180 Ringing
	(ACM - free)		
	200 OK (INVITE) ←	←	200 OK (INVITE)
	(ANM)		
	ACK →	→	ACK
	INFO (CPG – conference established) →		
	BYE (REL# 99 or 110) ←	→	BYE
	200 OK (BYE) →	←	200 OK (BYE)
	(RLC)		

6.2 Supplementary Services

6.2.1 Void

6.2.2 Connected line presentation and restriction (COLP/COLR)

TP number	TP_302_001	**Reference**	[1], clause 7.2.1 [2], clause 7.4.2
TSS reference	PSTN-SS/COL/		
Selection criteria	NOT PICS 6.3.4/1 AND PICS 6.3.1/1 AND PICS 6.3.2/2		
Test Purpose name	The SUT does not invoke the COLP service		
Test Purpose	Ensure that on receipt of an INVITE request ant the SUT does not invoke the COLP service, an INVITE with encapsulated IAM is sent and the Connected Line Identity Request indicator field of the Optional forward call indicators parameter of the IAM to 'not requested'. A received connected number is not interworked		
ISUP Parameter values	**IAM:** Optional forward call indicators = 'COL not requested' **ANM/CON:** Connected number present		
SIP Parameter values	200 OK: P-Asserted-Identity not present		
Comments			
Message flows	**SIP-NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	CASE A		
	180 Ringing ←	←	180 Ringing (ACM – free)
	200 OK (INVITE) ←	←	200 OK (INVITE) (ANM)
	ACK →	→	ACK
	CASE B		
	200 OK (INVITE) ←	←	200 OK (CON)
	ACK →	→	ACK
	Apply post test routine		

TP number	TP_302_002	**Reference**	[1], clause 7.2.1 [2], clause 7.4.2
TSS reference	PSTN-SS/COL/		
Selection criteria	PICS 6.3.4/1 AND PICS 6.3.1/1 AND PICS 6.3.2/2		
Test Purpose name	The SUT invokes the COLP service presentation allowed		
Test Purpose	Ensure that on receipt of an INVITE request ant the SUT invokes the COLP service, an INVITE with encapsulated IAM is sent and the Connected Line Identity Request indicator field of the Optional forward call indicators parameter of the IAM to 'requested'. A received connected number presentation allowed is interworked. **Connected number** Nature of Address Indicator equal to - 'national (significant) number' 200 OK INVITE P-Asserted-Identity Add CC (of the country where the SUT is located) to Connected number address signals to construct an E.164 number in the URI. Prefix number with '+' in the format '+ CC NDC SN.' - 'international number' 200 OK INVITE P-Asserted-Identity Map complete Connected number address signals to construct an E.164 number in the URI. Prefix number with "+" in the Format '+ CC NDC SN'. Address presentation restriction indicator - 'presentation allowed' Privacy header is not present or if present the value is not equal to 'id'		
ISUP Parameter values	**IAM:** Optional forward call indicators = 'COL not requested' **ANM/CON:** Connected number present		
SIP Parameter values	**INVITE:** P-Asserted-Identity present 200 OK: P-Asserted-Identity present		
Comments			

Message flows

SIP NNI		MGCF		SIP-I
INVITE	→		→	INVITE (IAM)
100 Trying	←			
CASE A				
180 Ringing	←		←	180 Ringing (ACM – free)
200 OK (INVITE)	←		←	200 OK (INVITE) (ANM)
ACK	→		→	ACK
CASE B				
200 OK (INVITE)	←		←	200 OK (INVITE) (CON)
ACK	→		→	ACK
Apply post test routine				

TP number	TP_302_003	**Reference**	[1], clause 7.2.1 [2], clause 7.4.2
TSS reference	PSTN-SS/COL/		
Selection criteria	PICS 6.3.4/1 AND PICS 6.3.1/1 AND PICS 6.3.2/2		
Test Purpose name	The SUT invokes the COLP service presentation restricted		
Test Purpose	Ensure that on receipt of an INVITE request ant the SUT invokes the COLP service, an INVITE with encapsulated IAM is sent and the Connected Line Identity Request indicator field of the Optional forward call indicators parameter of the IAM to 'requested'. A received connected number presentation restricted is interworked **Connected number** Nature of Address Indicator equal to - 'national (significant) number' 200 OK INVITE P-Asserted-Identity Add CC (of the country where the SUT is located) to Connected number address signals to construct an E.164 number in the URI. Prefix number with '+' in the format '+ CC NDC SN.' - 'international number' 200 OK INVITE P-Asserted-Identity Map complete Connected number address signals to construct an E.164 number in the URI. Prefix number with "+" in the Format '+ CC NDC SN'. Address presentation restriction indicator - 'presentation restricted' Privacy: id		
ISUP Parameter values	**IAM:** Optional forward call indicators = 'COL requested' **ANM/CON:** Connected number present		
SIP Parameter values	**INVITE:** P-Asserted-Identity present 200 OK: P-Asserted-Identity present Privacy: id		
Comments			

Message flows

SIP NNI		MGCF		SIP-I
INVITE	→		→	INVITE (IAM)
100 Trying	←			
CASE A				
180 Ringing	←		←	180 Ringing (ACM – free)
200 OK (INVITE)	←		←	200 OK (INVITE) (ANM)
ACK	→		→	ACK
CASE B				
200 OK (INVITE)	←		←	200 OK (INVITE) (CON)
ACK	→		→	ACK
Apply post test routine				

TP number	TP_302_004	**Reference**	[1], clause 7.3.1 [2], clause 7.4.2
TSS reference	PSTN-SS/COL/		
Selection criteria	PICS 6.3.1/1 AND PICS 6.3.2/2		
Test Purpose name	COL request is set to 'not requested'		
Test Purpose	Ensure that on receipt of an IAM and the Connected Line Identity Request indicator in the Optional Forward Call Indicators parameter is set to 'not requested', no P-Asserted-Identity received in a provisional or successful final response is present. No connected number is sent in a 200 OK (INVITE) with encapsulated ANM or CON.		
ISUP Parameter values			
SIP Parameter values			
Comments			

Message flows

SIP-I		**MGCF**		**SIP NNI**
INVITE (IAM)	→		→	INVITE
			←	100 Trying
CASE A				
180 Ringing (ACM – free)	←		←	180 Ringing
200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
ACK	→		→	ACK
CASE B				
200 OK (INVITE) (CON)	←		←	200 OK (INVITE)
ACK	→		→	ACK
Apply post test routine				

TP number	TP_302_005	**Reference**	[1], clause 7.3.1 [2], clause 7.4.2
TSS reference	PSTN-SS/COL/		
Selection criteria	PICS 6.3.1/1 AND PICS 6.3.2/2		
Test Purpose name	COL request is set to 'requested' Terminating identity received in a 180 response		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and the Connected Line Identity Request indicator in the Optional Forward Call Indicators parameter is set to 'requested', the P-Asserted-Identity received in a provisional response is sent in the 200 OK (INVITE) with encapsulated **ANM**. Coding of **Connected number parameter** Number incomplete indicator equal to 'Complete' Numbering Plan Indicator equal to 'ISDN/Telephony (*Recommendation E.164*)' Nature of Address Indicator If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then set to "national (significant) number" else set to "international number" Address Presentation Restricted Indicator derived from the Privacy header according the mapping as described in table 6.2.2-1		
ISUP Parameter values	**IAM:** Optional Forward Call Indicators Connected Line Identity Request = requested **ANM:** Connected number Presentation restriction **Privacy_VA**		
SIP Parameter values	180: P-Asserted-Identity		
Comments			

Message flows

SIP-I		**MGCF**		**SIP NNI**
INVITE (IAM)	→		→	INVITE
			←	100 Trying
180 Ringing (ACM)	←		←	180 Ringing
200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
ACK	→		→	ACK
Apply post test routine				

TP number	TP_302_006	**Reference**	[1], clause 7.3.1 [2], clause 7.4.2
TSS reference	PSTN-SS/COL/		
Selection criteria	PICS 6.3.1/1 AND PICS 6.3.2/2		
Test Purpose name	COL request is set to 'requested' Terminating identity received in a 200 OK response		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and the Connected Line Identity Request indicator in the Optional Forward Call Indicators parameter is set to 'requested', the P-Asserted-Identity received in a 200 OK response is sent in the 200 OK response with encapsulated **ANM**. Coding of **Connected number parameter** Number incomplete indicator equal to 'Complete' Numbering Plan Indicator equal to 'ISDN/Telephony (*Recommendation E.164*)' Nature of Address Indicator If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then set to "national (significant) number" else set to "international number" Address Presentation Restricted Indicator derived from the Privacy header according the mapping as described in table 6.2.2-1		
ISUP Parameter values	**IAM:** Optional Forward Call Indicators Connected Line Identity Request = requested **ANM:** Connected number Presentation restriction **Privacy_VA**		
SIP Parameter values	200: P-Asserted-Identity		
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →		→ INVITE
			← 100 Trying
	180 Ringing (ACM – free) ←		← 180 Ringing
	200 OK (INVITE) (ANM) ←		← 200 OK (INVITE)
	ACK →		→ ACK
		Apply post test routine	

TP number	TP_302_007	**Reference**	[1], clause 7.3.1 [2], clause 7.4.2
TSS reference	PSTN-SS/COL/		
Selection criteria	PICS 6.3.1/1 AND PICS 6.3.2/2		
Test Purpose name	COL request is set to requested Terminating identity received in a 200 OK response		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and the Connected Line Identity Request indicator in the Optional Forward Call Indicators parameter is set to 'requested', if no provisional response was received the P-Asserted-Identity received in a 200 OK response is sent in the 200 OK with encapsulated **CON**. Coding of **Connected number parameter** Number incomplete indicator equal to 'Complete' Numbering Plan Indicator equal to 'ISDN/Telephony (*Recommendation E.164*)' Nature of Address Indicator If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then set to "national (significant) number" else set to "international number" Address Presentation Restricted Indicator derived from the Privacy header according the mapping as described in table 6.2.2-1		
ISUP Parameter values	**IAM:** Optional Forward Call Indicators Connected Line Identity Request = requested **CON:** Connected number Presentation restriction **Privacy_VA**		
SIP Parameter values	200: P-Asserted-Identity		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying 200 OK (INVITE) (CON) ← ← 200 OK (INVITE) ACK → → ACK **Apply post test routine**		

Table 6.2.2-1: Mapping of Privacy value into Address presentation restriction indicator

Privacy_VA	Privacy value	Address Presentation Restricted Indicator
Privacy_VA_01	Header	Presentation restricted
Privacy_VA_02	User	Presentation restricted
Privacy_VA_03	None	Presentation allowed
Privacy_VA_04	Id	Presentation restricted
Privacy_VA_05	Privacy header not present	Presentation allowed

6.2.3 Malicious call identification

TP number	TP_303_001	**Reference**	[1], clause 7.2.1 [2], clause 7.4.4
TSS reference	PSTN-SS/MCID/		
Selection criteria	PICS 6.3.1/1 AND PICS 6.3.2/3		
Test Purpose name	MCID request before ACM		
Test Purpose	Ensure that a MCID request before an ACM received in an ISUP IDR is discarded without disrupt the call setup procedure. The sending of an IRS is optional		
ISUP Parameter values			
SIP Parameter values			
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	CASE A	←	183 Session Progress (IDR)
		→	INFO (IRS)
	CASE B	←	183 Session Progress (IDR) No response
	Apply post test routine		

TP number	TP_303_002	**Reference**	[1], clause 7.3.1 [2], clause 7.4.4
TSS reference	PSTN-SS/MCID/		
Selection criteria	PICS 6.3.1/1 AND PICS 6.3.2/3		
Test Purpose name	MCID request after ACM		
Test Purpose	Ensure that a MCID request after an ACM received in an ISUP IDR is discarded without disrupt the call setup procedure. The sending of an IRS is optional		
ISUP Parameter values			
SIP Parameter values			
Comments			
Message flows	**SIP SIP-I**	**MGCF**	**SIP NNI**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	180 Ringing ←	←	180 Ringing (ACM)
	CASE A	←	183 Session Progress (IDR)
		→	INFO (IRS)
	CASE B	←	183 Session Progress (IDR) No response
	Apply post test routine		

6.2.4 Subaddressing (SUB)

TP number	TP_304_001	**Reference**	[1], clause 7.2.1 [2], clause 7.4.5.2
TSS reference	PSTN-SS/SUB/		
Selection criteria	PICS 6.3.2/4		
Test Purpose name	isub parameter in the To header is mapped into Called party Subaddress		
Test Purpose	Ensure that on receipt of an initial INVITE request, an INVITE with encapsulated IAM is sent. The isub parameter present in the To header is mapped into the Called party Subaddress covered in an Access Transport parameter in the sent IAM. If the isub-encoding parameter is present, the values 'nsap-ia5', 'nsap-bcd' or 'nsap' are relevant for mapping Encoding of the Subaddress in the IAM: Type of Subaddress='NSAP' Subaddress digits derived from the uric of the isub parameter		
ISUP Parameter values	**IAM:** Access Transport Called party subaddress Type of Subaddress=NSAP Subaddress digits derived from the uric of the isub parameter		
SIP Parameter values	**INVITE:** To: isub uric Subaddress digits isub-encoding: Not present nsap-ia5 nsap-bcd nsap		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_304_002	**Reference**	[1], clause 7.2.1 [2], clause 7.4.5.2
TSS reference	PSTN-SS/SUB/		
Selection criteria	PICS 6.3.2/4		
Test Purpose name	isub parameter in the To header is not mapped		
Test Purpose	Ensure that on receipt of an initial INVITE request, an INVITE with encapsulated IAM is sent. The isub parameter present in the To header is not mapped into the Called party Subaddress if the value of the **isub-encoding** parameter is other then 'nsap-ia5', 'nsap-bcd' or 'nsap'		
ISUP Parameter values			
SIP Parameter values	**INVITE:** To: isub uric Subaddress digits isub-encoding: <any token>		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_304_003	**Reference**	[1], clause 7.2.1 [2], clause 7.4.5.2
TSS reference	PSTN-SS/SUB/		
Selection criteria	PICS 6.3.2/4		
Test Purpose name	isub parameter in the P-Asserted-Identity header is mapped into Calling party Subaddress		
Test Purpose	Ensure that on receipt of an initial INVITE request, an INVITE with encapsulated IAM is sent. The isub parameter present in the P-Asserted-Identity header is mapped into the Calling party Subaddress covered in an Access Transport parameter in the sent IAM. If the isub-encoding parameter is present, the values 'nsap-ia5', 'nsap-bcd' or 'nsap' are relevant for mapping Encoding of the Subaddress: Type of Subaddress='NSAP' Subaddress digits derived from the uric of the isub parameter		
ISUP Parameter values	**IAM:** Access Transport Calling party subaddress Type of Subaddress=NSAP Subaddress digits derived from the uric of the isub parameter		
SIP Parameter values	**INVITE:** P-Asserted-Identity: isub uric Subaddress digits isub-encoding: Not present nsap-ia5 nsap-bcd nsap		
Comments			
Message flows	**SIP NNISIP-I** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_304_004	**Reference**	[1], clause 7.2.1 [2], clause 7.4.5.2
TSS reference	PSTN-SS/SUB/		
Selection criteria	PICS 6.3.2/4		
Test Purpose name	isub parameter in the P-Asserted-Identity header in the INVITE is not mapped		
Test Purpose	Ensure that on receipt of an initial INVITE request, an INVITE with encapsulated IAM is sent. The isub parameter present in the P-Asserted-Identity header is not mapped into the Calling party Subaddress if the value of the **isub-encoding** parameter is other then 'nsap-ia5', 'nsap-bcd' or 'nsap'		
ISUP Parameter values			
SIP Parameter values	**INVITE:** P-Asserted-Identity: isub uric Subaddress digits isub-encoding: <any token>		
Comments			
Message flows	**SIP NNISIP-I** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_304_005	**Reference**	[1], clause 7.2.1 [2], clause 7.4.5.2
TSS reference	PSTN-SS/SUB/		
Selection criteria	PICS 6.3.2/4		
Test Purpose name	Connected party Subaddress in the ANM is mapped into the isub parameter in the P-Asserted-Identity header in the 200 OK		
Test Purpose	Ensure that on receipt of a 200 OK with encapsulated ANM message containing a Connected party Subaddress parameter in an Access Transport parameter, a 200 OK (INVITE) is sent and the P-Asserted-Identity header contains an isub parameter, the uric value is derived from the Connected Subaddress digits of the Connected party subaddress digits		
ISUP Parameter values	**ANM:** Access Transport Connected party subaddress Type of Subaddress=NSAP Subaddress digits		
SIP Parameter values	200 OK: P-Asserted-Identity: isub uric digits derived from the Connected party Subaddress digits		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	180 Ringing	←		←	180 Ringing (ACM – free)
	200 OK (INVITE)	←		←	200 OK (INVITE) (ANM)
	ACK	→		→	ACK
	Apply post test routine				

TP number	TP_304_006	**Reference**	[1], clause 7.2.1 [2], clause 7.4.5.2
TSS reference	PSTN-SS/SUB/		
Selection criteria	PICS 6.3.2/4		
Test Purpose name	Connected party Subaddress in the ANM is not mapped		
Test Purpose	Ensure that on receipt of a 200 OK (INVITE) ANM message containing a Connected party Subaddress parameter in an Access Transport parameter, a 200 OK (INVITE) is sent and the Connected party subaddress is not mapped if the Type of subaddress is not equal 'NSAP'		
ISUP Parameter values	**ANM:** Access Transport Connected party subaddress Type of Subaddress other then NSAP		
SIP Parameter values			
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	180 Ringing	←		←	180 Ringing (ACM – free)
	200 OK (INVITE)	←		←	200 OK (INVITE) (ANM)
	ACK	→		→	ACK
	Apply post test routine				

TP number	TP_304_007	**Reference**	[1], clause 7.3.1 [2], clause 7.4.5.3
TSS reference	PSTN-SS/SUB/		
Selection criteria	PICS 6.3.2/4		
Test Purpose name	Mapping of Called Party subaddress in the IAM into isub parameter in the To header in the INVITE		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM containing a Called party subaddress in the Access Transport parameter, an initial INVITE is sent. The Called party subaddress is mapped into an isub parameter present in the **To header** in the INVITE if the Type of number of the subaddress is set to 'NSAP', the isub-encoding parameter is set to 'nsap-ia5'.		
ISUP Parameter values	**IAM:** Access Transport Called party subaddress Type of Subaddress=NSAP Subaddress digits		
SIP Parameter values	**INVITE:** To: isub uric digits derived from the Called party Subaddress digits isub-encoding=nsap-ia5		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_304_008	**Reference**	[1], clause 7.3.1 [2], clause 7.4.5.3
TSS reference	PSTN-SS/SUB/		
Selection criteria	PICS 6.3.2/4		
Test Purpose name	No mapping of Called Party subaddress in the IAM		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM containing a Called party subaddress in the Access Transport parameter, an initial INVITE is sent. The Called party subaddress is not mapped into an isub parameter present in the To header of the INVITE if the Type of number of the subaddress is not equal to 'NSAP'		
ISUP Parameter values	**IAM:** Access Transport Called party subaddress Type of Subaddress not NSAP Subaddress digits		
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_304_009	**Reference**	[1], clause 7.3.1 [2], clause 7.4.5.3
TSS reference	PSTN-SS/SUB/		
Selection criteria	PICS 6.3.2/4		
Test Purpose name	Mapping of Calling Party subaddress in the IAM into isub parameter in the P-Asserted-Identity header in the INVITE		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM containing a Calling party subaddress in the Access Transport parameter, an initial INVITE is sent. The Calling party subaddress is mapped into an isub parameter present in the **P-Asserted-Identity header** in the INVITE if the Type of number of the subaddress is equal to 'NSAP', the isub-encoding parameter is set to 'nsap-ia5'.		
ISUP Parameter values	**IAM:** Access Transport Calling party subaddress Type of Subaddress=NSAP Subaddress digits		
SIP Parameter values	**INVITE:** P-Asserted-Identity: isub uric digits derived from the Calling party Subaddress digits isub-encoding=nsap-ia5		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_304_010	**Reference**	[1], clause 7.3.1 [2], clause 7.4.5.3
TSS reference	PSTN-SS/SUB/		
Selection criteria	PICS 6.3.2/4		
Test Purpose name	No mapping of Calling Party subaddress in the IAM		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM containing a Calling party subaddress in the Access Transport parameter, an initial INVITE is sent. The Calling party subaddress is not mapped into an isub parameter present in the P-Asserted-Identity header in the INVITE if the Type of number of the subaddress is not equal to 'NSAP'		
ISUP Parameter values	**IAM:** Access Transport Calling party subaddress Type of Subaddress not NSAP Subaddress digits		
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_304_011	**Reference**	[1], clause 7.3.1 [2], clause 7.4.5.3
TSS reference	PSTN-SS/SUB/		
Selection criteria	PICS 6.3.2/4		
Test Purpose name	Mapping of isub parameter in the 200 OK into the Connected party subaddress in the ANM		
Test Purpose	Ensure that on receipt of an isub parameter present in the P-Asserted-Identity in a 200 OK (INVITE), a 200 OK (INVITE) with encapsulated ANM is sent and the received Subaddress is mapped in the Connected party subaddress present in the Access Transport parameter in the ANM. If the isub-encoding parameter is present, the values 'nsap-ia5', 'nsap-bcd' or 'nsap' are relevant for mapping		
ISUP Parameter values	**ANM:** Access Transport Connected party subaddress Type of Subaddress=NSAP Subaddress digits derived from the uric of the isub parameter		
SIP Parameter values	200 OK: P-Asserted-Identity: isub uric Subaddress digits isub-encoding: Not present nsap-ia5 nsap-bcd nsap		
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →	→	INVITE
	180 Ringing (ACM - free) ←	←	180 Ringing
	200 OK (INVITE) (ANM) ←	←	200 OK (INVITE)
	ACK →	→	ACK
	Apply post test routine		

TP number	TP_304_012	**Reference**	[1], clause 7.3.1 [2], clause 7.4.5.3
TSS reference	PSTN-SS/SUB/		
Selection criteria	PICS 6.3.2/4		
Test Purpose name	Mapping of isub parameter in the 200 OK into the Connected party subaddress in the ANM		
Test Purpose	Ensure that on receipt of an isub parameter present in the P-Asserted-Identity in a 200 OK (INVITE), an ANM is sent and the received Subaddress is not mapped in the Connected party subaddress present in the Access Transport parameter in the ANM If the isub-encoding parameter is present and the value is not equal to 'nsap-ia5', 'nsap-bcd' or 'nsap'		
ISUP Parameter values			
SIP Parameter values	200 OK: P-Asserted-Identity: isub isub-encoding: Not nsap-ia5, nsap-bcd, nsap		
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →	→	INVITE
	180 Ringing (ACM) ←	←	180 Ringing
	200 OK (INVITE) (ANM) ←	←	200 OK (INVITE)
	ACK →	→	ACK
	Apply post test routine		

6.2.5 Call Forwarding Busy (CFB)/ Call Forwarding No Reply (CFNR) / Call Forwarding Unconditional (CFU)

Table 6.2.5-1: Void

Table 6.2.5-2: Void

Table 6.2.5-3: Void

Table 6.2.5-4: Void

Table 6.2.5-5: Void

Table 6.2.5-6: Void

Table 6.2.5-7: Void

Table 6.2.5-8: Void

Table 6.2.5-9: Void

Table 6.2.5-10: Void

Table 6.2.5-11: Void

Table 6.2.5-12: Void

Table 6.2.5-13: Void

Table 6.2.5-14: Void

Table 6.2.5-15: Void

Table 6.2.5-16: Void

Table 6.2.5-17: Void

Table 6.2.5-18: Void

Table 6.2.5-19: Void

Table 6.2.5-20: Void

Table 6.2.5-21: Void

Table 6.2.5-22: Void

Table 6.2.5-23: Void

Table 6.2.5-24: Void

Table 6.2.5-25: Void

Table 6.2.5-26: Void

Table 6.2.5-27: Void

Table 6.2.5-28: Void

Table 6.2.5-29: Void

Table 6.2.5-30: Void

Table 6.2.5-31: Void

Table 6.2.5-32: Void

Table 6.2.5-33: Void

Table 6.2.5-34: Void

Table 6.2.5-35: Void

Table 6.2.5-36: Void

Table 6.2.5-37: Void

Table 6.2.5-38: Void

Table 6.2.5-39: Void

Table 6.2.5-40: Void

Table 6.2.5-41: Void

TP number	TP_305_065	**Reference**	[1], clause 7.3.1 [2], clause 7.4.6.1
TSS reference	PSTN-SS/CDIV/		
Selection criteria	NOT PICS 6.3.2/5		
Test Purpose name	No mapping of Redirecting number, Original called number and Redirection Information		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM containing a Redirecting number parameter, a Original called number and a Redirection Information parameter Redirecting reason indicator is set to **REAS_value** as indicated in table 6.2.5-42, an INVITE request is sent and no History-Info header is present. The call setup is not disrupted		
ISUP Parameter values	**IAM:** Redirecting number Redirection Information Redirecting reason =**REAS_value** Original called number		
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) ➔ ➔ INVITE **Apply post test routine**		

Table 6.2.5-42: Value of Redirecting reason received in Redirection Information

	REAS_value
VA_01	Unknown
VA_02	Unconditional
VA_03	User Busy
VA_04	Deflection immediate response
VA_05	Mobile subscriber not reachable

TP number	TP_305_066	**Reference**	[1], clause 7.2.1 [2], clauses 7.4.6.3.3, table, 7.4.6.3.3.1, table, 7.4.6.3.3.3
TSS reference	PSTN-SS/CDIV/		
Selection criteria	NOT PICS 6.3.2/5		
Test Purpose name	No mapping of ACM Redirection number and Call diversion information		
Test Purpose	Ensure that on receipt of a 180 Ringing with encapsulated ACM a Redirection number and the Call diversion parameter the Redirecting reason is set to **REAS_value** as indicated in table 6.2.5-43 is present as an indication a call diversion occurred, a 180 Ringing is sent and no History-Info header is present. The call setup is not disrupted		
ISUP Parameter values	**ACM/CPG:** Generic notification=call is diverting Redirection number Call diversion information Redirecting reason =**REAS_value**		
SIP Parameter values			
Comments			

Message flows

SIP NNI		MGCF		SIP-I
INVITE	→		→	INVITE (IAM)
CASE A				
180 Ringing	←		←	180 Ringing (ACM)
181 Being forwarded	←		←	183 Session Progress (CPG)
CASE B				
181 Being forwarded	←		←	183 Session Progress (ACM)
Apply post test routine				

Table 6.2.5-43: Value of Redirecting reason received in Call diversion information

CAUSE	Redirecting_Reason REAS_value
VA_01	unknown
VA_02	unconditional
VA_03	User Busy
VA_04	Deflection immediate response
VA_05	Mobile subscriber not reachable

6.2.6 Explicit Call Transfer (ECT)

TP number	TP_306_001	**Reference**	[1], clause 7.2.1 [2], clause 7.4.8
TSS reference	PSTN-SS/ECT/		
Selection criteria	PICS 6.3.2/6		
Test Purpose name	A session is retrieved when a notification 'call transfer, active' in a reINVITE with encapsulated FAC was received and the session is on hold		
Test Purpose	I-MGCF: A session is on hold. Ensure that on receipt of an reINVITE with encapsulated FAC message and the Generic notification indicator is set to 'call transfer, active', a reINVITE is sent the a attribute in the SDP is set to 'sendrecv'		
ISUP Parameter values	**FAC:** Generic notification=transfer active		
SIP Parameter values	INVITE 2 SDP a=sendonly INVITE 3 SDP a=sendrecv		
Comments			

Message flows

SIP NNI		MGCF		SIP-I
INVITE 1	→		→	INVITE (IAM)
100 Trying	←			
180 Ringing	←		←	180 Ringing (ACM)
200 OK (INVITE)	←		←	200 OK (INVITE) (ANM)
ACK	→		→	ACK
INVITE 2	←		←	INVITE 2 (CPG(hold))
200 OK (INVITE)	→		→	200 OK (INVITE)
ACK	←		←	ACK
INVITE 3	←		←	INFO (FAC(call transfer, active))
200 OK (INVITE)	→		→	200 OK (INFO)
ACK	←			

Apply post test routine

TP number	TP_306_002	**Reference**	[1], clause 7.2.1 [2], clause 7.4.8
TSS reference	PSTN-SS/ECT/		
Selection criteria	PICS 6.3.2/6		
Test Purpose name	A session is retrieved when a notification 'call transfer, alerting' in a reINVITE with encapsulated FAC was received and the session is on hold		
Test Purpose	I-MGCF: A session is on hold. Ensure that on receipt of an reINVITE with encapsulated FAC message and the Generic notification indicator is set to 'call transfer, alerting', a reINVITE is sent the a attribute in the SDP is set to 'sendrecv'		
ISUP Parameter values	**FAC:** Generic notification=transfer alerting		
SIP Parameter values	INVITE 2 SDP a=sendonly INVITE 3 SDP a=sendrecv		
Comments			

Message flows

SIP NNI		MGCF		SIP-I
INVITE 1	→		→	INVITE (IAM)
100 Trying	←			
180 Ringing	←		←	180 Ringing (ACM)
200 OK (INVITE)	←		←	200 OK (INVITE) (ANM)
ACK	→		→	ACK
INVITE 2	←		←	INVITE 2 (CPG(hold))
200 OK (INVITE)	→			200 OK (INVITE)
ACK	←			ACK
INVITE 3	←		←	INFO (FAC(call transfer, alerting)
200 OK (INVITE)	→		→	200 OK (INFO)
ACK	←			

Apply post test routine

TP number	TP_306_003	**Reference**	[1], clause 7.2.1 [2], clause 7.4.8
TSS reference	PSTN-SS/ECT/		
Selection criteria	PICS 6.3.2/6		
Test Purpose name	A session is retrieved when a notification 'call transfer, active' in a reINVITE with encapsulated CPG was received and the session is on hold		
Test Purpose	O-MGCF: A session is on hold. Ensure that on receipt of a reINVITE with encapsulated CPG message and the Generic notification indicator is set to 'call transfer, active', a reINVITE is sent the a attribute in the SDP is set to 'sendrecv'		
ISUP Parameter values	**CPG:** Generic notification=transfer active		
SIP Parameter values	INVITE 2 SDP a=sendonly INVITE 3 SDP a=sendrecv		
Comments			

Message flows

SIP NNI		**MGCF**		**SIP-I**
INVITE	←		←	INVITE (IAM)
100 Trying	→		→	100 Trying
180 Ringing	→		→	180 Ringing (ACM)
200 OK (INVITE)	→		→	200 OK (INVITE) (ANM)
ACK	←		←	ACK
INVITE 2	←		←	INVITE 2 (CPG(hold))
200 OK (INVITE)	→		→	200 OK (INVITE)
ACK	←		←	ACK
INVITE 3	←		←	INFO (CPG(call transfer, active))
200 OK (INVITE)	→		→	200 OK (INFO)
ACK	←			

Apply post test routine

TP number	TP_306_004	**Reference**	[1], clause 7.2.1 [2], clause 7.4.8
TSS reference	PSTN-SS/ECT/		
Selection criteria	PICS 6.3.2/6		
Test Purpose name	A session is retrieved when a notification 'call transfer, alerting' in a reINVITE with encapsulated CPG was received and the session is on hold		
Test Purpose	O-MGCF: A session is on hold. Ensure that on receipt of a reINVITE with encapsulated CPG message and the Generic notification indicator is set to 'call transfer, alerting', a reINVITE is sent the a attribute in the SDP is set to 'sendrecv'		
ISUP Parameter values	**CPG:** Generic notification=transfer alerting		
SIP Parameter values	INVITE 2 SDP a=sendonly INVITE 3 SDP a=sendrecv		
Comments			

Message flows

SIP NNISIP-I		**MGCF**		**SIP-I**
INVITE	←		←	INVITE (IAM)
100 Trying	→		→	100 Trying
180 Ringing	→		→	180 Ringing (ACM)
200 OK (INVITE)	→		→	200 OK (INVITE) (ANM)
ACK	←		←	ACK
INVITE 2	←		←	INVITE 2 (CPG(hold))
200 OK (INVITE)	→		→	200 OK (INVITE)
ACK	←		←	ACK
INVITE 3	←		←	INFO (CPG(call transfer, alerting))
200 OK (INVITE)	→		→	200 OK (INFO)
ACK	←			

Apply post test routine

TP number	TP_306_005	**Reference**	[1], clause 7.2.1 [2], clause 7.4.8
TSS reference	PSTN-SS/ECT/		
Selection criteria	PICS 6.3.2/6		
Test Purpose name	reINVITE with encapsulated FAC with generic notification 'call transfer, active' received, no mapping		
Test Purpose	I-MGCF: Ensure that on receipt of a reINVITE with encapsulated FAC message and the Generic notification indicator is coded as 'call transfer, active' and the session is not on hold, no mapping occurs on the SIP side		
ISUP Parameter values	**FAC:** Generic notification=transfer active		
SIP Parameter values			
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	180 Ringing ←	←	180 Ringing (ACM)
	200 OK (INVITE) ←	←	200 OK (INVITE) (ANM)
	ACK →	→	ACK
		←	INFO FAC(call transfer, active)
		→	200 OK (INVITE)
	Apply post test routine		

TP number	TP_306_006	**Reference**	[1], clause 7.2.1 [2], clause 7.4.8
TSS reference	PSTN-SS/ECT/		
Selection criteria	PICS 6.3.2/6		
Test Purpose name	FAC with generic notification 'call transfer, alerting' received, no mapping		
Test Purpose	I-MGCF: Ensure that on receipt of a reINVITE with encapsulated FAC message and the Generic notification indicator is coded as 'call transfer, alerting' and the session is not on hold, no mapping occurs on the SIP side		
ISUP Parameter values	**FAC:** Generic notification=transfer alerting		
SIP Parameter values			
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←	←	100 Trying
	180 Ringing ←	←	180 Ringing (ACM)
	200 OK (INVITE) ←	←	200 OK (INVITE) (ANM)
	ACK →	→	ACK
		←	INFO FAC(call transfer, alerting)
		→	200 OK (INVITE)
	Apply post test routine		

TP number	TP_306_007	**Reference**	[1], clause 7.2.1 [2], clause 7.4.8
TSS reference	PSTN-SS/ECT/		
Selection criteria	PICS 6.3.2/6		
Test Purpose name	reINVITE with encapsulated CPG with generic notification 'call transfer, active' received, no mapping		
Test Purpose	I-MGCF: Ensure that on receipt of a reINVITE with encapsulated CPG message and the Generic notification indicator is coded as 'call transfer, active' and the session is not on hold, no mapping occurs on the SIP side		
ISUP Parameter values	**CPG:** Generic notification=transfer active		
SIP Parameter values			
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → IAM 100 Trying ← ← 100 Trying 180 Ringing ← ← 180 Ringing (ACM) 200 OK (INVITE) ← ← 200 OK (INVITE) (ANM) ← INFO (CPG(call transfer, active) → 200 OK (INVITE) **Apply post test routine**		

TP number	TP_306_008	**Reference**	[1], clause 7.2.1 [2], clause 7.4.8
TSS reference	PSTN-SS/ECT/		
Selection criteria	PICS 6.3.2/6		
Test Purpose name	reINVITE with encapsulated CPG with generic notification 'call transfer, alerting' received, no mapping		
Test Purpose	I-MGCF: Ensure that on receipt of a reINVITE with encapsulated CPG message and the Generic notification indicator is coded as 'call transfer, alerting' and the session is not on hold, no mapping occurs on the SIP side		
ISUP Parameter values	**CPG:** Generic notification=transfer alerting		
SIP Parameter values			
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← ← 100 Trying 180 Ringing ← ← ACM (180 Ringing) 200 OK (INVITE) ← ← 200 OK (INVITE) (ANM) ACK → → ACK ← INFO (CPG(call transfer, alerting)) → 200 OK (INVITE) **Apply post test routine**		

6.2.7 Void

6.2.8 Call Hold

TP number	TP_308_001	**Reference**	[1], clause 7.2.1 [2], clause 7.4.10
TSS reference	PSTN-SS/HOLD/		
Selection criteria	PICS 6.3.2/9		
Test Purpose name	Hold and Retrieve requested from the ISUP/SIP-I		
Test Purpose	Ensure that on receipt of an INVITE or UPDATE with encapsulated CPG message and the Generic notification is set to 'Remote hold' in the confirmed dialogue, an INVITE or UPDATE is sent. The media stream in the SDP is set to 'sendonly'. Ensure that on receipt of a CPG message and the Generic notification is set to 'Remote retrieval', an INVITE or UPDATE is sent. The media stream in the SDP is set to 'sendrecv'		
ISUP Parameter values	**CPG:** Generic notification Remote hold Remote retrieval		
SIP Parameter values	INVITE/UPDATE:SDP 1 a=sendonly SDP 2 a=sendrecv		
Comments			

Message flows

SIP NNI		**MGCF**		**SIP-I**
		Establish a confirmed dialogue		
CASE A				
INVITE(SDP 1 = sendonly)	←		←	INVITE (SDP 1 = sendonly) (CPG(hold))
200 OK (INVITE)	→		→	200 OK (INVITE)
ACK	←		←	ACK
CASE B				
UPDATE(SDP 1 = sendonly)	←		←	UPDATE (SDP 1 = sendonly) (CPG(hold))
200 OK (UPDATE)	→		→	200 OK (UPDATE)
CASE A				
INVITE(SDP 2 = sendrecv)	←		←	INVITE(SDP 2 = sendrecv) CPG(retrieve)
200 OK (INVITE)	→		→	200 OK (INVITE)
ACK	←		←	ACK
CASE B				
UPDATE(SDP 2 = sendrecv)	←		←	UPDATE (SDP 2 = sendrecv) CPG(retrieve)
200 OK (UPDATE)	→		→	200 OK (UPDATE)
		Apply post test routine		

TP number	TP_308_002	**Reference**	[1], clause 7.2.1 [2], clause 7.4.10
TSS reference	PSTN-SS/HOLD/		
Selection criteria	PICS 6.3.2/9		
Test Purpose name	Hold and Retrieve requested from SIP in reINVITE request		
Test Purpose	Ensure that on receipt of an INVITE request in the confirmed dialogue and the media stream in the SDP is set to 'sendonly', a INVITE with encapsulated CPG message is sent the Generic notification indicator is set to 'remote hold'. Ensure that on receipt of an INVITE request in the confirmed dialogue and the media stream in the SDP is set to 'sendrecv', a CPG message is sent the Generic notification indicator is set to 'remote retrieval'		
ISUP Parameter values	**CPG:** Generic notification Remote hold Remote retrieval		
SIP Parameter values	INVITE/UPDATE:SDP 1 a=sendonly SDP 2 a=sendrecv		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
			Establish a confirmed dialogue		
	INVITE(sendonly)	→		→	INVITE(sendonly) (CPG(hold))
	200 OK (INVITE)	←		←	200 OK (INVITE)
	ACK	→		→	ACK
	INVITE(sendrecv)	→		→	INVITE(sendrecv) (CPG(retrieve))
	200 OK (INVITE)	←		←	200 OK (INVITE)
	ACK	→		→	ACK
			Apply post test routine		

TP number	TP_308_003	**Reference**	[1], clause 7.2.1 [2], clause 7.4.10
TSS reference	PSTN-SS/HOLD/		
Selection criteria	PICS 6.3.2/9		
Test Purpose name	Hold and Retrieve requested from SIP in UPDATE request		
Test Purpose	Ensure that on receipt of an UPDATE request in the confirmed dialogue and the media stream in the SDP is set to 'sendonly', a UPDATE with encapsulated CPG message is sent the Generic notification indicator is set to 'remote hold'. Ensure that on receipt of an UPDATE request in the confirmed dialogue and the media stream in the SDP is set to 'sendrecv', a CPG message is sent the Generic notification indicator is set to 'remote retrieval'		
ISUP Parameter values	**CPG:** Generic notification Remote hold Remote retrieval		
SIP Parameter values	INVITE/UPDATE:SDP 1 a=sendonly SDP 2 a=sendrecv		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
			Establish a confirmed dialogue		
	UPDATE(sendonly)	→		→	UPDATE(sendonly) (CPG(hold))
	200 OK (UPDATE)	←		←	200 OK (UPDATE)
	ACK	→		→	ACK
	UPDATE(sendrecv)	→		→	UPDATE(sendrecv) (CPG(retrieve))
	200 OK (UPDATE)	←		←	200 OK (UPDATE)
	ACK	→		→	ACK
			Apply post test routine		

TP number	TP_308_004	**Reference**	[1], clause 7.2.1 [2], clause 7.4.10
TSS reference	PSTN-SS/HOLD/		
Selection criteria	PICS 6.3.2/9		
Test Purpose name	Hold requested from both ends, session inactive sent		
Test Purpose	Ensure that on receipt of a INVITE with encapsulated CPG message and the Generic notification indicator is set to 'remote hold' und the session was set on hold before, an INVITE or UPDATE request is sent and the media stream is set to 'inactive'		
ISUP Parameter values	**CPG:** Generic notification Remote hold		
SIP Parameter values	INVITE/UPDATE:SDP 1 a=sendonly SDP 2 a=inactive		
Comments			

Message flows

SIP NNI		MGCF		SIP-I
		Establish a confirmed dialogue		
INVITE(SDP 1 = sendonly)	→		→	CPG(hold)
200 OK (INVITE)	←		←	200 OK (INVITE)
ACK	→		→	ACK
CASE A				
INVITE(SDP 2 = inactive)	←		←	INVITE(SDP 2 = inactive) (CPG(hold))
200 OK (INVITE)	→		→	200 OK (INVITE)
ACK	←		←	ACK
CASE B				
UPDATE(SDP 2 = inactive)	←		←	UPDATE(SDP 2 = inactive) (CPG(hold))
200 OK (UPDATE)	→		→	200 OK (UPDATE)
		Apply post test routine		

TP number	TP_308_005	**Reference**	[1], clause 7.2.1 [2], clause 7.4.10
TSS reference	PSTN-SS/HOLD/		
Selection criteria	PICS 6.3.2/9		
Test Purpose name	Hold requested from both ends, session inactive received		
Test Purpose	The session is already set on hold. Ensure that on receipt of an INVITE request and the media stream in the SDP is set to 'inactive', a INVITE with encapsulated CPG message is sent and the Notification indicator is set to 'remote hold'		
ISUP Parameter values	**CPG:** Generic notification Remote hold		
SIP Parameter values	INVITE/UPDATE:SDP 1 a=sendonly SDP 2 a=inactive		
Comments			

Message flows

SIP NNI		MGCF		SIP-I
		Establish a confirmed dialogue		
CASE A				
INVITE(SDP 1 = sendonly)	←		←	INVITE(SDP 1 = sendonly) (CPG(hold))
200 OK (INVITE)	→		→	200 OK (INVITE)
ACK	←		←	ACK
CASE B				
UPDATE(SDP 1 = sendonly)	←		←	UPDATE(SDP 1 = sendonly) (CPG(hold))
200 OK (UPDATE)	→		→	200 OK (UPDATE)
INVITE(SDP 2 = inactive)	→		→	INVITE(SDP 2 = inactive) (CPG(hold))
200 OK (INVITE)	←		←	200 OK (INVITE)
ACK	→		→	ACK
		Apply post test routine		

TP number	TP_308_006	**Reference**	[1], clause 7.2.1 [2], clause 7.4.10
TSS reference	PSTN-SS/HOLD/		
Selection criteria	PICS 6.3.2/9		
Test Purpose name	First hold from SIP. Session inactive, Retrieve requested from SIP		
Test Purpose	The session is set on hold at first from SIP as well as second from SIP-I . Ensure that on receipt of an INVITE request and the media stream in the SDP is set to 'recvonly', a INVITE or UPDATE with encapsulated CPG message is sent and the Generic notification indicator is set to 'remote retrieval'		
ISUP Parameter values	CPG 1: Generic notification Remote hold CPG 2: Generic notification Remote retrieval		
SIP Parameter values	INVITE/UPDATE:SDP 1 a=sendonly SDP 2 a=inactive SDP 3 a=recvonly		
Comments			

Message flows

SIP NNI		**MGCF**		**SIP-I**
		Establish a confirmed dialogue		
INVITE(SDP 1 = sendonly)	→		→	INVITE(SDP 1 = sendonly) (CPG 1 (hold))
200 OK (INVITE)	←		←	200 OK (INVITE)
ACK	→		→	ACK
CASE A				
INVITE(SDP 2 = inactive)	←		←	INVITE(SDP 2 = inactive) (CPG 1 (hold))
200 OK (INVITE)	→		→	200 OK (INVITE)
ACK	←		←	ACK
CASE B				
UPDATE(SDP 2 = inactive)	←		←	UPDATE(SDP 2 = inactive) (CPG 1 (hold))
200 OK (UPDATE)	→		→	200 OK (UPDATE)
INVITE(SDP 3 = recvonly)	→		→	INVITE(SDP 3 = recvonly) (CPG 2 (retrieve))
200 OK (INVITE)	←			200 OK (INVITE)
ACK	→			ACK
		Apply post test routine		

TP number	TP_308_007	**Reference**	[1], clause 7.2.1 [2], clause 7.4.10
TSS reference	PSTN-SS/HOLD/		
Selection criteria	PICS 6.3.2/9		
Test Purpose name	First hold from SIP. Session inactive, Retrieve requested from ISUP		
Test Purpose	The session is set on hold at first from SIP as well as second from SIP-I . Ensure that on receipt of an INVITE or UPDATE with encapsulated CPG message and the Generic notification indicator is set to 'remote retrieval', an INVITE or UPDATE request is sent and the media stream in the SDP I set to 'recvonly'		
ISUP Parameter values	**CPG:** Generic notification Remote hold		
SIP Parameter values	INVITE/UPDATE:SDP 1 a=sendonly SDP 2 a=inactive SDP 3 a=recvonly		
Comments			

Message flows

SIP NNI	**MGCF**	**SIP-I**
	Establish a confirmed dialogue	
INVITE(SDP 1 = sendonly)	→	→ INVITE(SDP 1 = sendonly) (CPG(hold))
200 OK (INVITE)	←	← 200 OK (INVITE)
ACK	→	→ ACK
CASE A		
INVITE(SDP 2 = inactive)	←	← INVITE(SDP 2 = inactive)CPG(hold)
200 OK (INVITE)	→	→ 200 OK (INVITE)
ACK	←	← ACK
CASE B		
UPDATE(SDP 2 = inactive)	←	← UPDATE(SDP 2 = inactive) (CPG(hold))
200 OK (UPDATE)	→	→ (UPDATE)
CASE C		
INVITE(SDP 3 = recvonly)	←	← INVITE(SDP 3 = recvonly) (CPG(retrieve))
200 OK (INVITE)	→	→ 200 OK (INVITE)
ACK	←	← ACK
CASE D		
UPDATE(SDP 3 = recvonly)	←	← UPDATE(SDP 3 = recvonly) (CPG(retrieve))
200 OK (UPDATE)	→	→ 200 OK (UPDATE)
	Apply post test routine	

TP number	TP_308_008	**Reference**	[1], clause 7.2.1 [2], clause 7.4.10
TSS reference	PSTN-SS/HOLD/		
Selection criteria	PICS 6.3.2/9		
Test Purpose name	First hold from ISUP. Session inactive, Retrieve requested from SIP		
Test Purpose	The session is set on hold at first from SIP-I as well as second from SIP. Ensure that on receipt of an INVITE request and the media stream in the SDP is set to 'recvonly', a INVITE or UPDATE with encapsulated CPG message is sent and the Generic notification indicator is set to 'remote retrieval'		
ISUP Parameter values	**CPG:** Generic notification Remote hold		
SIP Parameter values	INVITE/UPDATE:SDP 1 a=sendonly SDP 2 a=inactive SDP 3 a=recvonly		
Comments			

Message flows

SIP NNI		MGCF		SIP-I
		Establish a confirmed dialogue		
CASE A				
INVITE(SDP 1 = sendonly)	←		←	INVITE(SDP 1 = sendonly) (CPG(hold))
200 OK (INVITE)	→		→	200 OK (INVITE)
ACK	←		←	ACK
CASE B				
UPDATE(SDP 1 = sendonly)	←		←	UPDATE(SDP 1 = sendonly) (CPG(hold))
200 OK (UPDATE)	→		→	200 OK (UPDATE)
INVITE(SDP 2 = inactive)	→		→	INVITE(SDP 2 = inactive) (CPG(hold))
200 OK (INVITE)	←		←	200 OK (INVITE)
ACK	→		→	ACK
INVITE(SDP 3 = recvonly)	→		→	INVITE(SDP 3 = recvonly) (CPG(retrieve))
200 OK (INVITE)	←		←	200 OK (INVITE)
ACK	→		→	ACK
		Apply post test routine		

TP number	TP_308_009	**Reference**	[1], clause 7.2.1 [2], clause 7.4.10
TSS reference	PSTN-SS/HOLD/		
Selection criteria	PICS 6.3.2/9		
Test Purpose name	First hold from ISUP. Session inactive, Retrieve requested from ISUP		
Test Purpose	The session is set on hold at first from ISUP as well as second from SIP. Ensure that on receipt of a CPG message and the Generic notification indicator is set to 'remote retrieval', an INVITE or UPDATE request is sent and the media stream in the SDP is set to 'recvonly'		
ISUP Parameter values	**CPG:** Generic notification Remote hold		
SIP Parameter values	INVITE/UPDATE: SDP 1 a=sendonly SDP 2 a=inactive SDP 3 a=recvonly		
Comments			

Message flows

SIP NNI		MGCF		SIP-I
		Establish a confirmed dialogue		
CASE A				
INVITE(SDP 1 = sendonly)	←		←	INVITE(SDP 1 = sendonly) (CPG(hold))
200 OK (INVITE)	→		→	200 OK (INVITE)
ACK	←		←	ACK
CASE B				
UPDATE(SDP 1 = sendonly)	←		←	UPDATE(SDP 1 = sendonly) (CPG(hold))
200 OK (UPDATE)	→		→	200 OK (UPDATE)
INVITE(SDP 2 = inactive)	→		→	INVITE(SDP 2 = inactive) (CPG(hold))
200 OK (INVITE)	←		←	200 OK (INVITE)
ACK	→		→	ACK
CASE C				
INVITE(SDP 3 = recvonly)	←		←	INVITE(SDP 3 = recvonly) (CPG(retrieve))
200 OK (INVITE)	→		→	200 OK (INVITE)
ACK	←		←	ACK
CASE D				
UPDATE(SDP 3 = recvonly)	←		←	UPDATE (SDP 3 = recvonly) (CPG(retrieve))
200 OK (UPDATE)	→		→	200 OK (UPDATE)
		Apply post test routine		

TP number	TP_308_010	**Reference**	[1], clause 7.3.1 [2], clause 7.4.10.2
TSS reference	PSTN-SS/HOLD/		
Selection criteria	PICS 6.3.2/9 AND PICS 6.3.6/1		
Test Purpose name	CPG hold received before an dialogue was established UPDATE is sent in early dialogue		
Test Purpose	Ensure that on receipt of a CPG message and the Generic notification indicator is set to 'remote hold' before an early dialogue is established, the UPDATE request indicating the hold indication is sent after the early dialogue by receiving a 180 Ringing is established. The media stream in the SDP is set to sendonly indicating the hold state		
ISUP Parameter values	**CPG:** Generic notification Remote hold		
SIP Parameter values	UPDATE: SDP a=sendonly		
Comments	A CPG is received after an ACM was sent.		
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying UPDATE (SDP 1 = sendonly) (CPG(hold)) → 200 OK (UPDATE) ← 180 Ringing (CPG– alerting) ← ← 180 Ringing → UPDATE(sendonly) ← 200 OK (UPDATE) **Apply post test routine**		

TP number	TP_308_011	**Reference**	[1], clause 7.3.1 [2], clause 7.4.10.2
TSS reference	PSTN-SS/HOLD/		
Selection criteria	PICS 6.3.2/9 AND PICS 6.3.6/1		
Test Purpose name	CPG hold received before an dialogue was established UPDATE is sent in confirmed dialogue		
Test Purpose	Ensure that on receipt of a UPDATE with encapsulated CPG message and the Generic notification indicator is set to 'remote hold' before an early dialogue is established, the INVITE or UPDATE request indicating the hold indication is sent after the confirmed dialogue by receiving a 200 OK (INVITE) is established. The media stream in the SDP is set to sendonly indicating the hold state		
ISUP Parameter values	**CPG:** Generic notification Remote hold		
SIP Parameter values	INVITE/UPDATE:SDP a=sendonly		
Comments			
Message flows	**ISIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 100 Trying ← ← 100 Trying UPDATE (CPG(hold)) → 200 OK (UPDATE) ← 200 OK (INVITE) ← ← 200 OK (INVITE) (CON) ACK → **CASE A** → INVITE(sendonly) ← 200 OK (INVITE) → ACK **CASE B** → UPDATE(sendonly) ← 200 OK (UPDATE) **Apply post test routine**		

TP number	TP_308_012	**Reference**	[1], clause 7.3.1 [2], clause 7.4.10.2
TSS reference	PSTN-SS/HOLD/		
Selection criteria	PICS 6.3.2/9 AND PICS 6.3.6/1		
Test Purpose name	Update with encapsulated CPG hold received after several early dialogues was established UPDATE is sent on the last established early dialogue		
Test Purpose	Two early dialogues are established. Ensure that on receipt of a INFO with encapsulated CPG message and the Generic notification indicator is set to 'remote hold', an UPDATE request is sent on the latest established early dialogue		
ISUP Parameter values	**CPG:** Generic notification Remote hold		
SIP Parameter values	180 1: To: <appropriate URI>; tag=1 180 1: To: <appropriate URI>; tag=2 UPDATE: To: <appropriate URI>; tag=2		
Comments	For all dialogues the Call-ID and the From tag are equal. The different dialogues can be distinguished by the To tag		
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 180 Ringing 1 ← ← 180 Ringing 1 (ACM – free) ← 180 Ringing 2 UPDATE (sendonly) → → UPDATE 2 (sendonly) CPG(hold) 200 OK (UPDATE) ← ← 200 OK (UPDATE) **Apply post test routine**		

TP number	TP_308_013	**Reference**	[1], clause 7.3.1 [2], clause 7.4.10.2
TSS reference	PSTN-SS/HOLD/		
Selection criteria	PICS 6.3.2/9 AND PICS 6.3.6/1		
Test Purpose name	An UPDATE (hold) is repeated in the early dialogue after SDP offer answer exchange		
Test Purpose	Ensure that on receipt of an UPDATE request after the session was set on hold indicating a new SDP, an UPDATE request is sent and the media stream is set to 'sendonly' to refresh the previous held state		
ISUP Parameter values	**CPG:** Generic notification Remote hold		
SIP Parameter values	**INVITE:** SDP1 UPDATE 1: SDP a=sendonly UPDATE 2: SDP 2		
Comments			

Message flows

SIP-I		**MGCF**		**SIP NNI**
INVITE(SDP1) (IAM)	→		→	INVITE(SDP1)
180 Ringing (ACM – free)	←		←	180 Ringing
UPDATE 1 (sendonly) CPG(hold)	→		→	UPDATE 1 (sendonly)
200 OK (UPDATE)	←		←	200 OK (UPDATE)
UPDATE 2 (SDP2) CPG(hold)	←		←	UPDATE 2 (SDP2)
200 OK (UPDATE)	→		→	200 OK (UPDATE)
UPDATE 1 (sendonly) CPG(retrieve)	→		→	UPDATE 1 (sendonly)
200 OK (UPDATE)	←		←	200 OK (UPDATE)

Apply post test routine

TP number	TP_308_014	**Reference**	[1], clause 7.3.1 [2], clause 7.4.10.2
TSS reference	PSTN-SS/HOLD/		
Selection criteria	PICS 6.3.2/9 AND PICS 6.3.6/1		
Test Purpose name	An UPDATE (hold) is sent after an additional early dialogue is established		
Test Purpose	An early dialogue is established and set on hold. Ensure that on receipt of a 180 Ringing establish a new early dialogue, an UPDATE request is sent on this dialogue and the media stream is set to 'sendonly'		
ISUP Parameter values	**CPG:** Generic notification Remote hold		
SIP Parameter values	180 1: To: <appropriate URI>; tag=1 180 1: To: <appropriate URI>; tag=2 UPDATE 2: To: <appropriate URI>; tag=2		
Comments			

Message flows

SIP-I		**MGCF**		**SIP NNI**
INVITE (IAM)	→		→	INVITE
180 Ringing 1 (ACM – free)	←		←	180 Ringing 1
UPDATE CPG(hold)	→		→	UPDATE 1 (sendonly)
200 OK (UPDATE)	←		←	200 OK (UPDATE)
			←	180 Ringing 2
			→	UPDATE 2 (sendonly)
			←	200 OK (UPDATE)

Apply post test routine

TP number	TP_308_015	**Reference**	[1], clause 7.3.1 [2], clause 7.4.10.2
TSS reference	PSTN-SS/HOLD/		
Selection criteria	PICS 6.3.2/9 AND PICS 6.3.6/1		
Test Purpose name	An INVITE or UPDATE (hold condition) is sent after 200 OK INVITE was received when a CPG (hold) was received in early dialogue		
Test Purpose	An UPDATE with encapsulated CPG indicating Hold was received in the early dialogue. Ensure that on receipt of a 200 OK (INVITE) establishing the confirmed dialogue, an INVITE or UPDATE request is sent and the media stream is set to 'sendonly' indicating the held state		
ISUP Parameter values	**CPG:** Generic notification Remote hold		
SIP Parameter values	INVITE/UPDATE 2: SDP a=sendonly		
Comments			

Message flows

SIP-I		**MGCF**		**SIP NNI**
INVITE (IAM)	→		→	INVITE
180 Ringing (ACM – free)	←		←	180 Ringing
UPDATE (CPG(hold))	→		→	UPDATE(sendonly)
200 OK (UPDATE)	←		←	200 OK (UPDATE)
200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
ACK	→		→	ACK
CASE A			→	INVITE 2 (sendonly)
			←	200 OK (INVITE)
			→	ACK
CASE B			→	UPDATE 2 (sendonly)
			←	200 OK (UPDATE)

Apply post test routine

TP number	TP_308_016	**Reference**	[1], clause 7.3.1 [2], clause 7.4.10
TSS reference	PSTN-SS/HOLD/		
Selection criteria	PICS 6.3.2/9 AND PICS 6.3.6/1		
Test Purpose name	'sendonly' and 'sendrecv' received from the terminating SIP user in the early dialogue		
Test Purpose	Ensure that on receipt of an UPDATE request in the early dialogue and the media stream is set to 'sendonly' a UPDATE(sendonly) with encapsulated CPG message is sent and the Generic notification indicator is set to 'remote hold'. Ensure that on receipt of an UPDATE request in the early dialogue and the media stream is already set on hold the media stream is set to 'sendrecv' in the received UPDATE, a CPG message is sent and the Generic notification indicator is set to 'remote retrieval'		
ISUP Parameter values			
SIP Parameter values			
Comments			

Message flows

SIP-I		**MGCF**		**SIP NNI**
INVITE IAM	→		→	INVITE
			←	100 Trying
180 Ringing (ACM – free)	←		←	180 Ringing
UPDATE(sendonly) (CPG(hold))	←		←	UPDATE(sendonly)
200 OK (UPDATE)	→		→	200 OK (UPDATE)
UPDATE(sendrecv) CPG(retrieve)	←		←	UPDATE(sendrecv)
200 OK (UPDATE)	→		→	200 OK (UPDATE)

Apply post test routine

TP number	TP_308_017	Reference	[1], clause 7.2.1 [2], clause 7.4.2
TSS reference	PSTN-SS/HOLD/		
Selection criteria	PICS 6.3.2/9 AND PICS 6.3.6/1		
Test Purpose name	'sendonly' and 'sendrecv' received from the originating SIP user in the early dialogue		
Test Purpose	Ensure that on receipt of an UPDATE request in the early dialogue and the media stream is set to 'sendonly', a UPDATE with encapsulated CPG message is sent and the Generic notification indicator is set to 'remote hold'. Ensure that on receipt of an UPDATE request in the early dialogue and the media stream is set to 'sendonly' the session is already set on hold, a CPG message is sent and the Generic notification indicator is set to 'remote retrieval'		
ISUP Parameter values			
SIP Parameter values			
Comments			

Message flows

SIP NNI		MGCF		SIP-I
INVITE	→		→	INVITE (IAM)
180 Ringing	←		←	180 Ringing (ACM)
UPDATE(sendonly)	→		→	UPDATE (sendonly) (CPG(hold))
200 OK (UPDATE)	←		←	200 OK (UPDATE)
UPDATE(sendrecv)	→		→	UPDATE(sendrecv) (CPG(retrieve))
200 OK (UPDATE)	←		←	200 OK (UPDATE)

Apply post test routine

TP number	TP_308_018	Reference	[1], clause 7.3.1 [2], clause 7.4.10
TSS reference	PSTN-SS/HOLD/		
Selection criteria	PICS 6.3.2/9 AND PICS 6.3.6/1		
Test Purpose name	'hold' and 'retrieve' received from the originating PSTN user in the early dialogue		
Test Purpose	Ensure that on receipt of a CPG message and the Generic notification indicator is set to 'remote hold' in the early dialogue, an UPDATE request is sent and the mediastream is set to 'sendonly'. Ensure that on receipt of a CPG message and the Generic notification indicator is set to 'remote retrieval' and the session is already set on hold, an UPDATE request is sent and the media stream is set to 'sendrecv'		
ISUP Parameter values			
SIP Parameter values			
Comments			

Message flows

SIP-I		MGCF		SIP NNI
INVITE (IAM)	→		→	INVITE
100 Trying	←		←	100 Trying
180 Ringing (ACM – free)	←		←	180 Ringing
UPDATE(sendonly) CPG(hold)	→		→	UPDATE(sendonly)
200 OK (UPDATE)	←		←	200 OK (UPDATE)
UPDATE(sendrecv) (CPG(retrieve))	→		→	UPDATE(sendrecv)
200 OK (UPDATE)	←		←	200 OK (UPDATE)

Apply post test routine

6.2.9 Call Completion on busy subscriber

TP number	TP_309_001	**Reference**	[1], clause 7.2.1 [2], clause 7.4.11
TSS reference	PSTN-SS/CCBS/		
Selection criteria	PICS 6.3.1/1 AND PICS 6.3.2/10		
Test Purpose name	The diagnostic field is not interworked		
Test Purpose	Ensure that on receipt of an REL message cause #17 and a diagnostic field is present set to 'CCBS possible', a final SIP response 486 Busy Here is sent no indication of CCBS facility is present		
ISUP Parameter values	**REL:** Cause indicator CCBS possible indicator=CCBS possible		
SIP Parameter values			
Comments	The CCBS possible indicator is contained in the diagnostic field of the Cause indicator		
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	486 Busy Here ←	←	486 Busy Here (REL(17))
	ACK →	→	ACK (RLC)

6.2.10 Completion of Calls on No Reply (CCNR)

TP number	TP_310_001	**Reference**	[1], clause 7.2.1 [2], clause 7.4.12
TSS reference	PSTN-SS/CCNR/		
Selection criteria	PICS 6.3.1/1 AND PICS 6.3.2/11		
Test Purpose name	CCNR possible indication received in an ACM, discarded		
Test Purpose	Ensure that on receipt of an ACM and a CCNR possible indicator is present the value set to 'CCNR possible', a 180 Ringing is sent without indication of CCNR facility		
ISUP Parameter values	**ACM:** BCI called party status indicator=subscriber free, CCNR Possible Indicator=CCNR possible		
SIP Parameter values			
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	180 Ringing ←	←	180 Ringing (ACM - free)
	Apply post test routine		

TP number	TP_310_002	**Reference**	[1], clause 7.2.1 [2], clause 7.4.12
TSS reference	PSTN-SS/CCNR/		
Selection criteria	PICS 6.3.1/1 AND PICS 6.3.2/11		
Test Purpose name	CCNR possible indication received in an CPG, discarded		
Test Purpose	Ensure that on receipt of an CPG and a CCNR possible indicator is present the value set to 'CCNR possible', a 180 Ringing is sent without indication of CCNR facility		
ISUP Parameter values	**ACM:** BCI called party status indicator=no indication, oBCI=inband info available **CPG:** Event indicator= ALERTING, CCNR Possible Indicator=CCNR possible		
SIP Parameter values			
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←	←	100 Trying
		←	183 Session Progress (ACM(no indication))
	180 Ringing ←	←	180 Ringing (CPG)
	Apply post test routine		

6.2.11 Terminal Portability (TP)

TP number	TP_311_001	**Reference**	[1], clause 7.2.1 [2], clause 7.4.13
TSS reference	PSTN-SS/TP/		
Selection criteria	PICS 6.3.2/12		
Test Purpose name	SUS user initiated is mapped into an reINVITE SDP sendonly		
Test Purpose	Ensure that on receipt of an SUS message and the Suspend/Resume indicator is set to 'ISDN subscriber initiated', a reINVITE is sent and the media stream indicated in the SDP is set to 'sendonly'		
ISUP Parameter values	**SUS:** Suspend/Resume ISDN subscriber initiated		
SIP Parameter values	**INVITE 2:** SDP a=sendonly		
Comments			

Message flows

SIP NNI		MGCF		SIP-I
INVITE 1	→		→	INVITE (IAM)
100 Trying	←			
180 Ringing	←		←	180 Ringing (ACM free)
200 OK (INVITE)	←		←	200 OK (INVITE) (ANM)
ACK	→		→	ACK
INVITE 2(sendonly)	←		←	INFO (SUS(user))
200 OK (INVITE)	→		→	200 OK (INFO)
ACK	←			

Apply post test routine

TP number	TP_311_002	**Reference**	[1], clause 7.3.1 [2], clause 7.4.13
TSS reference	PSTN-SS/TP/		
Selection criteria	PICS 6.3.2/12		
Test Purpose name	RES user initiated is mapped into an reINVITE SDP sendrecv		
Test Purpose	A SUS message and the Suspend/Resume indicator is set to 'ISDN subscriber initiated' was received. Ensure that on receipt of an RES message and the Suspend/Resume indicator is set to 'ISDN subscriber initiated', a reINVITE is sent and the media stream indicated in the SDP is set to 'sendrecv'		
ISUP Parameter values	**RES:** Suspend/Resume ISDN subscriber initiated		
SIP Parameter values	**INVITE 2:** SDP a=sendonly **INVITE 3:** SDP a=sendrecv		
Comments			

Message flows

SIP-I		MGCF		SIP NNI
INVITE 1 (IAM)	→		→	INVITE
			←	100 Trying
180 Ringing (ACM – free)	←		←	180 Ringing
200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
ACK	→		→	ACK
INVITE 2(sendonly)	←		←	INFO (SUS(user))
200 OK (INVITE)	→			200 OK (INFO)
ACK	←			
INVITE 3(sendrecv)	←		←	INFO (RES(user))
200 OK (INVITE)	→		→	200 OK (INFO)
ACK	←			

Apply post test routine

6.2.12 Conference calling (CONF) / Three-Party Service (3PTY)

TP number	TP_312_001	**Reference**	[1], clause 7.2.1 [2], clause 7.4.14
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/1 AND PICS 6.3.2/13		
Test Purpose name	I-MGCF: Session not on hold, notification 'conference established'		
Test Purpose	A session at the I-MGCF is in the confirmed state and not set on hold. Ensure that on receipt of a reINVITE with encapsulated CPG message the Generic notification indicator is set to 'Conference established' no reINVITE is sent		
ISUP Parameter values	**CPG:** Generic notification Conference established		
SIP Parameter values			
Comments	This state is applicable for CONF and 3PTY		

Message flows

SIP NNI		MGCF		SIP-I
INVITE	→		→	INVITE (IAM)
100 Trying	←			
180 Ringing	←		←	180 Ringing (ACM)- free
200 OK (INVITE)	←		←	200 OK (INVITE) (ANM)
ACK	→			→ ACK
			←	INFO (CPG)
			→	200 OK (INFO)
		Apply post test routine		

TP number	TP_312_002	**Reference**	[1], clause 7.3.1 [2], clause 7.4.14
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/1 AND PICS 6.3.2/13		
Test Purpose name	O-MGCF: Session not on hold, notification 'conference established'		
Test Purpose	A session at the O-MGCF is in the confirmed state and not set on hold. Ensure that on receipt of a reINVITE with encapsulated CPG message the Generic notification indicator is set to 'Conference established' no reINVITE is sent		
ISUP Parameter values	**CPG:** Generic notification= Conference established		
SIP Parameter values			
Comments	This state is applicable for CONF and 3PTY		

Message flows

SIP-I		MGCF		SIP NNI
INVITE (IAM)	→		→	INVITE
			←	100 Trying
180 Ringing (ACM)	←		←	180 Ringing
200 OK (INVITE) ANM	←		←	200 OK (INVITE)
ACK	→		→	ACK
INFO (CPG)	→			
200 OK (INFO)	←			
		Apply post test routine		

TP number	TP_312_003	**Reference**	[1], clause 7.2.1 [2], clause 7.4.14
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/1 AND PICS 6.3.2/13		
Test Purpose name	I-MGCF: Session on hold, notification 'conference established'		
Test Purpose	A session at the I-MGCF is in the confirmed state and set on hold. Ensure that on receipt of an INVITE with encapsulated CPG message the Generic notification indicator is set to 'Conference established' a reINVITE request is sent the 'a' attribute in the SDP is set to 'sendrecv' On receipt of an INFO with encapsulated CPG message the Generic notification indicator is set to 'Conference established' **no** reINVITE request is sent the 'a' attribute in the SDP is set to 'sendrecv' will be sent (CASE B)		
ISUP Parameter values	CPG 1: Generic notification Remote hold CPG 2: Generic notification Conference established		
SIP Parameter values	INVITE 1: SDP a=sendonly INVITE 2: SDP a=sendrecv		
Comments	This state is applicable for 3PTY		

Message flows

SIP NNI		**MGCF**		**SIP-I**
INVITE	→		→	INVITE (IAM)
100 Trying	←			
180 Ringing	←		←	180 Ringing (ACM - free)
200 OK (INVITE)	←		←	200 OK (INVITE) (ANM)
ACK	→		→	ACK
INVITE 1 (sendonly)	←		←	INVITE 1 (sendonly) (CPG 1)
200 OK INVITE (recvonly)	→		→	200 OK INVITE (recvonly)
ACK	←		←	ACK
CASE A				
INVITE 2 (sendrecv)	←		←	INVITE 2 (sendrecv)
200 OK INVITE (sendrecv)	→		→	200 OK INVITE (sendrecv)
ACK	←		←	ACK
			←	INFO(CPG 2)
			→	200 OK INFO
CASE B				
INVITE 2 (sendrecv)	←		←	INFO(CPG 2)
200 OK INVITE (sendrecv)	→		→	200 OK INFO
ACK	←			
Apply post test routine				

TP number	TP_312_004	**Reference**	[1], clause 7.3.1 [2], clause 7.4.14
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/1 AND PICS 6.3.2/13		
Test Purpose name	O-MGCF: Session on hold, notification 'conference established'		
Test Purpose	A session at the O-MGCF is in the confirmed state and set on hold. Ensure that on receipt of a INVITE with encapsulated CPG message the Generic notification indicator is set to 'Conference established' a reINVITE request is sent the 'a' attribute in the SDP is set to 'sendrecv' On receipt of an INFO with encapsulated CPG message the Generic notification indicator is set to 'Conference established' **no** reINVITE request is sent the 'a' attribute in the SDP is set to 'sendrecv' will be sent (CASE B)		
ISUP Parameter values	CPG 1: Generic notification Remote hold CPG 2: Generic notification Conference established		
SIP Parameter values	INVITE 1: SDP a=sendonly INVITE 2: SDP a=sendrecv		
Comments	This state is applicable for 3PTY		
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →	→	INVITE
		←	100 Trying
	180 Ringing (ACM – free) ←	←	180 Ringing
	200 OK (INVITE) (ANM) ←	←	200 OK (INVITE)
	ACK →	→	ACK
	INVITE 1 (sendonly) (CPG 1) →	→	INVITE 1 (sendonly)
	200 OK INVITE (recvonly) ←	←	200 OK INVITE (recvonly)
	ACK →	→	ACK
	CASE A		
	INVITE 2 (sendrecv) →	→	INVITE 2 (sendrecv)
	200 OK INVITE (sendrecv) ←	←	200 OK INVITE (sendrecv)
	ACK →	→	ACK
	INFO (CPG 2) →		
	200 OK INFO ←		
	CASE B		
	INFO (CPG 2) →	→	INVITE 2 (sendrecv)
	200 OK INFO ←	←	200 OK INVITE (sendrecv)
		→	ACK
	Apply post test routine		

TP number	TP_312_005	**Reference**	[1], clause 7.2.1 [2], clause 7.4.14
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/1 AND PICS 6.3.2/13		
Test Purpose name	I-MGCF: Session not on hold, notification 'Conference disconnected'		
Test Purpose	A session at the I-MGCF is in the confirmed state not set on hold and a conference is established. Ensure that on receipt of an INFO with encapsulated CPG message the Generic notification indicator is set to 'Conference disconnected' no reINVITE is sent		
ISUP Parameter values	CPG 1: Generic notification Conference established CPG 2: Generic notification Conference disconnected		
SIP Parameter values			
Comments	This state is applicable for CONF and 3PTY		

Message flows

SIP NNI		MGCF		SIP-I
INVITE	→		→	INVITE (IAM)
100 Trying	←			
180 Ringing	←		←	180 Ringing (ACM - free)
200 OK (INVITE)	←		←	200 OK (INVITE) (ANM)
ACK	→		→	ACK
			←	INFO 1 (CPG 1)
			→	200 OK (INFO)
			←	INFO 2 (CPG 2)
			→	200 OK (INFO)

Apply post test routine

TP number	TP_312_006	**Reference**	[1], clause 7.3.1 [2], clause 7.4.14
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/1 AND PICS 6.3.2/13		
Test Purpose name	O-MGCF: Session not on hold, notification 'Conference disconnected'		
Test Purpose	A session at the O-MGCF is in the confirmed state not set on hold and a conference is established. Ensure that on receipt of an INFO with encapsulated CPG message the Generic notification indicator is set to 'Conference disconnected' no reINVITE is sent		
ISUP Parameter values	CPG 1: Generic notification Conference established CPG 2: Generic notification Conference disconnected		
SIP Parameter values			
Comments	This state is applicable for CONF and 3PTY		

Message flows

SIP-I		MGCF		SIP NNI
INVITE (IAM)	→		→	INVITE
			←	100 Trying
180 Ringing (ACM- free)	←		←	180 Ringing
200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
ACK	→		→	ACK
INFO (CPG 1)	→			
200 OK (INFO)	←			
INFO (CPG 2)	→			
200 OK	←			

Apply post test routine

TP number	TP_312_007	**Reference**	[1], clause 7.2.1 [2], clause 7.4.14
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/1 AND PICS 6.3.2/13		
Test Purpose name	I-MGCF: Session on hold, notification 'Conference disconnected'		
Test Purpose	A session at the I-MGCF is in the confirmed state set on hold and a conference is established. Ensure that on receipt of an INFO with encapsulated CPG message the Generic notification indicator is set to 'Conference disconnected' no action takes place on the SIP side.		
ISUP Parameter values	CPG 1: Generic notification Remote hold CPG 2: Generic notification Conference established CPG 3: Generic notification Conference disconnected		
SIP Parameter values	INVITE 1: SDP a=sendonly INVITE 2: SDP a=sendrecv		
Comments	This state is applicable for 3PTY		

Message flows

SIP NNI		**MGCF**		**SIP-I**
INVITE	→		→	INVITE (IAM)
100 Trying	←			
180 Ringing	←		←	180 Ringing (ACM – free)
200 OK (INVITE)	←		←	200 OK (INVITE) (ANM)
ACK	→		→	ACK
INVITE 1 (sendonly)	←		←	INVITE 1 (sendonly) (CPG 1)
200 OK INVITE (recvonly)	→		→	200 OK INVITE (recvonly)
ACK	←		←	ACK
CASE A				
INVITE 2 (sendrecv)	←		←	INVITE 2 (sendrecv)
200 OK INVITE (sendrecv)	→		→	200 OK INVITE (sendrecv)
ACK	←		←	ACK
			←	INFO (CPG 3)
			→	200 OK INFO
CASE B				
INVITE 2 (sendrecv)	←		←	INFO (CPG 2)
200 OK INVITE (sendrecv)	→		→	200 OK INFO
ACK	←			
			←	INFO (CPG 3)
			→	200 OK INFO

Apply post test routine

TP number	TP_312_008	**Reference**	[1], clause 7.3.1 [2], clause 7.4.14
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/1 AND PICS 6.3.2/13		
Test Purpose name	O-MGCF: Session on hold, notification 'Conference disconnected'		
Test Purpose	A session at the O-MGCF is in the confirmed state set on hold and a conference is established. Ensure that on receipt of an INFO with encapsulated CPG message the Generic notification indicator is set to 'Conference disconnected' no action takes place on the SIP side.		
ISUP Parameter values	CPG 1: Generic notification Remote hold CPG 2: Generic notification Conference established CPG 3: Generic notification Conference disconnected		
SIP Parameter values	INVITE 1: SDP a=sendonly INVITE 2: SDP a=sendrecv		
Comments	This state is applicable for 3PTY		

Message flows

SIP-I	MGCF	SIP NNI
	A conference is established	
INVITE (IAM)	→	→ INVITE
		← 100 Trying
180 Ringing (ACM - free)	←	← 180 Ringing
200 OK (INVITE) (ANM)	←	← 200 OK (INVITE)
ACK	→	→ ACK
INVITE 1 (sendonly) (CPG 1)	→	→ INVITE 1 (sendonly)
200 OK INVITE (recvonly)	←	← 200 OK INVITE (recvonly)
ACK	→	→ ACK
CASE A		
INVITE 2 (sendrecv)	→	→ INVITE 2 (sendrecv)
200 OK INVITE (sendrecv)		← 200 OK INVITE (sendrecv)
ACK	→	→ ACK
INFO (CPG 2)	→	
200 OK INFO	←	
INFO (CPG 3)	→	
200 OK INFO	←	
CASE B		
INFO (CPG 2)	→	→ INVITE 2 (sendrecv)
200 OK INFO	←	← 200 OK INVITE (sendrecv)
		→ ACK
INFO (CPG 3)	→	
200 OK INFO	←	
	Apply post test routine	

TP number	TP_312_009	**Reference**	[1], clause 7.2.1 [2], clause 7.4.14
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/1 AND PICS 6.3.2/13		
Test Purpose name	I-MGCF: notification 'isolated' and 'reattached' interworked		
Test Purpose	A conference at the I-MFCF is established. Ensure that on receipt of an INVITE with encapsulated CPG message the Generic notification indicator is set to 'isolated' a reINVITE request is sent the 'a' attribute in the SDP is set to 'sendonly'. Subsequently on receipt of a CPG message the Generic notification indicator is set to 'reattached' a reINVITE request is sent the 'a' attribute in the SDP is set to 'sendrecv'		
ISUP Parameter values	CPG 1: Generic notification Conference established CPG 2: Generic notification isolated CPG 3: Generic notification reattached		
SIP Parameter values	INVITE 1: SDP a=sendonly INVITE 2: SDP a=sendrecv		
Comments	This state is applicable for CONF		

Message flows

SIP NNI		**MGCF**		**SIP-I**
INVITE	→		→	INVITE (IAM)
100 Trying	←			
180 Ringing	←		←	180 Ringing (ACM)
200 OK (INVITE)	←		←	200 OK (INVITE) (ANM)
ACK	→		→	ACK
			←	INFO (CPG 1)
			→	200 OK (INFO)
INVITE 1 (sendonly)	←		←	INFO CPG 2
200 OK INVITE (recvonly)	→		→	200 OK INFO
ACK	←			
INVITE 2 (sendrecv)	←		←	INFO (CPG 3)
200 OK INVITE (sendrecv)	→		→	200 OK INFO
ACK	←			
Apply post test routine				

TP number	TP_312_010	**Reference**	[1], clause 7.3.1 [2], clause 7.4.14
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/1 AND PICS 6.3.2/13		
Test Purpose name	O-MGCF: notification 'isolated' and 'reattached' interworked		
Test Purpose	A conference at the O-MFCF is established. Ensure that on receipt of a reINVITE with encapsulated CPG message the Generic notification indicator is set to 'isolated' a reINVITE request is sent the 'a' attribute in the SDP is set to 'sendonly'. Subsequently on receipt of a CPG message the Generic notification indicator is set to 'reattached' a reINVITE request is sent the 'a' attribute in the SDP is set to 'sendrecv'		
ISUP Parameter values	CPG 1: Generic notification Conference established CPG 2: Generic notification isolated CPG 2: Generic notification reattached		
SIP Parameter values	INVITE 1: SDP a=sendonly INVITE 2: SDP a=sendrecv		
Comments	This state is applicable for CONF		

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
				←	100 Trying
	180 Ringing (ACM – free)	←		←	180 Ringing
	200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
	ACK	→		→	ACK
	INFO (CPG 1)	→			
	200 OK (INFO)	←			
	INFO (CPG 2)	→		→	INVITE 1 (sendonly)
	200 OK INFO	←		←	200 OK INVITE (recvonly)
	ACK	→		→	ACK
	INFO (CPG 3)	→		→	INVITE 2 (sendrecv)
	200 OK INFO)	←		←	200 OK INVITE (sendrecv)
	ACK	→		→	ACK
			Apply post test routine		

6.2.13 Void

6.2.14 Multi-Level Precedence and Pre-emption (MLPP)

TP number	TP_314_001	**Reference**	[1], clause 7.3.1 [2], clause 7.4.17
TSS reference	PSTN-SS/MLPP/		
Selection criteria			
Test Purpose name	Precedence parameter received in IAM, discarded		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and a Precedence parameter is present, this parameter is discarded without affect the ongoing call setup		
ISUP Parameter values	**IAM:** Precedence		
SIP Parameter values			
Comments			

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
				←	100 Trying
			Apply post test routine		

TP number	TP_314_002	**Reference**	[1], clause 7.3.1 [2], clause 7.4.17
TSS reference	PSTN-SS/MLPP/		
Selection criteria			
Test Purpose name	A REL cause #9 terminates an early dialogue		
Test Purpose	Ensure that on receipt of a CANCEL with encapsulated REL message in an early dialogue at the O-MGCF and the Cause value is set to '9', a CANCEL request is sent. A Reason header is contained in the CANCEL request and the cause value is set to '9'		
ISUP Parameter values	**REL:** Cause = 9		
SIP Parameter values	CANCEL: Reason: Q.850; cause=9		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** **A Session is already in early dialogue** CANCEL (REL) → → CANCEL 200 OK CANCEL (RLC) ← ← 200 OK CANCEL 487 Request Terminated ← ← 487 Request Terminated ACK → → ACK		

TP number	TP_314_003	**Reference**	[1], clause 7.2.1 [2], clause 7.4.17
TSS reference	PSTN-SS/MLPP/		
Selection criteria			
Test Purpose name	A REL cause #8 terminates an early dialogue		
Test Purpose	Ensure that on receipt of a 4xx/5xx with encapsulated REL message in an early dialogue at the I-MGCF and the Cause value is set to '8', a 4xx or 5xx final response is sent. A Reason header is contained in the final response message and the cause value is set to '9'		
ISUP Parameter values	**REL:** Cause = 8		
SIP Parameter values	480: Reason: Q.850; cause=8		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** **A Session is already in early dialogue** 4xx/5xx ← ← 4xx/5xx (REL) ACK → → ACK (RLC)		

TP number	TP_314_004	**Reference**	[1], clause 7.3.1 [2], clause 7.4.17
TSS reference	PSTN-SS/MLPP/		
Selection criteria	PICS 6.3.1/1 AND PICS 6.3.2/15		
Test Purpose name	A REL cause #9 terminates a confirmed dialogue		
Test Purpose	Ensure that on receipt of a REL message in a confirmed dialogue and the Cause value is set to '9', a BYE request is sent. A Reason header is contained in the BYE request and the cause value is set to '9'		
ISUP Parameter values	**REL:** Cause = 9		
SIP Parameter values	BYE: Reason: Q.850; cause=9		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** **A Session is already established** BYE (REL) → → BYE 200 OK BYE (RLC) ← ← 200 OK BYE		

6.2.15 Global Virtual Network Service (GVNS)

TP number	TP_315_001	**Reference**	[1], clause 7.2.1 [2], clause 7.4.18
TSS reference	PSTN-SS/GVNS/		
Selection criteria			
Test Purpose name	Forward GVNS parameter in IAM discarded		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM containing a request for GVNS service, the Forward GVNS parameter is discarded without affect the ongoing call setup		
ISUP Parameter values	**IAM:** Called party number Forward GVNS Originating participating service provider GVNS user group Terminating network routing number		
SIP Parameter values			
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

6.2.16 Reverse charging (REV)

TP number	TP_316_001	**Reference**	[1], clause 7.3.1 [2], clause 7.4.20
TSS reference	PSTN-SS/REV/		
Selection criteria	PICS 6.3.7/1 AND PICS 6.3.1/1 AND PICS 6.3.2/17		
Test Purpose name	REV request from the calling user at the call set-up time		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and a Remote Operation parameter is present containing a REVCallingReqSetup invoke component, the Remote Operation parameter is discarded without affect the ongoing call setup		
ISUP Parameter values	**IAM:** Called party number Remote Operation REVCallingReqSetup invoke transferRequested = true callingUserNumber		
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_316_002	**Reference**	[1], clause 7.3.1 [2], clause 7.4.20
TSS reference	PSTN-SS/REV/		
Selection criteria			
Test Purpose name	REV request from the calling user during the active state of the call		
Test Purpose	Ensure that on receipt of a INFO with encapsulated FAC message at the O-MGCF in the active state of a call and a Remote Operation parameter is present containing a REVCallingReqActive invoke component, the FAC message is discarded without affect the present call		
ISUP Parameter values	**FAC:** Remote Operation REVCallingReqActive invoke transferRequested = true callingUserNumber		
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** **A confirmed dialogue is already established** INFO (FAC) → 200 OK INFO ← **Apply post test routine**		

TP number	TP_316_003	**Reference**	[1], clause 7.2.1 [2], clause 7.4.20
TSS reference	PSTN-SS/REV/		
Selection criteria			
Test Purpose name	REV request from the called user during the active state of the call		
Test Purpose	Ensure that on receipt of a INFO with encapsulated FAC message at the I-MGCF in the active state of a call and a Remote Operation parameter is present containing a REVCalledRequest invoke component, the FAC message is discarded without affect the present call		
ISUP Parameter values	**FAC:** Remote Operation REVCalledRequest invoke transferRequested = true calledUserNumber		
SIP Parameter values			
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** **A confirmed dialogue is already established** ← INFO (FAC) → 200 OK INFO **Apply post test routine**		

TP number	TP_316_004	**Reference**	[1], clause 7.3.1 [2], clause 7.4.20
TSS reference	PSTN-SS/REV/		
Selection criteria			
Test Purpose name	REV request in IAM explicit rejected		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM message and a Remote Operation parameter is present containing REVCallingReqSetup invoke component and the explicit rejection of this service is supported, the SUT sends in a: • 200 OK INVITE with encapsulated ANM a Remote Operation parameter containing a REVCallingReqSetup return error component set to rejectedByNetwork **OR** • BYE with encapsulated REL a Remote Operation parameter containing a REVCallingReqSetup return error component set to rejectedByNetwork and the Cause value is set to '29'		
ISUP Parameter values	**IAM:** Called party number Remote Operation REVCallingReqSetup invoke transferRequested = true callingUserNumber **ANM:** Remote Operation REVCallingReqSetup return error rejectedByNetwork **REL:** Cause 29 Remote Operation REVCallingReqSetup return error rejectedByNetwork		
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → **CASE A** → INVITE 180 Ringing ← ← 180 Ringing (ACM – free) 200 OK INVITE (ANM) ← ← 200 OK INVITE ACK → → ACK **Apply post test routine** **CASE B** 4xx/5xx/6xx (REL) ← ACK (RLC) →		

TP number	TP_316_005	**Reference**	[1], clause 7.3.1 [2], clause 7.4.20
TSS reference	PSTN-SS/REV/		
Selection criteria			
Test Purpose name	REV request in the active state explicit rejected at the O-MGCF		
Test Purpose	Ensure that on receipt of an INFO with encapsulated FAC message at the O-MGCF in the active state of the call and a Remote Operation parameter is present containing REVCallingReqSetup invoke component and the explicit rejection of this service is supported, the SUT sends in a INFO with encapsulated FRJ message a Remote Operation parameter containing a REVCallingReqActive return error component set to rejectedByNetwork		
ISUP Parameter values	**FAC:** Remote Operation REVCallingReqActive invoke transferRequested = true callingUserNumber **FRJ:** Remote Operation REVCallingReqActive return error rejectedByNetwork		
SIP Parameter values			
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** **A confirmed dialogue is already established** INFO (FAC) ➔ 200 OK INFO ← INFO (FRJ) ← 200 OK INFO ➔ **Apply post test routine**		

TP number	TP_316_006	**Reference**	[1], clause 7.2.1 [2], clause 7.4.20
TSS reference	PSTN-SS/REV/		
Selection criteria			
Test Purpose name	REV request in the active state explicit rejected at the I-MGCF		
Test Purpose	Ensure that on receipt of an INFO with encapsulated FAC message at the O-MGCF in the active state of the call and a Remote Operation parameter is present containing REVCallingReqSetup invoke component and the explicit rejection of this service is supported, the SUT sends in a INFO with encapsulated FRJ message a Remote Operation parameter containing a REVCalledRequest return error component set to rejectedByNetwork		
ISUP Parameter values	**FAC:** Remote Operation REVCalledRequest invoke transferRequested = true calledUserNumber **FRJ:** Remote Operation REVCalledRequest return error rejectedByNetwork		
SIP Parameter values			
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** **A confirmed dialogue is already established** ← INFO (FAC) ➔ 200 OK INFO ➔ INFO (FRJ) ← 200 OK INFO **Apply post test routine**		

6.2.17 Void

6.2.18 Void

6.3 IMS Supplementary Services

6.3.1 Originating Identification Presentation (OIP) and Originating Identification Restriction (OIR)

TP number	TP_401_001	**Reference**	[1], clause 7.2.1 [2], clause 7.5.1
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.3/1 AND PICS 6.3.2/1		
Test Purpose name	INVITE received. From header not present, P-Asserted-Identity not present. Network provided number is sent		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is not present and the From header does not contain an URI that encodes an E.164 *[i.1]* Address, an INVITE with encapsulated IAM is sent. An Calling party number parameter is present and the address digits are provided by the SUT		

ISUP Parameter values	**IAM: Calling party Number**
	Number incomplete indicator=*Complete*
	Numbering Plan Indicator=*ISDN/Telephony (Recommendation E.164)*
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Screening indicator=Network Provided
	Presentation restriction=restricted or allowed
	Address signal **provided by the Network**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* then set to "CC"+" NDC"+"SN"		

SIP Parameter values	**INVITE:** P-Asserted-Identity: not present From: sip:unavailable@unknown.invalid		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM 100 Trying ← **Apply post test routine**		

TP number	TP_401_002	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.1.2.6
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.3/1 AND PICS 6.3.3/4 AND PICS 6.3.2/1		
Test Purpose name	INVITE received. From header not present, P-Asserted-Identity not present. Network provided number is sent		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is not present and the From header does not contain an URI that encodes an E.164 *[i.1]* Address, an INVITE with encapsulated IAM is sent. A Calling party number parameter is present and the address digits are provided by the SUT. The Presentation restriction indicator is set to 'presentation restricted by network'		

ISUP Parameter values	**IAM: Calling party Number**
	Number incomplete indicator=*Complete*
	Numbering Plan Indicator=*ISDN/Telephony (Recommendation E.164 [i.1])*
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Screening indicator=Network Provided
	Presentation restriction=presentation restricted by network
	Address signal **provided by the Network**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* then set to "CC"+" NDC"+"SN"		

SIP Parameter values	**INVITE:** P-Asserted-Identity: not present From: sip:unavailable@unknown.invalid		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_401_003	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.1.2.6
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	NOT PICS 6.3.3/2 AND NOT PICS6.3.3/1 AND PICS 6.3.2/1		
Test Purpose name	INVITE received. From header not present, P-Asserted-Identity not present. Address digits omitted		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is not present and the From header does not contain an URI that encodes an E.164 *[i.1]* Address, an INVITE with encapsulated IAM is sent. A Calling party number parameter is not present and a Generic number parameter is not present.		
ISUP Parameter values	**IAM: Calling party Number** not present		
SIP Parameter values	**INVITE:** P-Asserted-Identity: not present From: sip:unavailable@unknown.invalid		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_401_004	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.1.2.6
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.3/1 AND PICS 6.3.3/2 AND PICS 6.3.3/3 AND PICS 6.3.2/1		
Test Purpose name	INVITE received. From header not present, P-Asserted-Identity not present APRI is set to 'Address not available'		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is not present and the From header does not contain an URI that encodes an E.164 *[i.1]* Address, an INVITE with encapsulated IAM is sent. A Calling party number parameter is present and the address digits omitted. The Presentation restriction indicator is set to 'Address not available'		
ISUP Parameter values	**IAM: Calling party Number** Number incomplete indicator=*Complete* Numbering Plan Indicator='000' Nature of Address Indicator='0000000' Screening indicator=Network Provided Presentation restriction=Address not available Address signal Address digits not present		
SIP Parameter values	**INVITE:** P-Asserted-Identity: not present From: sip:unavailable@unknown.invalid		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	Apply post test routine		

TP number	TP_401_005	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.1.2.6
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.3/1 PICS 6.3.2/1		
Test Purpose name	INVITE received. From header present, P-Asserted-Identity not present. Network provided number is sent		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is not present and the From header contains an URI that encodes an E.164 *[i.1]* Address, an INVITE with encapsulated IAM is sent. A Calling party number parameter is present and the address digits are provided by the SUT. An Additional calling Party number is sent in a Generic number parameter and the Address signals are derived from the Userpart of the From header		

ISUP Parameter values	**IAM: Calling party Number**
	Number incomplete indicator=*Complete*
	Numbering Plan Indicator=*ISDN/Telephony (Recommendation E.164 [i.1])*
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Screening indicator=Network Provided
	Presentation restriction=restricted or allowed
	Address signal **provided by the Network**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* then set to "CC"+" NDC"+"SN"
	Additional calling party number
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Number incomplete indicator=Complete
	Numbering Plan Indicator=ISDN/Telephony (*Recommendation E.164*)
	Presentation restriction=restricted or allowed
	Screening indicator=user provided not verified
	Address digits **derived from the 'From' header**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* set to "CC"+' NDC'+'SN'		

SIP Parameter values	**INVITE:** P-Asserted-Identity: not present From: contains a URI that encodes an E.164 *[i.1]* address		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←	←	100 Trying
	Apply post test routine		

TP number	TP_401_006	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.1.2.6
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.3/1 AND PICS 6.3.3/4 AND PICS 6.3.2/1		
Test Purpose name	INVITE received. From header present, P-Asserted-Identity not present. Network provided number is sent		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is not present and the From header contains an URI that encodes an E.164 *[i.1]* Address, an INVITE with encapsulated IAM is sent. A Calling party number parameter is present and the address digits are provided by the SUT. The Presentation restriction indicator is set to 'presentation restricted by network'. An Additional calling Party number is sent in a Generic number parameter and the Address signals are derived from the Userpart of the From header and the Presentation restriction indicator is set to 'presentation allowed'		

ISUP Parameter values	**IAM: Calling party Number**
	Number incomplete indicator=*Complete*
	Numbering Plan Indicator=*ISDN/Telephony (Recommendation E.164)*
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Screening indicator=Network Provided
	Presentation restriction=presentation restricted by network
	Address signal **provided by the Network**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* then set to "CC"+" NDC"+"SN"
	Additional calling party number
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Number incomplete indicator=Complete
	Numbering Plan Indicator=ISDN/Telephony (*Recommendation E.164*)
	Presentation restriction=allowed
	Screening indicator=user provided not verified
	Address digits **derived from the 'From' header**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is "*international number"* set to "CC"+' NDC'+'SN'		

SIP Parameter values	**INVITE:** P-Asserted-Identity: not present From: contains a URI that encodes an E.164 *[i.1]* address		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_401_007	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.1.2.6
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	NOT PICS 6.3.3/1 AND PICS 6.3.3/2 AND PICS 6.3.3/3 AND PICS 6.3.2/1		
Test Purpose name	INVITE received. From header present, P-Asserted-Identity not present. Address digits omitted		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is not present and the From header does not contain an URI that encodes an E.164 *[i.1]* Address, an INVITE with encapsulated IAM is sent. A Calling party number parameter is present and the address digits omitted. An Additional calling Party number is sent in a Generic number parameter and the Address signals are derived from the Userpart of the From header		
ISUP Parameter values	**IAM: Calling party Number** Number incomplete indicator=*Complete* Numbering Plan Indicator='000' Nature of Address Indicator='0000000' Screening indicator=Network Provided Presentation restriction= Address not available Address signal Address **digits not present** **Additional calling party number** Nature of Address Indicator If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then *national (significant) number* else *international number* Number incomplete indicator=Complete Numbering Plan Indicator=ISDN/Telephony (*Recommendation E.164*) Presentation restriction=restricted or allowed Screening indicator=user provided not verified Address digits **derived from the 'From' header** if NOA is *"national (significant) number"* then set to "NDC" + "SN" If NOA is "*international number"* set to "CC"+' NDC'+'SN'		
SIP Parameter values	**INVITE:** P-Asserted-Identity: not present From: contains a URI that encodes an E.164 *[i.1]* address		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_401_008	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.1.2.6
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	NOT PICS 6.3.3/1 AND NOT PICS 6.3.3/2 AND PICS 6.3.3/5 AND PICS 6.3.2/1		
Test Purpose name	INVITE received. From header present, P-Asserted-Identity not present. Address digits omitted		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is not present and the From header does not contain an URI that encodes an E.164 *[i.1]* Address, an INVITE with encapsulated IAM is sent. A Calling party number parameter is present and the address digits omitted. In addition, the Additional calling party number is omitted.		
ISUP Parameter values	**IAM: Calling party Number** not present **Additional calling party number** not present		
SIP Parameter values	**INVITE:** P-Asserted-Identity: not present From: contains a URI that encodes an E.164 *[i.1]* address		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_401_009	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.1.2.6
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.2/1		
Test Purpose name	INVITE received. From header not present, P-Asserted-Identity present Privacy not present		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is present and the From header does not contain an URI that encodes an E.164 *[i.1]* Address a Privacy header is not present, an INVITE with encapsulated IAM is sent. A Calling party number parameter is present and the address digits are derived from the P-Asserted-Identity header		

ISUP Parameter values	**IAM: Calling party Number**
	Number incomplete indicator=*Complete*
	Numbering Plan Indicator=*ISDN/Telephony (Recommendation E.164)*
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Screening indicator=Network Provided
	Presentation restriction=allowed
	Address signal **derived from the P-Asserted-Identity**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* then set to "CC"+" NDC"+"SN"		

SIP Parameter values	**INVITE:** P-Asserted-Identity: present From: sip:unavailable@unknown.invalid Privacy not present		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_401_010	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.1.2.6
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.2/1		
Test Purpose name	INVITE received. From header not present, P-Asserted-Identity present, Privacy value 'none'		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is present and the From header does not contain an URI that encodes an E.164 *[i.1]* Address and a Privacy header is present set to 'none', an INVITE with encapsulated IAM is sent. A Calling party number parameter is present and the address digits are derived from the P-Asserted-Identity header. The Presentation restriction is set to 'presentation 'allowed'		

ISUP Parameter values	**IAM: Calling party Number**
	Number incomplete indicator=*Complete*
	Numbering Plan Indicator=*ISDN/Telephony (Recommendation E.164 [i.1])*
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Screening indicator=Network Provided
	Presentation restriction=allowed
	Address signal **derived from the P-Asserted-Identity**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* then set to "CC"+" NDC"+"SN"		

SIP Parameter values	**INVITE:** P-Asserted-Identity: present From: sip:unavailable@unknown.invalid Privacy: none		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_401_011	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.1.2.6
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.2/1		
Test Purpose name	INVITE received. From header not present, P-Asserted-Identity present, Privacy value 'id'		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is present and the From header does not contain an URI that encodes an E.164 *[i.1]* Address and a Privacy header is present set to 'id', an INVITE with encapsulated IAM is sent. A Calling party number parameter is present and the address digits are derived from the P-Asserted-Identity header. The Presentation restriction is set to 'presentation 'restricted'		

ISUP Parameter values	**IAM: Calling party Number**
	Number incomplete indicator=*Complete*
	Numbering Plan Indicator=*ISDN/Telephony (Recommendation E.164 [i.1])*
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Screening indicator=Network Provided
	Presentation restriction=restricted
	Address signal **derived from the P-Asserted-Identity**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* then set to "CC"+" NDC"+"SN"		

SIP Parameter values	**INVITE:** P-Asserted-Identity: present From: sip:unavailable@unknown.invalid Privacy: id		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_401_012	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.1.2.6
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.2/1		
Test Purpose name	INVITE received. From header not present, P-Asserted-Identity present, Privacy value 'user'		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is present and the From header does not contain an URI that encodes an E.164 *[i.1]* Address and a Privacy header is present set to 'user', an INVITE with encapsulated IAM is sent. A Calling party number parameter is present and the address digits are derived from the P-Asserted-Identity header. The Presentation restriction is set to 'presentation 'restricted'		

ISUP Parameter values	**IAM: Calling party Number**
	Number incomplete indicator=*Complete*
	Numbering Plan Indicator=*ISDN/Telephony (Recommendation E.164 [i.1])*
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Screening indicator=Network Provided
	Presentation restriction=restricted
	Address signal **derived from the P-Asserted-Identity**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* then set to "CC"+" NDC"+"SN"		

SIP Parameter values	**INVITE:** P-Asserted-Identity: present From: sip:unavailable@unknown.invalid Privacy: user		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_401_013	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.1.2.6
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.2/1		
Test Purpose name	INVITE received. From header not present, P-Asserted-Identity present, Privacy value 'header'		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is present and the From header does not contain an URI that encodes an E.164 *[i.1]* Address and a Privacy header is present set to 'header', an INVITE with encapsulated IAM is sent. A Calling party number parameter is present and the address digits are derived from the P-Asserted-Identity header. The Presentation restriction is set to 'presentation 'restricted'		

ISUP Parameter values	**IAM: Calling party Number**
	Number incomplete indicator=*Complete*
	Numbering Plan Indicator=*ISDN/Telephony (Recommendation E.164 [i.1])*
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Screening indicator=Network Provided
	Presentation restriction=restricted
	Address signal **derived from the P-Asserted-Identity**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* then set to "CC"+" NDC"+"SN"		

SIP Parameter values	**INVITE:** P-Asserted-Identity: present From: sip:unavailable@unknown.invalid Privacy: header		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_401_014	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.1.2.6
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	NOT PICS 6.3.3/6 AND PICS 6.3.2/1		
Test Purpose name	INVITE received. From header present, P-Asserted-Identity present. Privacy header not present, additional calling party number not omitted		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is present and the From header contains an URI that encodes an E.164 *[i.1]* Address a Privacy header is not present, an INVITE with encapsulated IAM is sent. A Calling party number parameter is present and the address digits are derived from the P-Asserted-Identity header the Presentation restriction indicator is set to 'presentation allowed'. An Additional calling Party number is sent in a Generic number parameter and the Address signals are derived from the Userpart of the From header the Presentation restriction indicator is set to 'presentation allowed'.		

ISUP Parameter values	**IAM: Calling party Number**
	Number incomplete indicator=*Complete*
	Numbering Plan Indicator=*ISDN/Telephony (Recommendation E.164 [i.1])*
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Screening indicator=Network Provided
	Presentation restriction=allowed
	Address signal **derived from the P-Asserted-Identity**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* then set to "CC"+" NDC"+"SN"
	Additional calling party number
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Number incomplete indicator=Complete
	Numbering Plan Indicator=ISDN/Telephony (*Recommendation E.164*)
	Presentation restriction=allowed
	Screening indicator=user provided not verified
	Address digits **derived from the 'From' header**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* set to "CC"+' NDC'+'SN'		

SIP Parameter values	**INVITE:** P-Asserted-Identity: present From: contains a URI that encodes an E.164 *[i.1]* address Privacy not present		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_401_015	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.1.2.6
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	NOT PICS 6.3.3/6 AND PICS 6.3.2/1		
Test Purpose name	INVITE received. From header present, P-Asserted-Identity present. Privacy header 'none', additional calling party number not omitted		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is present and the From header contains an URI that encodes an E.164 *[i.1]* Address, an INVITE with encapsulated IAM is sent with Privacy header is present set to 'none', A Calling party number parameter is present and the address digits are derived from the P-Asserted-Identity header the Presentation restriction indicator is set to 'presentation allowed'. An Additional calling Party number is sent in a Generic number parameter and the Address signals are derived from the Userpart of the From header the Presentation restriction indicator is set to 'presentation allowed'.		

ISUP Parameter values	**IAM: Calling party Number**
	Number incomplete indicator=*Complete*
	Numbering Plan Indicator=*ISDN/Telephony (Recommendation E.164 [i.1])*
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Screening indicator=Network Provided
	Presentation restriction=allowed
	Address signal **derived from the P-Asserted-Identity**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* then set to "CC"+" NDC"+"SN"
	Additional calling party number
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Number incomplete indicator=Complete
	Numbering Plan Indicator=ISDN/Telephony (*Recommendation E.164 [i.1]*)
	Presentation restriction=allowed
	Screening indicator=user provided not verified
	Address digits **derived from the 'From' header**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* set to "CC"+' NDC'+'SN'		

SIP Parameter values	**INVITE:** P-Asserted-Identity: present From: contains a URI that encodes an E.164 address Privacy: none		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_401_016	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.1.2.6
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	NOT PICS 6.3.3/6 AND PICS 6.3.2/1		
Test Purpose name	INVITE received. From header present, P-Asserted-Identity present. Privacy header 'id', additional calling party number not omitted		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is present and the From header contains an URI that encodes an E.164 *[i.1]* Address, an INVITE with encapsulated IAM is sent with Privacy header is present set to 'id', A Calling party number parameter is present and the address digits are derived from the P-Asserted-Identity header the Presentation restriction indicator is set to 'presentation restricted'. An Additional calling Party number is sent in a Generic number parameter and the Address signals are derived from the Userpart of the From header the Presentation restriction indicator is set to 'presentation restricted'.		

ISUP Parameter values	**IAM: Calling party Number**
	Number incomplete indicator=*Complete*
	Numbering Plan Indicator=*ISDN/Telephony (Recommendation E.164 [i.1])*
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Screening indicator=Network Provided
	Presentation restriction=restricted
	Address signal **derived from the P-Asserted-Identity**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* then set to "CC"+" NDC"+"SN"
	Additional calling party number
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Number incomplete indicator=Complete
	Numbering Plan Indicator=ISDN/Telephony (*Recommendation E.164*)
	Presentation restriction=restricted
	Screening indicator=user provided not verified
	Address digits **derived from the 'From' header**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* set to "CC"+' NDC'+'SN'		

SIP Parameter values	**INVITE:** P-Asserted-Identity: present From: contains a URI that encodes an E.164 *[i.1]* address Privacy: id		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_401_017	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.1.2.6
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	NOT PICS 6.3.3/6 AND PICS 6.3.2/1		
Test Purpose name	INVITE received. From header present, P-Asserted-Identity present. Privacy header 'user', additional calling party number not omitted		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is present and the From header contains an URI that encodes an E.164 *[i.1]* Address, an INVITE with encapsulated IAM is sent with Privacy header is present set to 'user', A Calling party number parameter is present and the address digits are derived from the P-Asserted-Identity header the Presentation restriction indicator is set to 'presentation restricted'. An Additional calling Party number is sent in a Generic number parameter and the Address signals are derived from the Userpart of the From header the Presentation restriction indicator is set to 'presentation restricted'		

ISUP Parameter values	**IAM: Calling party Number**
	Number incomplete indicator=*Complete*
	Numbering Plan Indicator=*ISDN/Telephony (Recommendation E.164 [i.1])*
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Screening indicator=Network Provided
	Presentation restriction=restricted
	Address signal **derived from the P-Asserted-Identity**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* then set to "CC"+" NDC"+"SN"
	Additional calling party number
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Number incomplete indicator=Complete
	Numbering Plan Indicator=ISDN/Telephony (*Recommendation E.164*)
	Presentation restriction=restricted
	Screening indicator=user provided not verified
	Address digits **derived from the 'From' header**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* set to "CC"+' NDC'+'SN'		

SIP Parameter values	**INVITE:** P-Asserted-Identity: present From: contains a URI that encodes an E.164 *[i.1]* address Privacy: user		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_401_018	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.1.2.6
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	NOT PICS 6.3.3/6 AND PICS 6.3.2/1		
Test Purpose name	INVITE received. From header present, P-Asserted-Identity present. Privacy header 'header', additional calling party number not omitted		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is present and the From header contains an URI that encodes an E.164 *[i.1]* Address, an INVITE with encapsulated IAM is sent Privacy header is present set to 'header', A Calling party number parameter is present and the address digits are derived from the P-Asserted-Identity header the Presentation restriction indicator is set to 'presentation restricted'. An Additional calling Party number is sent in a Generic number parameter and the Address signals are derived from the Userpart of the From header the Presentation restriction indicator is set to 'presentation restricted'		

ISUP Parameter values	**IAM: Calling party Number**
	Number incomplete indicator=*Complete*
	Numbering Plan Indicator=*ISDN/Telephony (Recommendation E.164 [i.1])*
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Screening indicator=Network Provided
	Presentation restriction=restricted
	Address signal **derived from the P-Asserted-Identity**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* then set to "CC"+" NDC"+"SN"
	Additional calling party number
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Number incomplete indicator=Complete
	Numbering Plan Indicator=ISDN/Telephony (*Recommendation E.164*)
	Presentation restriction=restricted
	Screening indicator=user provided not verified
	Address digits **derived from the 'From' header**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* set to "CC"+' NDC'+'SN'		

SIP Parameter values	**INVITE:** P-Asserted-Identity: present From: contains a URI that encodes an E.164 *[i.1]* address Privacy: header		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_401_019	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.1.2.6
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.3/6 AND PICS 6.3.2/1		
Test Purpose name	INVITE received. From header present, P-Asserted-Identity present. Privacy header not present, additional calling party number omitted		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is present and the From header contains an URI that encodes an E.164 *[i.1]* Address a Privacy header is not present, an INVITE with encapsulated IAM is sent. A Calling party number parameter is present and the address digits are derived from the P-Asserted-Identity header the Presentation restriction indicator is set to 'presentation allowed'. An Additional calling Party number parameter is not present		

ISUP Parameter values	**IAM: Calling party Number**
	Number incomplete indicator=*Complete*
	Numbering Plan Indicator=*ISDN/Telephony (Recommendation E.164 [i.1])*
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Screening indicator=Network Provided
	Presentation restriction=allowed
	Address signal **derived from the P-Asserted-Identity**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* then set to "CC"+" NDC"+"SN"		

SIP Parameter values	**INVITE:** P-Asserted-Identity: present From: contains a URI that encodes an E.164 *[i.1]* address Privacy not present		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → (INVITE) IAM 100 Trying ← **Apply post test routine**		

TP number	TP_401_020	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.1.2.6
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.3/6 AND PICS 6.3.2/1		
Test Purpose name	INVITE received. From header present, P-Asserted-Identity present. Privacy header 'none', additional calling party number omitted		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is present and the From header contains an URI that encodes an E.164 *[i.1]* Address a Privacy header is set to 'none', an INVITE with encapsulated IAM is sent. A Calling party number parameter is present and the address digits are derived from the P-Asserted-Identity header the Presentation restriction indicator is set to 'presentation allowed'. An Additional calling Party number parameter is not present		

ISUP Parameter values	**IAM: Calling party Number**
	Number incomplete indicator=*Complete*
	Numbering Plan Indicator=*ISDN/Telephony (Recommendation E.164 [i.1])*
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Screening indicator=Network Provided
	Presentation restriction=allowed
	Address signal **derived from the P-Asserted-Identity**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* then set to "CC"+" NDC"+"SN"		

SIP Parameter values	**INVITE:** P-Asserted-Identity: present From: contains a URI that encodes an E.164 *[i.1]* address Privacy: none		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_401_021	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.1.2.6
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.3/6 AND PICS 6.3.2/1		
Test Purpose name	INVITE received. From header present, P-Asserted-Identity present. Privacy header 'id', additional calling party number omitted		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is present and the From header contains an URI that encodes an E.164 *[i.1]* Address a Privacy header is set to 'id', an INVITE with encapsulated IAM is sent. A Calling party number parameter is present and the address digits are derived from the P-Asserted-Identity header the Presentation restriction indicator is set to 'presentation restricted'. An Additional calling Party number parameter is not present		

ISUP Parameter values	**IAM: Calling party Number**
	Number incomplete indicator=*Complete*
	Numbering Plan Indicator=*ISDN/Telephony (Recommendation E.164[i.1])*
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Screening indicator=Network Provided
	Presentation restriction=restricted
	Address signal **derived from the P-Asserted-Identity**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* then set to "CC"+" NDC"+"SN"		

SIP Parameter values	**INVITE:** P-Asserted-Identity: present From: contains a URI that encodes an E.164 *[i.1]* address Privacy: id		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → IAM 100 Trying ← **Apply post test routine**		

TP number	TP_401_022	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.1.2.6
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.3/6 AND PICS 6.3.2/1		
Test Purpose name	INVITE received. From header present, P-Asserted-Identity present. Privacy header 'user', additional calling party number omitted		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is present and the From header contains an URI that encodes an E.164 *[i.1]* Address a Privacy header is set to 'user', an INVITE with encapsulated IAM is sent. A Calling party number parameter is present and the address digits are derived from the P-Asserted-Identity header the Presentation restriction indicator is set to 'presentation restricted'. An Additional calling Party number parameter is not present		

ISUP Parameter values	**IAM: Calling party Number**
	Number incomplete indicator=*Complete*
	Numbering Plan Indicator=*ISDN/Telephony (Recommendation E.164 [i.1])*
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Screening indicator=Network Provided
	Presentation restriction=restricted
	Address signal **derived from the P-Asserted-Identity**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* then set to "CC"+" NDC"+"SN"		

SIP Parameter values	**INVITE:** P-Asserted-Identity: present From: contains a URI that encodes an E.164 *[i.1]* address Privacy: user		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_401_023	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.1.2.6
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.3/6 AND PICS 6.3.2/1		
Test Purpose name	INVITE received. From header present, P-Asserted-Identity present. Privacy header 'header', additional calling party number omitted		
Test Purpose	Ensure that on receipt of an INVITE request the P-Asserted-Identity is present and the From header contains an URI that encodes an E.164 *[i.1]* Address a Privacy header is set to 'header', an INVITE with encapsulated IAM is sent. A Calling party number parameter is present and the address digits are derived from the P-Asserted-Identity header the Presentation restriction indicator is set to 'presentation restricted'. An Additional calling Party number parameter is not present		

ISUP Parameter values	**IAM: Calling party Number**
	Number incomplete indicator=*Complete*
	Numbering Plan Indicator=*ISDN/Telephony (Recommendation E.164 [i.1])*
	Nature of Address Indicator
	If CC encoded in the URI is equal to the CC of the country where MGCF is located AND the next BICC/ISUP node is located in the same country then
	national (significant) number
	else
	international number
	Screening indicator=Network Provided
	Presentation restriction=restricted
	Address signal **derived from the P-Asserted-Identity**
	if NOA is *"national (significant) number"* then set to "NDC" + "SN"
	If NOA is *"international number"* then set to "CC"+" NDC"+"SN"		

SIP Parameter values	**INVITE:** P-Asserted-Identity: present From: contains a URI that encodes an E.164 *[i.1]* address Privacy: header		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_401_024	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.1, 7.2.3.2.2.3
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.2/1		
Test Purpose name	Calling party number not received, Additional calling party number not received, unavailable From header is sent		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and no Calling party number and no Additional calling party number is present, an INVITE is sent. A P-Asserted-Identity is not present and the URI of the From header is set to 'sip:unavailable@unknown.invalid'		
ISUP Parameter values	**IAM:** Calling party number not present Generic number (Additional calling party number) not present		
SIP Parameter values	**INVITE:** From: sip:unavailable@unknown.invalid P-Asserted-Identity not present		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_401_025	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.1, 7.2.3.2.2.3
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.2/1		
Test Purpose name	Calling party number not received, Additional calling party number received presentation allowed, From header containing a E.164 *[i.1]* URI is sent		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and no Calling party number is present and an Additional calling party number is present, an INVITE is sent. A P-Asserted-Identity is not present and the URI of the From header is derived from the additional calling party number or is network provided		
ISUP Parameter values	**IAM:** Calling party number not present Generic number (Additional calling party number) present presentation allowed		
SIP Parameter values	**INVITE:** From: derived from the additional calling party number or network provided P-Asserted-Identity not present		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_401_026	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.1, 7.2.3.2.2.3
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.2/1		
Test Purpose name	Calling party number not received, Additional calling party number received presentation restricted, unavailable From header is sent		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and no Calling party number and an Additional calling party number is present the Presentation restriction indicator is set to 'presentation restricted', an INVITE is sent. A P-Asserted-Identity is not present and the URI of the From header is set to 'sip:unavailable@unknown.invalid'		
ISUP Parameter values	**IAM:** Calling party number not present Generic number (Additional calling party number) present presentation restricted		
SIP Parameter values	**INVITE:** From: sip:unavailable@unknown.invalid P-Asserted-Identity not present		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_401_027	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.1, 7.2.3.2.2.3
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.2/1		
Test Purpose name	Calling party number received presentation allowed, Additional calling party number not received, P-Asserted-Identity header and From header are sent		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and a Calling party number Presentation restriction indicator is set to 'presentation allowed' and an Additional calling party number is not present, an INVITE is sent. A P-Asserted-Identity is present the URI is derived from the address signals of the calling party number and the URI of the From header is derived from the address signals of the calling party number. A Privacy header is not present or if present the value is not equal to 'id'		
ISUP Parameter values	**IAM:** Calling party number present presentation allowed Generic number (Additional calling party number) not present		
SIP Parameter values	**INVITE:** From derived from the calling party number P-Asserted-Identity derived from the calling party number Privacy not 'id' or Privacy header not present		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_401_028	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.1, 7.2.3.2.2.3
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.2/1		
Test Purpose name	Calling party number received presentation allowed, Additional calling party number received presentation allowed, P-Asserted-Identity header and From header are sent		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and a Calling party number Presentation restriction indicator is set to 'presentation allowed' and an Additional calling party number is present the Presentation restriction indicator is set to 'presentation allowed', an INVITE is sent. A P-Asserted-Identity is present the URI is derived from the address signals of the calling party number and the URI of the From header is derived from the address signals of the additional calling party number. A Privacy header is not present or if present the value is not equal to 'id'		
ISUP Parameter values	**IAM:** Calling party number present presentation allowed Generic number (Additional calling party number) present presentation allowed		
SIP Parameter values	**INVITE:** From derived from the additional calling party number P-Asserted-Identity derived from the calling party number Privacy not 'id' or Privacy header not present		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_401_029	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.1, 7.2.3.2.2.3
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.2/1		
Test Purpose name	Calling party number received presentation allowed, Additional calling party number received presentation restricted, P-Asserted-Identity header and From header are sent		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and a Calling party number Presentation restriction indicator is set to 'presentation allowed' and an Additional calling party number is present the Presentation restriction indicator is set to 'presentation restricted', an INVITE is sent. A P-Asserted-Identity is present the URI is derived from the address signals of the calling party number and the URI of the From header is derived from the address signals of the calling party number. A Privacy header is not present or if present the value is not equal to 'id'		
ISUP Parameter values	**IAM:** Calling party number present presentation allowed Generic number (Additional calling party number) present presentation restricted		
SIP Parameter values	**INVITE:** From derived from the calling party number P-Asserted-Identity derived from the calling party number Privacy not 'id' or Privacy header not present		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_401_030	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.1, 7.2.3.2.2.3
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.2/1		
Test Purpose name	Calling party number received presentation restricted, Additional calling party number not received, P-Asserted-Identity header and From header are sent		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and a Calling party number Presentation restriction indicator is set to 'presentation restricted' and an Additional calling party number is not present, an INVITE is sent. A P-Asserted-Identity is present the URI is derived from the address signals of the calling party number and the URI of the From header is ser to 'sip:anonymous@anonymous.invalid'. A Privacy header is present the value is equal to 'id'		
ISUP Parameter values	**IAM:** Calling party number present presentation restricted Generic number (Additional calling party number) not present		
SIP Parameter values	**INVITE:** From: sip:anonymous@anonymous.invalid P-Asserted-Identity derived from the calling party number Privacy: 'id'		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_401_031	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.1, 7.2.3.2.2.3
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.2/1		
Test Purpose name	Calling party number received presentation restricted, Additional calling party number received presentation allowed, P-Asserted-Identity header and From header are sent		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and a Calling party number Presentation restriction indicator is set to 'presentation restricted' and an Additional calling party number is present the Presentation restriction indicator is set to 'presentation allowed', an INVITE is sent. A P-Asserted-Identity is present the URI is derived from the address signals of the calling party number and the URI of the From header is derived from the address signals of the additional calling party number. A Privacy header is present the value is equal to 'id'		
ISUP Parameter values	**IAM:** Calling party number present presentation restricted Generic number (Additional calling party number) present presentation allowed		
SIP Parameter values	**INVITE:** From derived from the additional calling party number P-Asserted-Identity derived from the calling party number Privacy: 'id'		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_401_032	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.1, 7.2.3.2.2.3
TSS reference	IMS-SS/OIP-OIR/		
Selection criteria	PICS 6.3.2/1		
Test Purpose name	Calling party number received presentation restricted, Additional calling party number received presentation restricted, P-Asserted-Identity header and From header are sent		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and a Calling party number Presentation restriction indicator is set to 'presentation restricted' and an Additional calling party number is present the Presentation restriction indicator is set to 'presentation restricted', an INVITE is sent. A P-Asserted-Identity is present the URI is derived from the address signals of the calling party number and the URI of the From header is set to the value 'sip:anonymous@anonymous.invalid'. A Privacy header is present the value is equal to 'id'		
ISUP Parameter values	**IAM:** Calling party number present presentation restricted Generic number (Additional calling party number) present presentation restricted		
SIP Parameter values	**INVITE:** From: sip:anonymous@anonymous.invalid P-Asserted-Identity derived from the calling party number Privacy: 'id'		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

6.3.2 Terminating Identification Presentation (TIP) and Terminating Identification Restriction (TIR)

TP number	TP_402_001	**Reference**	[1], clause 7.3.1 [2], clause 7.5.2
TSS reference	IMS-SS/TIP-TIR/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/2		
Test Purpose name	INVITE is sent the supported header contains the option tag 'from-change'		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and the Connected Line Identity Request indicator in the Optional Forward Call Indicators parameter is set to 'requested', an INVITE is sent and the Supported header contains the option tag 'from-change'		
ISUP Parameter values	**IAM:** Optional Forward Call Indicators Connected Line Identity Request = requested		
SIP Parameter values	**INVITE:** Supported: from-change **INVITE (IAM):** from-change tag **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_402_002	**Reference**	[1], clause 7.3.1 [2], clause 7.5.2
TSS reference	IMS-SS/TIP-TIR/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/2		
Test Purpose name	'from-change' tag not included in a received provisional response		
Test Purpose	Ensure that on receipt of a provisional response and the 'from-change' tag is not included the 200 OK INVITE with encapsulated ANM is sent as soon as the 200 OK (INVITE) is received		
ISUP Parameter values	**IAM:** Optional Forward Call Indicators Connected Line Identity Request = requested		
SIP Parameter values	**INVITE:** Supported: from-change **180**: from-change tag not included in the Supported header **INVITE (IAM) / 180 :** from-change tag **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 180 Ringing (ACM) ← ← 180 Ringing 200 OK (INVITE) ← ← 200 OK (INVITE) (ANM) ACK → → ACK **Apply post test routine**		

TP number	TP_402_003	Reference	[1], clause 7.3.1 [2], clause 7.5.2
TSS reference	IMS-SS/TIP-TIR/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/2		
Test Purpose name	'from-change' tag not included in a received final response		
Test Purpose	Ensure that on receipt of a final successful response and the 'from-change' tag is not included the 200 OK INVITE with encapsulated ANM is sent		
ISUP Parameter values	**IAM:** Optional Forward Call Indicators Connected Line Identity Request = requested		
SIP Parameter values	**INVITE:** Supported: from-change 200: from-change tag not included in the Supported header **INVITE (IAM) / 200:** from-change tag **not present**		
Comments			

Message flows

SIP-I		MGCF		SIP NNI
INVITE (IAM)	→		→	INVITE
180 Ringing (ACM)	←		←	180 Ringing
200 OK INVITE (ANM)	←		←	200 OK (INVITE)
ACK	→		→	ACK

Apply post test routine

TP number	TP_402_004	Reference	[1], clause 7.3.1 [2], clause 7.5.2
TSS reference	IMS-SS/TIP-TIR/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/2		
Test Purpose name	'from-change' tag included in a received provisional response		
Test Purpose	Ensure that on receipt of a provisional response and the 'from-change' tag is included the timer T_{TIR1} is started. The 200 OK INVITE with encapsulated ANM is sent as soon as the UPDATE request is received and a Generic number with a Number qualifier indicator set to 'additional connected number' is present. The additional connected number is coded as follows: Nature of Address Indicator If CC is equal to the country code of the country where SUT is located AND the next ISUP node is located in the same country, then set to *"national (significant) number"* else set to "*international number*" Number Incomplete Indicator = complete Numbering Plan Indicator = *ISDN (Telephony) numbering plan (Recommendation E.164)* Address Presentation Restricted Indicator = **Privacy_VA** as indicate in table 6.3.2-1 Screening Indicator = user provided, not verified Address Signals If NOA is *"national (significant) number"* then set to **NDC + SN**. If NOA is *"international number"* then set to **CC + NDC + SN** In addition a Connected number is present the address signal are derived from the P-Asserted-Identity in UPDATE request		
ISUP Parameter values	**IAM:** Optional Forward Call Indicators Connected Line Identity Request = requested **ANM:** Connected number Generic number - additional connected number		
SIP Parameter values	**INVITE:** Supported: from-change 180: from-change tag included in the Supported header **INVITE (IAM) / 180:** from-change tag **not present**		
Comments			

Message flows

SIP-I		MGCF		SIP NNI
INVITE (IAM)	→		→	INVITE
180 Ringing (ACM)	←		←	180 Ringing
		T_{TIR1} started	←	200 OK (INVITE)
			→	ACK
200 OK INVITE (ANM)	←		←	UPDATE
ACK	→		→	200 OK (UPDATE)

Apply post test routine

TP number	TP_402_005	**Reference**	[1], clause 7.3.1 [2], clause 7.5.2
TSS reference	IMS-SS/TIP-TIR/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/2		
Test Purpose name	'from-change' tag included in a received final response		
Test Purpose	Ensure that on receipt of a final successful response and the 'from-change' tag is included the timer T_{TIR1} is started. The 200 OK IVITE with encapsulated ANM is sent as soon as the UPDATE request is received and a Generic number with a Number qualifier indicator set to 'additional connected number' is present. The additional connected number is coded as follows: Nature of Address Indicator If CC is equal to the country code of the country where SUT is located AND the next ISUP node is located in the same country, then set to *"national (significant) number"* else set to *"international number"* Number Incomplete Indicator = complete Numbering Plan Indicator = *ISDN (Telephony) numbering plan (Recommendation E.164)* Address Presentation Restricted Indicator = **Privacy_VA** as indicate in table 6.3.2-1 Screening Indicator = user provided, not verified Address Signals If NOA is *"national (significant) number"* then set to **NDC + SN**. If NOA is *"international number"* then set to **CC + NDC + SN** In addition a Connected number is present the address signal are derived from the P-Asserted-Identity in UPDATE request		
ISUP Parameter values	**IAM:** Optional Forward Call Indicators Connected Line Identity Request = requested **ANM:** Connected number Generic number - additional connected number		
SIP Parameter values	**INVITE:** Supported: from-change 200: from-change tag included in the Supported header **INVITE (IAM) / 200:** from-change tag **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 180 Ringing (ACM) ← ← 180 Ringing T_{TIR1} started ← 200 OK (INVITE) → ACK 200 OK INVITE (ANM) ← ← UPDATE ACK → → 200 OK (UPDATE) **Apply post test routine**		

Table 6.3.2-1: Mapping of Privacy value into Address presentation restriction indicator

Privacy_VA	Privacy value	Address Presentation Restricted Indicator
Privacy_VA_01	Header	Presentation restricted
Privacy_VA_02	User	Presentation restricted
Privacy_VA_03	None	Presentation allowed
Privacy_VA_04	Id	Presentation restricted
Privacy_VA_05	Privacy header not present	Presentation allowed

TP number	TP_402_006	**Reference**	[1], clause 7.3.1 [2], clause 7.5.2
TSS reference	IMS-SS/TIP-TIR/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/2		
Test Purpose name	Timer T_{TIR1} expires		
Test Purpose	Ensure that on receipt of a 200 OK (INVITE) and the 'from-change' tag is present in the Supported header the timer T_{TIR1} is started. After expiry of T_{TIR1} the 200 OK INVITE with encapsulated ANM is sent		
ISUP Parameter values	**IAM:** Optional Forward Call Indicators Connected Line Identity Request = requested **ANM:** Connected number		
SIP Parameter values	**INVITE:** Supported: from-change 200: from-change tag included in the Supported header **INVITE (IAM) / 200:** from-change tag **not present**		
Comments			

Message flows

SIP-I		**MGCF**		**SIP NNI**
INVITE (IAM)	→		→	INVITE
180 Ringing (ACM)	←		←	180 Ringing
		T_{TIR1} started	←	200 OK (INVITE)
			→	ACK
200 OK INVITE (ANM)	←	T_{TIR1} expired		
ACK	→			
Apply post test routine				

TP number	TP_402_007	**Reference**	[1], clause 7.2.1 [2], clause 7.5.2
TSS reference	IMS-SS/TIP-TIR/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/2		
Test Purpose name	Interworking of SIP Supported header into Optional forward call indicator		
Test Purpose	Ensure that on receipt of an INVITE request and the Supported header contains the 'from-change' tag, an INVITE with encapsulated IAM is sent. The Connected Line Identity Request indicator in the Optional Forward Call Indicators parameter is set to 'requested'		
ISUP Parameter values	**IAM:** Optional Forward Call Indicators Connected Line Identity Request = requested		
SIP Parameter values	**INVITE:** Supported: from-change **INVITE (IAM):** from-change tag **not present**		
Comments			

Message flows

SIP NNI		**MGCF**		**SIP-I**
INVITE	→		→	INVITE (IAM)
100 Trying	←			
Apply post test routine				

TP number	TP_402_008	**Reference**	[1], clause 7.2.1 [2], clause 7.5.2
TSS reference	IMS-SS/TIP-TIR/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/2		
Test Purpose name	Mapping of Additional connected number presentation allowed into the From header in an UPDATE request.		
Test Purpose	Ensure that on receipt of a 200 OK INVITE with encapsulated ANM and a Generic number additional connected number is present, a 200 OK (INVITE) is sent and the P-Asserted-Identity copied from the P-Called-Party-ID header and the 'from-change' tag in the Supported header is present. The 200 OK (INVITE) is followed by an UPDATE request, containing the 'additional connected number' received in the 200 OK INVITE with encapsulated ANM copied into the From header as described below **Generic number** Nature of Address Indicator *"national (significant) number"* Add "+" CC (of the country where the IWU is located) to Generic Number Address Signals then map to user portion of URI scheme used *"international number"* Map complete Generic Number Address Signals used prefixed with a "+" to user portion of URI scheme used Address Presentation restriction indicator presentation allowed then no Privacy header present or not "*header*" or not "*user*" Address Signals: "+" CC NDC SN mapped to user portion of URI scheme used The P-Asserted-Identity is derived from the Connected number as follows **Connected number** Nature of Address Indicator *"national (significant) number"* Add "+" CC (of the country where the IWU is located) to Connected Number Address Signals then map to user portion of URI scheme used *"international number"* Map complete Connected Number Address Signals used prefixed with a "+" to user portion of URI scheme used Address Presentation restriction indicator presentation allowed then no Privacy header present or not "*header*" or not "*user*" Address Signals: "+" CC NDC SN mapped to user portion of URI scheme used		
ISUP Parameter values	**IAM:** Optional forward call indicator Connected Line Identity Request = requested **ANM:** Generic number additional connected number Address Presentation restriction indicator = presentation allowed		
SIP Parameter values	**INVITE:** Supported: from-change 200 OK: P-Asserted-Identity Supported: from-change UPDATE: From: <derived from the additional connected number> **INVITE (IAM) / 200:** from-change tag **not present**		
Comments			

Message flows

SIP NNI		MGCF		SIP-I
INVITE	→		→	INVITE (IAM)
180 Ringing	←		←	180 Ringing (ACM)
200 OK (INVITE)	←		←	200 OK INVITE (ANM)
			→	ACK
UPDATE	←			
200 OK (UPDATE)	→			

Apply post test routine

TP number	TP_402_009	**Reference**	[1], clause 7.2.1 [2], clause 7.5.2
TSS reference	IMS-SS/TIP-TIR/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/2		
Test Purpose name	Mapping of Additional connected number presentation restricted into the From header in an UPDATE request		
Test Purpose	Ensure that on receipt of a 200 OK INVITE with encapsulated ANM and a Generic number additional connected number is present, a 200 OK (INVITE) is sent and the P-Asserted-Identity copied from the P-Called-Party-ID header and the 'from-change' tag in the Supported header is present. The 200 OK (INVITE) is followed by an UPDATE request, containing the 'additional connected number' received in the ANM copied into the **From header** as described below **Generic number** Nature of Address Indicator *"national (significant) number"* Add "+" CC (of the country where the IWU is located) to Generic Number Address Signals then map to user portion of URI scheme used *"international number"* Map complete Generic Number Address Signals used prefixed with a "+" to user portion of URI scheme used Address Presentation restriction indicator presentation restricted then Privacy: ***header*** Address Signals: "+" CC NDC SN mapped to user portion of URI scheme used The P-Asserted-Identity is derived from the Connected number as follows **Connected number** Nature of Address Indicator *"national (significant) number"* Add "+" CC (of the country where the IWU is located) to Connected Number Address Signals then map to user portion of URI scheme used *"international number"* Map complete Connected Number Address Signals used prefixed with a "+" to user portion of URI scheme used Address Presentation restriction indicator presentation restricted then Privacy: ***header*** Address Signals: "+" CC NDC SN mapped to user portion of URI scheme used		
ISUP Parameter values	**IAM:** Optional forward call indicator Connected Line Identity Request = requested **ANM:** Generic number additional connected number Address Presentation restriction indicator = presentation restricted		
SIP Parameter values	**INVITE:** Supported: from-change 200 OK: P-Asserted-Identity Supported: from-change UPDATE: From: <derived from the additional connected number> P-Asserted-Identity: <derived from the connected number> **INVITE (IAM) / 200:** from-change tag **not present**		
Comments			

Message flows

SIP NNI		MGCF		SIP-I
INVITE	→		→	INVITE (IAM)
180 Ringing	←		←	180 Ringing (ACM)
200 OK (INVITE)	←		←	200 OK INMVITE (ANM)
			→	ACK
UPDATE	←			
200 OK (UPDATE)	→			

Apply post test routine

6.3.3 Communication Diversion (CDIV)

TP number	TP_403_001	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.2
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 181 hi-targeted-to-uri into 181 (Call Is Being Forwarded) or 183 Session Progress with encapsulated ACM Redirection number		
Test Purpose	Ensure that on receipt of 181 (Call Is Being Forwarded) an 181 (Call Is Being Forwarded) or 183 Session Progress with encapsulated ACM is sent. The History-Info entry containing a cause parameter is mapped into the Redirection number: • If CC of the hi-targeted-to-uri is equal the country code where the SUT is located: Nature of address indicator is set to '**national (significant) number**', '+' and the country code is removed from the digit string and sent in the Address signal of the Redirection number. • If the country code of the hi-targeted-to-uri is not equal the country code where the SUT is located: Nature of address indicator is set to '**international number**' '+' is removed from the digit string and sent in the Address signal of the Redirection number		
ISUP Parameter values	**ACM:** Generic Notification Redirection number **Nature of address indicator** **Address signal** Derived from the last History-Info entry		
SIP Parameter values	181: History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any>; index=1.1 **183/181 (ACM):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 181 Call Is Being Forwarded **CASE A** 183 Session Progress (ACM) ← **CASE B** 181 Call Is Being Forwarded (ACM) ← **Apply post test routine**		

TP number	TP_403_001A	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.2
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Sending of Generic Notification in ACM		
Test Purpose	Ensure that on receipt of 181 (Call Is Being Forwarded) an 183 Session Progress or 183 Session Progress with encapsulated ACM is sent. A Generic Notification parameter is sent in the encapsulated ACM set to 'call is diverting'.		
ISUP Parameter values	**ACM:** Generic Notification call is diverting		
SIP Parameter values	181: History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any>; index=1.1 **183/181 (ACM):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 181 Call Is Being Forwarded **CASE A** 183 Session Progress (ACM) ← **CASE B** 181 Call Is Being Forwarded (ACM) ← **Apply post test routine**		

TP number	TP_403_002	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.3
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 181 escaped Privacy header into 181 (Call Is Being Forwarded) or 183 Session Progress with encapsulated ACM Redirection number restriction		
Test Purpose	Ensure that on receipt of 181 (Call Is Being Forwarded), a 181 (Call Is Being Forwarded) or 183 Session Progress with encapsulated ACM is sent. The Redirection number restriction is set according the **escaped Privacy header** in the last History entry as indicated in table 6.3.3-1		
ISUP Parameter values	**ACM:** Redirection number restriction= **PRES_restr**		
SIP Parameter values	181: History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any value?*Privacy*=***Priv-value*** >; index=1.1 **181/183 (ACM):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 181 Call Is Being Forwarded **CASE A** 183 Session Progress (ACM) ← **CASE B** 181 Call Is Being Forwarded (ACM) ← **Apply post test routine**		

TP number	TP_403_003	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.3
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 181 Privacy header into 181 (Call Is Being Forwarded) or 183 Session Progress with encapsulated ACM Redirection number restriction		
Test Purpose	Ensure that on receipt of 181 (Call Is Being Forwarded), a 181 (Call Is Being Forwarded) or 183 Session Progress with encapsulated ACM is sent. The Redirection number restriction is set according the **Privacy header** as indicated in table 6.3.3-1		
ISUP Parameter values	**ACM:** Redirection number restriction= **PRES_restr**		
SIP Parameter values	181: *Privacy*=***Priv-value*** History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any value>; index=1.1 **181/183 (ACM):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 181 Call Is Being Forwarded **CASE A** 181 Call Is Being Forwarded (ACM) ← **CASE B** 183 Session Progress (ACM) ← **Apply post test routine**		

Table 6.3.3-1: Mapping of Privacy value into Redirection number restriction

CAUSE	Priv-value	PRES_restr
VA_01	history	Presentation restricted
VA_02	session	Presentation restricted
VA_03	header	Presentation restricted
VA_04	none or *absent*	Presentation allowed *or absent*

TP number	TP_403_004	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.4
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 181 Privacy header into 181 (Call Is Being Forwarded) or 183 Session Progress with encapsulated ACM Notification subscription options		
Test Purpose	Ensure that on receipt of 181 (Call Is Being Forwarded) containing a Privacy header, a 181 (Call Is Being Forwarded) or 183 Session Progress with encapsulated ACM is sent. The Notification subscription options in the Call Diversion Information parameter is set according the Privacy header in the message body as indicated in table 6.3.3-2		
ISUP Parameter values	**ACM:** Call Diversion Information Notification subscription options=**SUBS_options**		
SIP Parameter values	181: *Privacy:* ***Priv-value*** History-Info: <sip:any proper URI;cause=any value>; index=1, <sip:any proper URI>; index=1.1 **181/183 (ACM):** History-Info **not present**		
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →		→ INVITE
			← 181 Call Is Being Forwarded
	CASE A 181 Call Is Being Forwarded (ACM) ←		
	CASE B 183 Session Progress (ACM) ←		
		Apply post test routine	

Table 6.3.3-2: Mapping of Privacy value into Notification subscription options

CAUSE	Priv-value	SUBS_options
VA_01	history	presentation not allowed
VA_02	session	presentation not allowed
VA_03	header	presentation not allowed
VA_04	None or *absent*	Presentation allowed with redirection number

TP number	TP_403_005	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.4
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 181 escaped Privacy header into 181 (Call Is Being Forwarded) with or 183 Session Progress encapsulated ACM Notification subscription options		
Test Purpose	Ensure that on receipt of 181 (Call Is Being Forwarded) or 183 Session Progress containing an escaped Privacy header field in the last hi-targeted-to-uri, a 181 (Call Is Being Forwarded) with encapsulated ACM is sent. The Notification subscription options in the Call Diversion Information parameter is set according the escaped Privacy header in the last History entry as indicated in table 6.3.3-3		
ISUP Parameter values	**ACM:** Call Diversion Information Notification subscription options=**SUBS_options**		
SIP Parameter values	181: History-Info: <sip:any proper URI >; index=1, <sip:any proper URI;cause=any value?*Privacy*=***Priv-value***>; index=1.1 **181/183 (ACM):** History-Info **not present**		
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →		→ INVITE
			← 181 Call Is Being Forwarded
	CASE A 181 Call Is Being Forwarded (ACM) ←		
	CASE B 183 Session Progress (ACM) ←		
	Apply post test routine		

Table 6.3.3-3: Mapping of Privacy value into Notification subscription options

CAUSE	Priv-value	SUBS_options
VA_01	history	presentation allowed without redirection number
VA_02	session	presentation allowed without redirection number
VA_03	header	presentation allowed without redirection number
VA_04	None or *absent*	Presentation allowed with redirection number

TP number	TP_403_006	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.4
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 181 hi-targeted-to-uri into 181 (Call Is Being Forwarded) or 183 Session Progress with encapsulated ACM Redirecting Reason		
Test Purpose	Ensure that on receipt of 181 (Call Is Being Forwarded) a 181 (Call Is Being Forwarded) or 183 Session Progress with encapsulated ACM is sent. The cause parameter of the last hi-entry is mapped into the Redirecting reason in the Call Diversion Information parameter is set as indicated in table 6.3.3-4		
ISUP Parameter values	**ACM:** Redirection number Call Diversion Information Redirecting reason = **Redirecting_Reason**		
SIP Parameter values	181: History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=**CAUSE_value**>; index=1.1 **181/183 (ACM):** History-Info **not present**		
Comments			
Message flows	**SIP-I** / **MGCF** / **SIP NNI** INVITE (IAM) → → INVITE ← 181 Call Is Being Forwarded **CASE A** 181 Call Is Being Forwarded (ACM) ← **CASE B** 183 Session Progress (ACM) ← **Apply post test routine**		

Table 6.3.3-4: Mapping of cause parameter into Redirecting reason

CAUSE	CAUSE_value	Redirecting_Reason
VA_01	404	Unknown
VA_02	302	Unconditional
VA_03	486	User busy
VA_04	408	No reply
VA_05	480	Deflection immediate
VA_06	503	Mobile subscriber not reachable
VA_07	487	Deflection during alerting

TP number	TP_403_007	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.7
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.5/3 AND PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 181 hi-targeted-to-uri cause parameter into 181 Call Is Being Forwarded with or 183 Session Progress encapsulated CPG Event indicator		
Test Purpose	Ensure that on receipt of 181 (Call Is Being Forwarded) a 181 (Call Is Being Forwarded) or 183 Session Progress with encapsulated CPG is sent. The Event indicator is set to '**Redirecting_Reason**' as indicated in table 6.3.3-5		
ISUP Parameter values	**CPG:** Event=**Redirecting_Reason**		
SIP Parameter values	181: History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=**CAUSE_value**>; index=1.1 **181/183 (CPG):** History-Info **not present**		
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →		→ INVITE
	180 Ringing (ACM) ←		← 180 Ringing
			← 181 Call Is Being Forwarded
	CASE A		
	181 Call Is Being Forwarded (CPG) ←		
	CASE B		
	183 Session Progress (CPG) ←		
	Apply post test routine		

Table 6.3.3-5: Mapping of cause parameter into Event indicator

	CAUSE_value	Redirecting_Reason
VA_01	486	CFB (national use)
VA_02	408	CFNR (national use)
VA_03	302	CFU (national use)

TP number	TP_403_008	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.2
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 181 hi-targeted-to-uri into 181 Call Is Being Forwarded or 183 Session Progress with encapsulated CPG Redirection number		
Test Purpose	Ensure that on receipt of 181 (Call Is Being Forwarded) a 181 (Call Is Being Forwarded) or 183 Session Progress with the encapsulated CPG is sent. The History-Info entry containing a cause parameter is mapped into the Redirection number: • If CC of the hi-targeted-to-uri is equal the country code where the SUT is located: Nature of address indicator is set to '**national (significant) number**', '+' and the country code is removed from the digit string and sent in the Address signal of the Redirection number. • If the country code of the hi-targeted-to-uri is not equal the country code where the SUT is located: Nature of address indicator is set to '**international number**' '+' is removed from the digit string and sent in the Address signal of the Redirection number		
ISUP Parameter values	**CPG:** Redirection number **Nature of address indicator** **Address signal** Derived from the last History-Info entry		
SIP Parameter values	181: History-Info: <sip:any proper URI>; index=1, <sip:**any proper URI**;cause=any>; index=1.1 **181/183 (CPG):** History-Info **not present**		
Comments			
Message flows	**SIP-I** → **MGCF** → **SIP NNI** INVITE (IAM) → → INVITE 180 Ringing (ACM) ← ← 180 Ringing ← 181 Call Is Being Forwarded **CASE A** 181 Call Is Being Forwarded (CPG) ← **CASE B** 183 Session Progress (CPG) ← **Apply post test routine**		

TP number	TP_403_008A	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.2
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Sending of Generic Notification in the encapsulated CPG		
Test Purpose	Ensure that on receipt of 181 (Call Is Being Forwarded) containing a History-Info header a 181 (Call Is Being Forwarded) or 183 Session Progress with the encapsulated CPG is sent. A Generic Notification parameter is sent in the CPG message set to 'call is diverting'.		
ISUP Parameter values	**CPG:** Generic Notification call is diverting		
SIP Parameter values	181: History-Info: <sip:any proper URI>; index=1, <sip:**any proper URI**;cause=any>; index=1.1 **181/183 (CPG):** History-Info **not present**		
Comments			

Message flows

SIP-I		MGCF		SIP NNI
INVITE (IAM)	→		→	INVITE
180 Ringing (ACM)	←		←	180 Ringing
			←	181 Call Is Being Forwarded
CASE A				
181 Call Is Being Forwarded (CPG)	←			
CASE B				
183 Session Progress (CPG)	←			
Apply post test routine				

TP number	TP_403_008B	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.2
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Sending of CPG Event indicator 'Progress'		
Test Purpose	Ensure that on receipt of 181 (Call Is Being Forwarded) a 181 (Call Is Being Forwarded) or 183 Session Progress with the encapsulated CPG is sent. The Event indicator in the encapsulated CPG is set to 'Progress'		
ISUP Parameter values	**CPG:** Event indicator Progress		
SIP Parameter values	181: History-Info: <sip:any proper URI>; index=1, <sip:**any proper URI**;cause=any>; index=1.1 **181/183 (CPG):** History-Info **not present**		
Comments			

Message flows

SIP-I		MGCF		SIP NNI
INVITE (IAM)	→		→	INVITE
180 Ringing (ACM)	←		←	180 Ringing
			←	181 Call Is Being Forwarded
CASE A				
181 Call Is Being Forwarded (CPG)	←			
CASE B				
183 Session Progress (CPG)	←			
Apply post test routine				

TP number	TP_403_009	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.3
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 181 escaped Privacy header into 181 Call Is Being Forwarded or 183 Session Progress with encapsulated CPG Redirection number restriction		
Test Purpose	Ensure that on receipt of 181 (Call Is Being Forwarded), a 181 (Call Is Being Forwarded) or 183 Session Progress with encapsulated CPG is sent. The Redirection number restriction is set according the **escaped Privacy header** in the last History entry as indicated in table 6.3.3-1		
ISUP Parameter values	**CPG:** Redirection number restriction = **PRES_restr**		
SIP Parameter values	181: History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any value?*Privacy*=***Priv-value***>; index=1.1 **181/183 (CPG):** History-Info **not present**		
Comments			

Message flows

SIP-I		**MGCF**		**SIP NNI**
INVITE (IAM)	→		→	INVITE
180 Ringing (ACM)	←		←	180 Ringing
			←	181 Call Is Being Forwarded
CASE A				
181 Call Is Being Forwarded (CPG)	←			
CASE B				
183 Session Progress (CPG)	←			
Apply post test routine				

TP number	TP_403_010	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.3
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 181 Privacy header into early 181 Call Is Being Forwarded or 183 Session Progress with encapsulated CPG Redirection number restriction		
Test Purpose	Ensure that on receipt of 181 (Call Is Being Forwarded), a 181 Call Is Being Forwarded with or 183 Session Progress encapsulated CPG is sent. The Redirection number restriction is set according the **Privacy header** as indicated in table 6.3.3-1.		
ISUP Parameter values	**CPG:** Redirection number restriction = **PRES_restr**		
SIP Parameter values	181: *Privacy*=***Priv-value*** History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any value>; index=1.1 **181/183 (CPG):** History-Info **not present**		
Comments			

Message flows

SIP-I		**MGCF**		**SIP NNI**
INVITE (IAM)	→		→	INVITE
180 Ringing (ACM)	←		←	180 Ringing
			←	181 Call Is Being Forwarded
CASE A				
181 Call Is Being Forwarded (CPG)	←			
CASE B				
183 Session Progress (CPG)	←			
Apply post test routine				

TP number	TP_403_011	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.4
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 181 Privacy header into 181 Call Is Being Forwarded or 183 Session Progress with encapsulated CPG Notification subscription options		
Test Purpose	Ensure that on receipt of 181 (Call Is Being Forwarded) containing a Privacy header, a 181 (Call Is Being Forwarded) or 183 Session Progress with encapsulated CPG is sent. The Notification subscription options in the Call Diversion Information parameter is set according the Privacy header in the message body as indicated in table 6.3.3-2		
ISUP Parameter values	**CPG:** Call Diversion Information Notification subscription options=**SUBS_options**		
SIP Parameter values	181: *Privacy:* ***Priv-value*** History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any value>; index=1.1 **181/183 (CPG):** History-Info **not present**		
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →		→ INVITE
	180 Ringing (ACM) ←		← 180 Ringing
			← 181 Call Is Being Forwarded
	CASE A		
	181 Call Is Being Forwarded (CPG) ←		
	CASE B		
	183 Session Progress (CPG) ←		
	Apply post test routine		

TP number	TP_403_012	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.4
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 181 escaped Privacy header into 181 Call Is Being Forwarded or 183 Session Progress with encapsulated CPG Notification subscription options		
Test Purpose	Ensure that on receipt of 181 (Call Is Being Forwarded) containing an escaped Privacy header field in the last hi-targeted-to-uri, a 181 Call Is Being Forwarded or 183 Session Progress with encapsulated CPG is sent. The Notification subscription options in the Call Diversion Information parameter is set according the escaped Privacy header in the last History entry as indicated in table 6.3.3-3		
ISUP Parameter values	**CPG:** Call Diversion Information Notification subscription options=**SUBS_options**		
SIP Parameter values	181: History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any value?*Privacy*=***Priv-value***>; index=1.1 **181/183 (CPG):** History-Info **not present**		
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →		→ INVITE
	180 Ringing (ACM) ←		← 180 Ringing
			← 181 Call Is Being Forwarded
	CASE A		
	181 Call Is Being Forwarded (CPG) ←		
	CASE B		
	183 Session Progress (CPG) ←		
	Apply post test routine		

TP number	TP_403_013	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.4
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 181 hi-targeted-to-uri into 181 Call Is Being Forwarded or 183 Session Progress with encapsulated CPG Redirecting Reason		
Test Purpose	Ensure that on receipt of 181 (Call Is Being Forwarded) a 181 Call Is Being Forwarded or 183 Session Progress with encapsulated CPG is sent. The History-Info entry containing a cause parameter is mapped into the Redirecting reason in the Call Diversion Information parameter is set as indicated in table 6.3.3-4		
ISUP Parameter values	**CPG:** Call Diversion Information Redirecting reason= **Redirecting_Reason**		
SIP Parameter values	181: History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=**CAUSE_value**>; index=1.1 **181/183 (CPG):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 180 Ringing (ACM) ← ← 180 Ringing ← 181 Call Is Being Forwarded **CASE A** 181 Call Is Being Forwarded (CPG) ← **CASE B** 183 Session Progress (CPG) ← **Apply post test routine**		

TP number	TP_403_014	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.2
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 180 hi-targeted-to-uri into a 180 (Ringing) with encapsulated ACM Redirection number		
Test Purpose	Ensure that on receipt of 180 (Ringing) a 180 (Ringing) with encapsulated ACM (subscriber free) is sent. The last History-Info entry containing a cause parameter is mapped into the Redirection number: • If CC of the hi-targeted-to-uri is equal the country code where the SUT is located: Nature of address indicator is set to '**national (significant) number**', '+' and the country code is removed from the digit string and sent in the Address signal of the Redirection number. • If the country code of the hi-targeted-to-uri is not equal the country code where the SUT is located: Nature of address indicator is set to '**international number**' '+' is removed from the digit string and sent in the Address signal of the Redirection number		
ISUP Parameter values	**ACM:** Redirection number **Nature of address indicator** **Address signal** Derived from the last History-Info entry		
SIP Parameter values	180: History-Info: <sip:any proper URI>; index=1, <sip:**any proper URI**;cause=any>; index=1.1 **180 (ACM):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 180 Ringing (ACM) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_403_014A	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.6
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Sending of Generic Notification in an ACM free		
Test Purpose	Ensure that on receipt of 180 (Ringing) a 180 Ringing with an encapsulated ACM (subscriber free) is sent. The last History-Info entry containing a cause parameter. A Generic Notification parameter is sent in the ACM set to 'call is diverting'.		
ISUP Parameter values	**ACM:** Backward call indicator Called party status=subscriber free Generic Notification call is diverting		
SIP Parameter values	180: History-Info: <sip:any proper URI>; index=1, <sip:**any proper URI**;cause=any>; index=1.1 **180 (ACM):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 180 Ringing (ACM) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_403_015	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.3
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 180 escaped Privacy header into a 180 (Ringing) with encapsulated ACM Redirection number restriction		
Test Purpose	Ensure that on receipt of 180 (Ringing), a 180 (Ringing) with encapsulated ACM (subscriber free) is sent. The Redirection number restriction is set according the **escaped Privacy header** in the last History entry as indicated in table 6.3.3-1		
ISUP Parameter values	**ACM:** Redirection number restriction= **PRES_restr**		
SIP Parameter values	180: History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any?*Privacy*=***Priv-value***>; index=1.1 **180 (ACM):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 180 Ringing (ACM) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_403_016	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.3
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 180 Privacy header into a 180 (Ringing) with encapsulated ACM Redirection number restriction		
Test Purpose	Ensure that on receipt of 180 (Ringing), a 180 (Ringing) with encapsulated ACM (subscriber free) is sent. The Redirection number restriction is set according the **Privacy header** as indicated in table 6.3.3-1		
ISUP Parameter values	**ACM:** Redirection number restriction= **PRES_restr**		
SIP Parameter values	180: *Privacy=**Priv-value*** History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any value>; index=1.1 **180 (ACM):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 180 Ringing (ACM) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_403_017	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.4
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 180 Privacy header into a 180 (Ringing) with encapsulated ACM Notification subscription options		
Test Purpose	Ensure that on receipt of 180 (Ringing) containing a Privacy header, a 180 (Ringing) with encapsulated ACM (subscriber free) is sent. The Notification subscription options in the Call Diversion Information parameter is set according the **Privacy header** in the message body as indicated in table 6.3.3-2		
ISUP Parameter values	**ACM:** Call Diversion Information Notification subscription options=**SUBS_options**		
SIP Parameter values	180: *Privacy: **Priv-value*** History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any value>; index=1.1 **180 (ACM):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 180 Ringing (ACM) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_403_018	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.4
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 181 escaped Privacy header into a 180 (Ringing) with encapsulated ACM Notification subscription options		
Test Purpose	Ensure that on receipt of 180 (Ringing) containing an escaped Privacy header field in the last hi-targeted-to-uri, a 180 (Ringing) with encapsulated ACM (subscriber free) is sent. The Notification subscription options in the Call Diversion Information parameter is set according the **escaped Privacy header** in the last History entry as indicated in table 6.3.3-3		
ISUP Parameter values	**ACM:** Call Diversion Information Notification subscription options=**SUBS_options**		
SIP Parameter values	180: History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any value?*Privacy*=***Priv-value***>; index=1.1 **180 (ACM):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 180 Ringing (ACM) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_403_019	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.4
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 180 hi-targeted-to-uri into a 180 (Ringing) with encapsulated ACM Redirecting Reason		
Test Purpose	Ensure that on receipt of 180 (Ringing) a 180 (Ringing) with encapsulated ACM (subscriber free) is sent. The last History-Info entry containing a cause parameter is mapped into the Redirecting reason in the Call Diversion Information parameter is set as indicated in table 6.3.3-4		
ISUP Parameter values	**ACM:** Call Diversion Information Redirecting reason= **Redirecting_Reason**		
SIP Parameter values	180: History-Info: <sip:any proper URI;cause=**CAUSE_value**>; index=1, <sip:any proper URI>; index=1.1 **180 (ACM):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 180 Ringing (ACM) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_403_020	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.2
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 180 hi-targeted-to-uri into a 180 (Ringing) with encapsulated CPG Redirection number		
Test Purpose	Ensure that on receipt of 180 (Ringing) a 180 (Ringing) with encapsulated CPG Alerting is sent. The last History-Info entry containing a cause parameter is mapped into the Redirection number: • If CC of the hi-targeted-to-uri is equal the country code where the SUT is located: Nature of address indicator is set to '**national (significant) number**', '+' and the country code is removed from the digit string and sent in the Address signal of the Redirection number. • If the country code of the hi-targeted-to-uri is not equal the country code where the SUT is located: Nature of address indicator is set to '**international number**' '+' is removed from the digit string and sent in the Address signal of the Redirection number		
ISUP Parameter values	**CPG:** Redirection number **Nature of address indicator** **Address signal** Derived from the last History-Info entry		
SIP Parameter values	180: History-Info: <sip:any proper URI>; index=1, <sip:**any proper URI**;cause=any>; index=1.1 **180 (CPG):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 181 Call Is Being Forwarded (ACM) ← ← 181 Call Is Being Forwarded 180 Ringing (CPG) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_403_020A	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.9
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Sending of Generic Notification in an encapsulated CPG after 180		
Test Purpose	Ensure that on receipt of 180 (Ringing) an encapsulated CPG Alerting is sent. The last History-Info entry containing a cause parameter. The CPG contains the Generic Notification parameter set to 'call is diverting'.		
ISUP Parameter values	**CPG:** Generic Notification call is diverting		
SIP Parameter values	180: History-Info: <sip:any proper URI>; index=1, <sip:**any proper URI**;cause=any>; index=1.1 **180 (CPG):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 181 Call Is Being Forwarded (ACM) ← ← 181 Call Is Being Forwarded 180 Ringing (CPG) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_403_020B	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.9
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Sending of Event indicator 'Alerting' in an encapsulated CPG after 180		
Test Purpose	Ensure that on receipt of 180 (Ringing) an encapsulated CPG Alerting is sent. The last History-Info entry containing a cause parameter. The Event indicator in the encapsulated CPG message is set to 'Alerting'.		
ISUP Parameter values	**CPG:** Event=Alerting		
SIP Parameter values	180: History-Info: <sip:any proper URI>; index=1, <sip:**any proper URI**;cause=any>; index=1.1 **180 (CPG):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 181 Call Is Being Forwarded (ACM) ← ← 181 Call Is Being Forwarded 180 Ringing (CPG) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_403_021	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.3
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 180 escaped Privacy header into a 180 (Ringing) with encapsulated CPG Redirection number restriction		
Test Purpose	Ensure that on receipt of 180 (Ringing), a 180 (Ringing) with encapsulated CPG Alerting is sent. The Redirection number restriction is set according the **escaped Privacy header** in the last History entry as indicated in table 6.3.3-1		
ISUP Parameter values	**CPG:** Redirection number restriction= **PRES_restr**		
SIP Parameter values	180: History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any?*Privacy*=***Priv-value***>; index=1.1 **180 (CPG):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 181 Call Is Being Forwarded (ACM) ← ← 181 Call Is Being Forwarded 180 Ringing (CPG) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_403_022	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.3
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 180 Privacy header into CPG Redirection number restriction		
Test Purpose	Ensure that on receipt of 180 (Ringing), a 180 Ringing with encapsulated CPG Alerting is sent. The Redirection number restriction is set according the **Privacy header** as indicated in table 6.3.3-1		
ISUP Parameter values	**CPG:** Redirection number restriction= **PRES_restr**		
SIP Parameter values	180: *Privacy*=***Priv-value*** History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any value>; index=1.1 **180 (CPG):** History-Info **not present**		
Comments			

Message flows

SIP-I		MGCF		SIP NNI
INVITE (IAM)	→		→	INVITE
181 Call Is Being Forwarded (ACM)	←		←	181 Call Is Being Forwarded
180 Ringing (CPG-Ringing)	←		←	180 Ringing

Apply post test routine

TP number	TP_403_023	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.4
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 180 Privacy header into CPG Notification subscription options		
Test Purpose	Ensure that on receipt of 180 (Ringing) containing a Privacy header, a 180 Ringing with encapsulated CPG Alerting is sent. The Notification subscription options in the Call Diversion Information parameter is set according the **Privacy header** in the message body as indicated in table 6.3.3-2		
ISUP Parameter values	**CPG:** Call Diversion Information Notification subscription options=**SUBS_options**		
SIP Parameter values	180: *Privacy:* ***Priv-value*** History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any value>; index=1.1 **180 (CPG):** History-Info **not present**		
Comments			

Message flows

SIP-I		MGCF		SIP NNI
INVITE (IAM)	→		→	INVITE
181 Call Is Being Forwarded (ACM)	←		←	181 Call Is Being Forwarded
180 Ringing (CPG)	←		←	180 Ringing

Apply post test routine

TP number	TP_403_024	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.4
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 180 escaped Privacy header into CPG Notification subscription options		
Test Purpose	Ensure that on receipt of 180 (Ringing) containing an escaped Privacy header field in the last hi-targeted-to-uri, a 180 (Ringing) with encapsulated CPG Alerting is sent. The Notification subscription options in the Call Diversion Information parameter is set according the **escaped Privacy header** in the last History entry as indicated in table 6.3.3-3		
ISUP Parameter values	**CPG:** Call Diversion Information Notification subscription options=**SUBS_options**		
SIP Parameter values	180: History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any value?*Privacy*=***Priv-value***>; index=1.1 **180 (CPG):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 181 Call Is Being Forwarded (ACM) ← ← 181 Call Is Being Forwarded 180 Ringing (CPG - Alerting) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_403_025	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.4
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 180 hi-targeted-to-uri into CPG Redirecting Reason		
Test Purpose	Ensure that on receipt of 180 (Ringing) a 180 (Ringing) with encapsulated CPG Alerting is sent. The last History-Info entry containing a cause parameter is mapped into the Redirecting reason in the Call Diversion Information parameter is set as indicated in table 6.3.3-4		
ISUP Parameter values	**CPG:** Call Diversion Information Redirecting reason= **Redirecting_Reason**		
SIP Parameter values	180: History-Info: <sip:any proper URI >; index=1, <sip:any proper URI;cause=**CAUSE_value** >; index=1.1 **180 (CPG):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 181 Call Is Being Forwarded (ACM) ← ← 181 Call Is Being Forwarded 180 Ringing (CPG - Alerting) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_403_026	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.2
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 200 OK hi-targeted-to-uri into ANM Redirection number		
Test Purpose	Ensure that on receipt of 200 OK (INVITE) an ANM is sent. The last History-Info entry containing a cause parameter is mapped into the Redirection number: • If CC of the hi-targeted-to-uri is equal the country code where the SUT is located: Nature of address indicator is set to '**national (significant) number**', '+' and the country code is removed from the digit string and sent in the Address signal of the Redirection number. • If the country code of the hi-targeted-to-uri is not equal the country code where the SUT is located: Nature of address indicator is set to '**international number**' '+' is removed from the digit string and sent in the Address signal of the Redirection number		
ISUP Parameter values	**ANM:** Redirection number **Nature of address indicator** **Address signal** Derived from the last History-Info entry		
SIP Parameter values	200: History-Info: <sip:any proper URI>; index=1, <sip:**any proper URI**;cause=any value>; index=1.1 **200 (ANM):** History-Info **not present**		
Comments			

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
	181 Call Is Being Forwarded (ACM)	←		←	181 Call Is Being Forwarded
	180 Ringing (CPG)	←		←	180 Ringing
	200 OK INVITE (ANM)	←		←	200 OK INVITE
	ACK	→		→	ACK
	Apply post test routine				

TP number	TP_403_027	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.3
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 200 escaped Privacy header into ANM Redirection number restriction		
Test Purpose	Ensure that on receipt of 200 (INVITE), a 200 OK INVITE (ANM) with encapsulated ANM is sent. The Redirection number restriction is set according the **escaped Privacy header** in the last History entry as indicated in table 6.3.3-1		
ISUP Parameter values	**ANM:** Redirection number restriction= **PRES_restr**		
SIP Parameter values	200 OK: History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any value?*Privacy*=***Priv-value***>; index=1.1 **200 (ANM):** History-Info **not present**		
Comments			

Message flows	**SIP-I**		**MGCF**		**SIP NNI**
	INVITE (IAM)	→		→	INVITE
	181 Call Is Being Forwarded (ACM)	←		←	181 Call Is Being Forwarded
	180 Ringing (CPG)	←		←	180 Ringing
	200 OK INVITE (ANM)	←		←	200 OK INVITE
	ACK	→		→	ACK
	Apply post test routine				

TP number	TP_403_028	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.3
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 200 Privacy header into 200 OK INVITE (ANM) with encapsulated ANM Redirection number restriction		
Test Purpose	Ensure that on receipt of 200 OK (INVITE), a200 OK INVITE (ANM) with encapsulated ANM is sent. The Redirection number restriction is set according the **Privacy header** as indicated in table 6.3.3-1		
ISUP Parameter values	**ANM:** Redirection number restriction= **PRES_restr**		
SIP Parameter values	200 OK: *Privacy=**Priv-value*** History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any value>; index=1.1 **200 (ANM):** History-Info **not present**		
Comments			

Message flows

SIP-I		MGCF		SIP NNI
INVITE (IAM)	→		→	INVITE
181 Call Is Being Forwarded (ACM)	←		←	181 Call Is Being Forwarded
180 Ringing (CPG)	←		←	180 Ringing
200 OK INVITE (ANM)	←		←	200 OK INVITE
ACK	→		→	ACK

Apply post test routine

TP number	TP_403_029	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.2
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 200 OK hi-targeted-to-uri into 200 OK (INVITE) with encapsulated CON Redirection number		
Test Purpose	Ensure that on receipt of 200 OK (INVITE) a 200 OK (INVITE) with encapsulated CON is sent. The History-Info entry containing a cause parameter is mapped into the Redirection number: • If CC of the hi-targeted-to-uri is equal the country code where the SUT is located: Nature of address indicator is set to '**national (significant) number**', '+' and the country code is removed from the digit string and sent in the Address signal of the Redirection number. • If the country code of the hi-targeted-to-uri is not equal the country code where the SUT is located: Nature of address indicator is set to '**international number**' '+' is removed from the digit string and sent in the Address signal of the Redirection number		
ISUP Parameter values	**CON:** Redirection number **Nature of address indicator** **Address signal** Derived from the last History-Info entry		
SIP Parameter values	200 OK: History-Info: <sip:any proper URI>; index=1, <sip:**any proper URI**;cause=any value ; index=1.1 **200 (CON):** History-Info **not present**		
Comments			

Message flows

SIP-I		MGCF		SIP NNI
INVITE (IAM)	→		→	INVITE
200 OK INVITE (CON)	←		←	200 OK INVITE
ACK	→		→	ACK

Apply post test routine

TP number	TP_403_030	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.3
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 200 escaped Privacy header into 200 OK (INVITE) with encapsulated CON Redirection number restriction		
Test Purpose	Ensure that on receipt of 200 (INVITE), a 200 OK (INVITE) with encapsulated CON is sent. The Redirection number restriction is set according the **escaped Privacy header** in the last History entry as indicated in table 6.3.3-1		
ISUP Parameter values	**CON:** Redirection number restriction= **PRES_restr**		
SIP Parameter values	200 OK: History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any value?*Privacy*=***Priv-value***>; index=1.1 **200 (CON):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 200 OK INVITE (CON) ← ← 200 OK INVITE ACK → → ACK **Apply post test routine**		

TP number	TP_403_031	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.1, table, 7.5.4.2.1.3
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 200 Privacy header into 200 OK (INVITE) with encapsulated CON Redirection number restriction		
Test Purpose	Ensure that on receipt of 200 OK (INVITE), a 200 OK (INVITE) with encapsulated CON is sent. The Redirection number restriction is set according the **Privacy header** as indicated in table 6.3.3-1		
ISUP Parameter values	**CON:** Redirection number restriction= **PRES_restr**		
SIP Parameter values	200 OK: *Privacy*=***Priv-value*** History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any value>; index=1.1 **200 (CON):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE 200 OK INVITE (CON) ← ← 200 OK INVITE ACK → → ACK **Apply post test routine**		

TP number	TP_403_032	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.2, table, 7.5.4.2.2.1
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of Redirecting number Address signals into History-Info header URI		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM containing a Redirecting number parameter, an Original called number parameter and a Redirection Information parameter, an INVITE request is sent and a History-Info header is present. The value of the second last hi-targeted-to-uri **Value of Redirecting number** is mapped from the Redirecting number Address Signals as indicated in table 6.3.3-6		
ISUP Parameter values	**IAM:** Redirecting number Nature of Address: **NoA_value** Address Signals <any appropriate value> Redirection Information Redirection counter=2 Original called number		
SIP Parameter values	**INVITE:** History-Info: <sip:any proper URI>; index=1, <sip:**Value of Redirecting number**;cause=any>; index=1.1 <sip: any proper URI;cause=any>; index=1.1.1 **INVITE (IAM):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE **Apply post test routine**		

Table 6.3.3-6: Mapping of Redirecting number into second last Hist-entry

	NoA_value	**Value of Redirecting number second last hi-targeted-to-uri**
VA_01	*national (significant) number*	Add '+' and the country code where the SUT is located to the Address Signal digits of the Redirecting number
VA_02	*international number*	Add '+' to the Address Signal digits of the Redirecting number

TP number	TP_403_033	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.2, table, 7.5.4.2.2.1
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of Redirecting number Address presentation restricted into History-Info header Privacy value		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM containing a Redirecting, an Original called number parameter number parameter and a Redirection Information parameter, an INVITE request is sent and a History-Info header is present. A Privacy header is escaped in the second last hi-targeted-to-uri and the **PRIV_value** is mapped from the Address presentation restricted indicator of the Redirecting number as indicated in table 6.2.5-7		
ISUP Parameter values	**IAM:** Redirecting number Address presentation restricted indicator: **APRI_value** Redirection Information Redirection counter=2 Original called number		
SIP Parameter values	**INVITE:** History-Info: <sip:any proper URI>; index=1, <sip: any proper URI;cause=any?Privacy=**PRIV_value**>; index=1.1 <sip: any proper URI;cause=any>; index=1.1.1 **INVITE (IAM):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE **Apply post test routine**		

Table 6.3.3-7: Mapping of Redirecting number APRI into Privacy header in the second last Hist-entry

	APRI_value	**PRIV_value second last hi-targeted-to-uri**
VA_01	presentation restricted	history
VA_02	presentation allowed	Header absent or 'none'

TP number	TP_403_034	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.2, table, 7.5.4.2.2.1
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of Redirection Information Redirecting indicator		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM containing a Redirecting number, an Original called number parameter and a Redirection Information parameter, an INVITE request is sent and a History-Info header is present. A Privacy header is escaped in the second last hi-targeted-to-uri and the **PRIV_value** is mapped from the Redirecting indicator of the Redirection Information as indicated in table 6.2.5-21		
ISUP Parameter values	**IAM:** Redirection Information Redirection counter=2 Redirecting indicator=**RDIND_value**		
SIP Parameter values	**INVITE:** History-Info: <sip:any proper URI>; index=1, <sip: any proper URI;cause=any?Privacy=**PRIV_value**>; index=1.1 <sip: any proper URI;cause=any>; index=1.1.1 **INVITE (IAM):** History-Info **not present**		
Comments			
Message flows	**SIP-I** → **MGCF** → **SIP NNI** INVITE (IAM) → → INVITE **Apply post test routine**		

Table 6.3.3-8: Mapping of Redirecting indicator into Privacy header in the second last Hist-entry

	RDIND_value	**PRIV_value second last hi-targeted-to-uri**
VA_01	Call diverted, all redirection info presentation restricted	history
VA_02	Call diverted	none

TP number	TP_403_035	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.2, table, 7.5.4.2.2.1
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of Redirection Information Redirection counter		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM containing a Redirecting number, an Original called number parameter and a Redirection Information parameter, an INVITE request is sent and a the hi-targeted-to-uri and the index parameter of the Redirection counter as indicated in table 6.3.3-9		
ISUP Parameter values	**IAM:** Redirection Information Redirection counter=**RDCONT_value**		
SIP Parameter values	**INVITE:** History-Info: **HI-ENTRY_values** **INVITE (IAM):** History-Info **not present**		
Comments			
Message flows	**SIP-I** → **MGCF** → **SIP NNI** INVITE (IAM) → → INVITE **Apply post test routine**		

Table 6.3.3-9: Mapping of Redirection counter into index parameter of History-Info header

	RDCONT_value	HI-ENTRY_values
VA_01	1	<sip:represents the Original called number>; **index=1**, <sip: represents the Called party number;cause=any>; **index=1.1**
VA_02	2	<sip: represents the Original called number>; **index=1**, <sip: represents the Redirecting number;cause=any>; **index=1.1**, <sip: represents the Called party number;cause=any>; **index=1.1.1**
VA_03	3	<sip: represents the Original called number>; **index=1**, <sip: represents any placeholder value;cause=any>; **index=1.1**, <sip: represents the Redirecting number;cause=404>; **index=1.1.1**, <sip: represents the Called party number;cause=any>; **index=1.1.1.1**
VA_04	4	<sip: represents the Original called number>; **index=1**, <sip: represents any placeholder value;cause=any>; **index=1.1**, <sip: represents any placeholder value;cause=404>; **index=1.1.1**, <sip: represents the Redirecting number;cause=404>; **index=1.1.1.1**, <sip: represents the Called party number;cause=any>; **index=1.1.1.1.1**
VA_05	5	<sip: represents the Original called number>; **index=1**, <sip: represents any placeholder value;cause=any>; **index=1.1**, <sip: represents any placeholder value;cause=404>; **index=1.1.1**, <sip: represents any placeholder value;cause=404>; **index=1.1.1.1**, <sip: represents the Redirecting number;cause=404>; **index=1.1.1.1.1**, <sip: represents the Called party number;cause=any>; **index=1.1.1.1.1.1**

TP number	TP_403_036	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.2, table, 7.5.4.2.2.1
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of Redirection Information Original redirection reason		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM containing a Redirecting number an Original called number and a Redirection Information parameter, an INVITE request is sent. The Original redirection reason indicator **'unknown'** of the Redirection Information is mapped into the cause parameter **'404'** of the second hi-targeted-to-uri of the History-Info header in the sent INVITE as indicated in table 6.3.3-10		
ISUP Parameter values	**IAM:** Redirection Information Redirection counter=2 Original redirection reason=unknown		
SIP Parameter values	**INVITE:** History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=**'404'**>; index=1.1, <sip: any proper URI;cause=any>; index=1.1.1 **INVITE (IAM):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) ➔ ➔ INVITE **Apply post test routine**		

Table 6.3.3-10: Void

TP number	TP_403_037	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.2, table, 7.5.4.2.2.1
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of Redirection Information Redirecting reason		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM containing a Redirection number an Original called number and a Redirection Information parameter, an INVITE request is sent. The Redirecting reason indicator **REAS_value** of the Redirection Information is mapped into the cause parameter **Cause_value** of the last hi-targeted-to-uri of the History-Info header in the sent INVITE as indicated in table 6.3.3-11		
ISUP Parameter values	**IAM:** Redirection Information Redirection counter=2 Redirecting reason =**REAS_value**		
SIP Parameter values	**INVITE:** History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any>; index=1.1, <sip: any proper URI;cause=**Cause_value**>; index=1.1.1 **INVITE (IAM):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) ➔ ➔ INVITE **Apply post test routine**		

Table 6.3.3-11: Mapping of Redirecting reason into Reason header in the last Hist-entry

	REAS_value	**Cause_value** **Second last hi-targeted-to-uri**
VA_01	unknown	404
VA_02	unconditional	302
VA_03	User Busy	486
VA_04	No reply	408
VA_05	Deflection during alerting	302
VA_06	Deflection immediate response	302
VA_07	Mobile subscriber not reachable	503

TP number	TP_403_038	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.2, table, 7.5.4.2.2.1
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of Called party number Address Signals		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM containing a Redirecting number parameter and a Redirection Information parameter, an INVITE request is sent and a History-Info header is present. The Called party number is mapped into the last hi-targeted-to-uri of the History-Info header as indicated in table 6.3.3-12		
ISUP Parameter values	**IAM:** Called party number Nature of Address: **NoA_value** Address Signals		
SIP Parameter values	**INVITE:** History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any>; index=1.1, <sip:**Value of Called party number**;cause=any>; index=1.1.1 **INVITE (IAM):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) ➔ ➔ INVITE **Apply post test routine**		

Table 6.3.3-12: Mapping of Called party number into last Hist-entry

	NoA_value	Value of Called party number last hi-targeted-to-uri
VA_01	*national (significant) number*	Add '+' and the country code where the SUT is located to the Address Signal digits of the Called party number
VA_02	*international number*	Add '+' to the Address Signal digits of the Called party number

TP number	TP_403_039	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.2, table, 7.5.4.2.2.1
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of Original called number Address Signals		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM containing an Original called number parameter and a Redirection Information parameter, an INVITE request is sent and a History-Info header is present. The value of the first hi-targeted-to-uri **Value of Original called number** is mapped from the Original called number Address Signals as indicated in table 6.3.3-13		
ISUP Parameter values	**IAM:** Original called number Nature of Address: **NoA_value** Address Signals <**Digits**>		
SIP Parameter values	**INVITE:** History-Info: <sip:**Value of Original called number**>; index=1, <sip:any proper URI;cause=any>; index=1.1 **INVITE (IAM):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) ➔ ➔ INVITE **Apply post test routine**		

Table 6.3.3-13: Mapping of Original called number into first Hist-entry

	NoA_value	Value of Original called number First hi-targeted-to-uri
VA_01	*national (significant) number*	Add '+' and the country code where the SUT is located to the Address Signal digits of the Original called number
VA_02	*international number*	Add '+' to the Address Signal digits of the Original called number

TP number	TP_403_040	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.4.2.2, table, 7.5.4.2.2.1
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of Original called number Address presentation restricted indicator		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM containing an Original called number parameter, an INVITE request is sent and a History-Info header is present. A Privacy header escaped in the first hi-targeted-to-uri and the **PRIV_value** is mapped from the Address presentation restricted indicator of the Original called number as indicated in table 6.3.3-14		
ISUP Parameter values	**IAM:** Original called number Address presentation restricted indicator: **APRI_value** Address Signals <any appropriate value>		
SIP Parameter values	**INVITE:** History-Info: <sip:any proper URI?Privacy=**PRIV_value**>; index=1, <sip:any proper URI;cause=any>; index=1.1 **INVITE (IAM):** History-Info **not present**		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) ➔ ➔ INVITE **Apply post test routine**		

Table 6.3.3-14: Mapping of Original called number APRI into Privacy header in the first Hist-entry

	APRI_value	PRIV_value first hi-targeted-to-uri
VA_01	presentation restricted	history
VA_02	presentation allowed	none

TP number	TP_403_041	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.2
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Second latest History-Info header field entry mapped into Redirecting number Nature of address indicator		
Test Purpose	Ensure that on receipt of an INVITE request containing a History-Info header, an INVITE with encapsulated IAM is sent and a Redirecting number an Original called number and a Redirection information parameter is present. The **Nature of address indicator** of the Redirecting number is mapped from the hi-targeted-to-uri in hi-entry before last hi-entry containing a cause-param URI parameter as indicated in table 6.3.3-15		
ISUP Parameter values	**IAM:** Redirecting number Nature of address indicator=**NoA_value**		
SIP Parameter values	**INVITE:** History-Info: <sip:any proper URI>; index=1, <sip:**Second last entry URI**;cause=any>; index=1.1, <sip:any proper URI;cause=any>; index=1.1.1 **INVITE (IAM):** History-Info **not present**		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

Table 6.3.3-15: Mapping of second last first Hist-entry into Redirecting number Nature of address indicator

	Second last entry URI	NoA_value
VA_01	CC is equal to the country code of the country where MGCF is located AND the next ISUP node is located in the same country	*national (significant) number*
VA_02	CC is **not** equal to the country code of the country where MGCF is located	*international number*

TP number	TP_403_042	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.2
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Second latest History-Info header field entry is mapped into Redirecting number Address signal		
Test Purpose	Ensure that on receipt of an INVITE request containing a History-Info header, an INVITE with encapsulated IAM is sent and a Redirecting number an Original called number and a Redirection information parameter is present. The **Address signal** of the Redirecting number is mapped from the hi-targeted-to-uri in hi-entry before last hi-entry containing a cause-param URI parameter in the format **+'CC+NDC+SN'** as indicated in table 6.3.3-16		
ISUP Parameter values	**IAM:** Redirecting number Address signal *derived from the second last Hist-entry*		
SIP Parameter values	**INVITE:** History-Info: <sip:any proper URI>; index=1, <sip:**Second last entry URI**;cause=any>; index=1.1, <sip:any proper URI;cause=any>; index=1.1.1 **INVITE (IAM):** History-Info **not present**		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	Apply post test routine		

Table 6.3.3-16: Mapping of second last first Hist-entry into Redirecting number Address signal

	Second last entry URI	**NoA_value**
VA_01	CC is equal to the country code of the country where MGCF is located AND the next ISUP node is located in the same country	'+CC' is removed from the userpart digit string used in the Redirecting number Address signal
VA_02	CC is **not** equal to the country code of the country where MGCF is located	'+' is removed from the userpart digit string used in the Redirecting number Address signal

TP number	TP_403_043	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.2
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Second latest History-Info header escaped Privacy header is mapped into Redirecting number Address presentation restricted indicator		
Test Purpose	Ensure that on receipt of an INVITE request containing a History-Info header, an INVITE with encapsulated IAM is sent and a Redirecting number an Original called number and a Redirection information parameter is present. The **Address presentation restricted indicator** of the Redirecting number is mapped from the escaped Privacy header of the second latest History-Info header field entry containing a cause parameter as indicated in table 6.3.3-17		
ISUP Parameter values	**IAM:** Redirecting number Address presentation restricted indicator=**APRI_value**		
SIP Parameter values	**INVITE:** History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any?Privacy=**PRIV_value**>; index=1.1, <sip:any proper URI;cause=any>; index=1.1.1 **INVITE (IAM):** History-Info **not present**		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	Apply post test routine		

TP number	TP_403_044	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.2
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Privacy header is mapped into Redirecting number Address presentation restricted indicator		
Test Purpose	Ensure that on receipt of an INVITE request containing a History-Info header, an INVITE with encapsulated IAM is sent and a Redirecting number an Original called number and a Redirection information parameter is present. The **Address presentation restricted indicator** of the Redirecting number is mapped from the Privacy header of the received INVITE request as indicated in table 6.3.3-17.		
ISUP Parameter values	**IAM:** Redirecting number Address presentation restricted indicator=**APRI_value**		
SIP Parameter values	**INVITE:** Privacy: **PRIV_value** History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any>; index=1.1 **INVITE (IAM):** History-Info **not present**		
Comments			
Message flows	**SIP NNI** → **MGCF** → **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

Table 6.3.3-17: Mapping of Privacy header into Redirecting number Address presentation restricted indicator

	PRIV_value	**APRI_value**
VA_01	history	presentation restricted
VA_02	session	presentation restricted
VA_03	header	presentation restricted
VA_04	none	presentation allowed
VA_05	Header absent	presentation allowed

TP number	TP_403_045	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.3
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Escaped Privacy header is mapped into Redirection information Redirecting indicator		
Test Purpose	Ensure that on receipt of an INVITE request containing a History-Info header, an INVITE with encapsulated IAM is sent and a Redirecting number an Original called number and a Redirection information parameter is present. The **Redirecting indicator** of the Redirection information is mapped from the escaped Privacy header of the second last History-Info header field entry and last History-Info header field in the received INVITE request as indicated in table 6.3.3-18		
ISUP Parameter values	**IAM:** Redirection information Redirecting indicator=**RDIND_value**		
SIP Parameter values	**INVITE:** History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any?Privacy=**PRIV_value**>; index=1.1, <sip:any proper URI;cause=any?Privacy=**PRIV_value**>; index=1.1.1 **INVITE (IAM):** History-Info **not present**		
Comments			
Message flows	**SIP NNI** → **MGCF** → **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_403_046	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.3
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Privacy header is mapped into Redirection information Redirecting indicator		
Test Purpose	Ensure that on receipt of an INVITE request containing a History-Info header, an INVITE with encapsulated IAM is sent and a Redirecting number an Original called number and a Redirection information parameter is present. The **Redirecting indicator** of the Redirection information is mapped from the Privacy header in the received INVITE request as indicated in table 6.3.3-18		
ISUP Parameter values	**IAM:** Redirection information Redirecting indicator=**RDIND_value**		
SIP Parameter values	**INVITE:** Privacy: **PRIV_value** History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any>; index=1.1, <sip:any proper URI;cause=any>; index=1.1.1 **INVITE (IAM):** History-Info **not present**		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
		Apply post test routine	

Table 6.3.3-18: Mapping of Privacy header into Redirecting indicator

	PRIV_value	**RDIND_value**
VA_01	history	Call diverted, all redirection info presentation restricted
VA_02	session	Call diverted, all redirection info presentation restricted
VA_03	header	Call diverted, all redirection info presentation restricted
VA_04	none	Call diverted
VA_05	Privacy header field absent	Call diverted

TP number	TP_403_047	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.3
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	'cause' parameter is mapped into Redirection information Redirecting reason		
Test Purpose	Ensure that on receipt of an INVITE request containing a History-Info header, an INVITE with encapsulated IAM is sent and a Redirecting number an Original called number and a Redirection information parameter is present. The **Redirecting reason** of the Redirection information is mapped from the cause parameter of the latest History-Info header field entry containing a cause parameter in the received INVITE request as indicated in table 6.3.3-19		
ISUP Parameter values	**IAM:** Redirection information Original redirection reason=unknown/not available Redirecting reason=**REAS_value**		
SIP Parameter values	**INVITE:** History-Info: <sip:any proper URI>; index=1, <sip:any proper URI;cause=any>; index=1.1, <sip:any proper URI; cause=**Cause_value**>; index=1.1.1 **INVITE (IAM):** History-Info **not present**		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
		Apply post test routine	

Table 6.3.3-19: Mapping of cause parameter in the last Hist-entry into Redirecting reason

	Cause_value Last hi-targeted-to-uri	**REAS_value**
VA_01	404	Unknown/not available
VA_02	302	Unconditional
VA_03	486	User busy
VA_04	408	No reply
VA_05	480	Deflection immediate response
VA_06	487	Deflection during alerting
VA_07	503	Mobile subscriber not reachable

TP number	TP_403_048	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.3
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Hi-index is mapped into Redirection information Redirection counter		
Test Purpose	Ensure that on receipt of an INVITE request containing a History-Info header, an INVITE with encapsulated IAM is sent and a Redirecting number an Original called number and a Redirection information parameter is present. The **Redirection counter** of the Redirection information is mapped from the hi-index of the last History-Info header field entry in the received INVITE request as indicated in table 6.3.3-20. The number of dots in the hi-index value is equal to the value of the Redirection counter		
ISUP Parameter values	**IAM:** Redirection information Redirection counter=**RDCONT_value**		
SIP Parameter values	**INVITE:** History-Info: **ENTRY_values** **INVITE (IAM):** History-Info **not present**		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

Table 6.3.3-20: Mapping of Redirection counter into index parameters of History-Info header

	ENTRY_values	**RDCONT_value**
VA_01	<sip:represents the Original called number>; **index=1**, <sip:represents the Called party number;cause=any>; **index=1.1**	1
VA_02	<sip:represents the Original called number>; **index=1**, <sip:represents the Redirecting number;cause=any>; **index=1.1**, <sip:represents the Called party number;cause=any>; **index=1.1.1**	2
VA_03	<sip:represents the Original called number>; **index=1**, <sip:any proper URI;cause=any>; **index=1.1**, <sip:represents the Redirecting number;cause=any>; **index=1.1.1**, <sip:represents the Called party number;cause=any>; **index=1.1.1.1**	3
VA_04	<sip:represents the Original called number>; **index=1**, <sip:any proper URI;cause=any>; **index=1.1**, <sip:any proper URI;cause=any>; **index=1.1.1**, <sip:represents the Redirecting number;cause=any>; **index=1.1.1.1**, <sip:represents the Called party number;cause=any>; **index=1.1.1.1.1**	4
VA_05	<sip:represents the Original called number>; **index=1**, <sip:any proper URI;cause=any>; **index=1.1**, <sip:any proper URI;cause=any>; **index=1.1.1**, <sip:any proper URI;cause=any>; **index=1.1.1.1**, <sip:represents the Redirecting number;cause=any>; **index=1.1.1.1.1**, <sip:represents the Called party number;cause=any>; **index=1.1.1.1.1.1**	5

TP number	TP_403_049	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.4
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	First History-Info header field entry is mapped into Original called number Nature of address indicator		
Test Purpose	Ensure that on receipt of an INVITE request containing a History-Info header, an INVITE with encapsulated IAM is sent and a Redirecting number an Original called number and a Redirection information parameter is present. The **Nature of address indicator** of the Original called is mapped from the first History-Info header field entry in the format **+'CC+NDC+SN'** as indicated in table 6.3.3-21		
ISUP Parameter values	**IAM:** Original called number Numbering Plan Indicator=*ISDN (Telephony) numbering plan (Recommendation E.164 [i.1])* Nature of address indicator=**NoA_value**		
SIP Parameter values	**INVITE:** History-Info: <sip:**First entry URI**>; index=1, <sip:any proper URI;cause=any>; index=1.1 **INVITE (IAM):** History-Info **not present**		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	Apply post test routine		

Table 6.3.3-21: Mapping of first Hist-entry into Original called number Nature of address indicator

	First entry URI	**NoA_value**
VA_01	CC is equal to the country code of the country where MGCF is located AND the next ISUP node is located in the same country	*national (significant) number*
VA_02	CC is **not** equal to the country code of the country where MGCF is located	*international number*

TP number	TP_403_050	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.4
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	First History-Info header field entry is mapped into Original called Address signal		
Test Purpose	Ensure that on receipt of an INVITE request containing a History-Info header, an INVITE with encapsulated IAM is sent and a Redirecting number an Original called number and a Redirection information parameter is present. The **Address signal** of the Original called number is mapped from the first History-Info header field entry in the format **+'CC+NDC+SN'** as indicated in table 6.3.3-22		
ISUP Parameter values	**IAM:** Original called Numbering Plan Indicator=*ISDN (Telephony) numbering plan (Recommendation E.164 [i.1])* Address signal *derived from the first Hist-entry*		
SIP Parameter values	**INVITE:** History-Info: <sip:**First entry URI**>; index=1, <sip:any proper URI;cause=any>; index=1.1 **INVITE (IAM):** History-Info **not present**		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	Apply post test routine		

Table 6.3.3-22: Mapping of first Hist-entry into Original called number Address signal

	First entry URI	NoA_value
VA_01	CC is equal to the country code of the country where MGCF is located AND the next ISUP node is located in the same country	'+CC' is removed from the userpart digit string used in the Original called number Address signal
VA_02	CC is **not** equal to the country code of the country where MGCF is located	'+' is removed from the userpart digit string used in the Original called number Address signal

TP number	TP_403_051	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.4
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	First History-Info header field entry escaped Privacy header is mapped into Original called number Address presentation restricted indicator		
Test Purpose	Ensure that on receipt of an INVITE request containing a History-Info header, an INVITE with encapsulated IAM is sent and a Redirecting number an Original called number and a Redirection information parameter is present. The **Address presentation restricted indicator** of the Original called number is mapped from the escaped Privacy header of the first History-Info header field entry as indicated in table 6.3.3-23		
ISUP Parameter values	**IAM:** Original called Address presentation restricted indicator=**APRI_value**		
SIP Parameter values	**INVITE:** History-Info: <sip:**First entry URI**?Privacy=**PRIV_value**>; index=1, <sip:any proper URI;cause=any>; index=1.1 **INVITE (IAM):** History-Info **not present**		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	Apply post test routine		

TP number	TP_403_052	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.4
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Privacy header is mapped into Original called number Address presentation restricted indicator		
Test Purpose	Ensure that on receipt of an INVITE request containing a History-Info header, an INVITE with encapsulated IAM is sent and a Redirecting number an Original called number and a Redirection information parameter is present. The **Address presentation restricted indicator** of the Original called number is mapped from the Privacy header of the received INVITE request as indicated in table 6.3.3-23		
ISUP Parameter values	**IAM:** Original called Address presentation restricted indicator=**APRI_value**		
SIP Parameter values	**INVITE:** *Privacy:* ***PRIV_value*** History-Info: <sip:**First entry URI**>; index=1, <sip:any proper URI;cause=any>; index=1.1 **INVITE (IAM):** History-Info **not present**		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	Apply post test routine		

Table 6.3.3-23: Mapping of Privacy header into Redirecting number Address presentation restricted indicator

	PRIV_value	APRI_value
VA_01	history	presentation restricted
VA_02	session	presentation restricted
VA_03	header	presentation restricted
VA_04	none	presentation allowed
VA_05	Header absent	presentation allowed

TP number	TP_403_053	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.8
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of a 183 Session Progress with encapsulated ACM Redirection number into 181 (Being forwarded) History-Info header		
Test Purpose	Ensure that on receipt of a 183 Session Progress with encapsulated ACM a Redirection number and the Call diversion parameter is present as an indication a call diversion occurred, a 181 (Being forwarded) is sent. The Redirection number is mapped into the hi-targeted-to-uri in a History-Info header containing one hi-entry in the sent 181 as indicated in table 6.3.3-24		
ISUP Parameter values	**ACM:** Backward call indicator Called party statue='no indication' Generic notification=call is diverting Call diversion information Redirection number Nature of address indicator=**NOA_value** Address signal **Digits**		
SIP Parameter values	181: History-Info: sip: **LAST_HIST_URI**;cause=any>; index=1 **183 (ACM):** History-Info **not present**		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	181 Being forwarded ←	←	183 Session Progress (ACM - no indication)
	Apply post test routine		

Table 6.3.3-24: Mapping Redirection number into History-Info header

	NOA_value	History-Info header: LAST_HIST_URI
VA_01	*national (significant) number*	Add '+' and CC (of the country where the MGCF is located) to Redirection number Address Signals then map to user portion of the last hi-targeted-to-uri in the format '+ CC NDC SN'.
VA_01	*international number*	Map complete Redirection number Address Signals and '+' to user portion of the last hi-targeted-to-uri in the format '+ CC NDC SN'

TP number	TP_403_054	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.8
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of a 183 Session Progress with encapsulated ACM Redirecting reason into 181 (Being forwarded) History-Info header cause parameter		
Test Purpose	Ensure that on receipt of a 183 Session Progress with encapsulated ACM a Redirection number and the Call diversion parameter is present as an indication a call diversion occurred, a 181 (Being forwarded) is sent. The Call diversion information Redirecting reason is mapped into the **cause parameter** of the hi-targeted-to-uri in a History-Info header in the sent 181 as indicated in table 6.3.3-25		
ISUP Parameter values	**ACM:** Backward call indicator Called party statue='no indication' Generic notification=call is diverting Redirection number Call diversion information Redirecting reason =**REAS_value**		
SIP Parameter values	181: History-Info: sip: **LAST_HIST_URI**;cause=CAUSE _**value**>; index=1 **183 (ACM):** History-Info **not present**		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	181 Being forwarded ←	←	183 Session Progress (ACM - no indication)
	Apply post test routine		

Table 6.3.3-25: Mapping of Redirecting reason into cause parameter

CAUSE	Redirecting_Reason REAS_value	Cause parameter, CAUSE_value
VA_01	unknown	404
VA_02	unconditional	302
VA_03	User Busy	486
VA_04	No reply	408
VA_05	Deflection during alerting	487
VA_06	Deflection immediate response	480
VA_07	Mobile subscriber not reachable	503

TP number	TP_403_055	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.8
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of a 183 Session Progress with encapsulated ACM Notification subscription options no 181 (Being forwarded) is sent		
Test Purpose	Ensure that on receipt of a 183 Session Progress with encapsulated ACM a Redirection number and the Call diversion parameter is present as an indication a call diversion occurred, if the Call diversion information Notification subscription options is set to **presentation not allowed** no provisional response is sent		
ISUP Parameter values	**ACM:** Generic notification=call is diverting Redirection number Call diversion information Notification subscription options=presentation not allowed		
SIP Parameter values			
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
		←	183 Session Progress (ACM - no indication)
	Apply post test routine		

TP number	TP_403_056	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.8
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of a 183 Session Progress with encapsulated ACM Notification subscription options into 181 (Being forwarded) escaped Privacy header		
Test Purpose	Ensure that on receipt of an a 183 Session Progress with encapsulated ACM a Redirection number and the Call diversion parameter is present as an indication a call diversion occurred, a 181 (Being forwarded) is sent. The escaped Privacy header of the last hi-targeted-to-uri in a History-Info header in the sent 181 is set to 'history'. When a 200 OK INVITE containing an encapsulated ANM message is received, a 200 OK INVITE is sent and a History-Info header is present, an escaped Privacy header is present the value is set as indicated in table 6.3.3-26		
ISUP Parameter values	**ACM:** Generic notification=call is diverting Redirection number Call diversion information Notification subscription options=**NSO_value**		
SIP Parameter values	181: History-Info: sip: **LAST_HIST_URI**;cause=any?Privacy=**history**>; index=1 **181 (ACM):** History-Info **not present** **200 OK** History-Info: sip: **LAST_HIST_URI**;cause=any?Privacy=**PRIV_value**>; index=1		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	181 Being forwarded ←	←	183 Session Progress (ACM - no indication)
	180 Ringing ←	←	180 Ringing (CPG – Alerting)
	200 OK ←	←	200 OK (ANM)
	ACK →	→	ACK
	Apply post test routine		

Table 6.3.3-26: Mapping of Notification subscription options into Privacy header

CAUSE	NSO_value	PRIV_value
VA_01	Unknown	history
VA_02	presentation allowed with redirection number	Header not present or 'none'
VA_03	presentation allowed without redirection number	history

TP number	TP_403_057	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.9
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of a 183 Session Progress with encapsulated CPG Redirection number into 181 (Being forwarded) History-Info header		
Test Purpose	Ensure that on receipt of a 183 Session Progress with encapsulated CPG the Event indicator is set to 'Progress' a Redirection number and the Call diversion parameter is present as an indication a call diversion occurred, a 181 (Being forwarded) is sent. The Redirection number is mapped into the hi-targeted-to-uri in a History-Info header in the sent 181 as indicated in table 6.3.3-24		
ISUP Parameter values	**CPG:** Event=Progress Generic notification=call is diverting Call diversion information Redirection number Nature of address indicator=**NOA_value** Address signal **Digits**		
SIP Parameter values	181: History-Info: <sip:**LAST_HIST_URI**;cause=any>; index=1 **181 (CPG):** History-Info **not present**		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	180 Ringing	←		←	180 Ringing (ACM)
	181 Being forwarded	←		←	183 Session Progress (CPG - call is diverting)
	Apply post test routine				

TP number	TP_403_058	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.9
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of a 183 Session Progress with encapsulated CPG Redirecting reason into 181 (Being forwarded) History-Info header cause parameter		
Test Purpose	Ensure that on receipt of a 183 Session Progress with encapsulated CPG the Event indicator is set to 'Progress' a Redirection number and the Call diversion parameter is present as an indication a call diversion occurred, a 181 (Being forwarded) is sent. The Call diversion information Redirecting reason is mapped into the **cause parameter** of the hi-targeted-to-uri in a History-Info header in the sent 181 as indicated in table 6.3.3-25		
ISUP Parameter values	**CPG:** Event=Progress Generic notification=call is diverting Redirection number Call diversion information Redirecting reason =**REAS_value**		
SIP Parameter values	181: History-Info: <sip:derived from Redirection number in ACM;cause=**CAUSE _value**>; index=1 **181 (CPG):** History-Info **not present**		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	180 Ringing	←		←	180 Ringing (ACM)
	181 Being forwarded	←		←	183 Session Progress (CPG - call is diverting)
	Apply post test routine				

TP number	TP_403_059	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.9
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of a 183 Session Progress with encapsulated CPG Notification subscription option presentation not allowed no 181 (Being forwarded) is sent		
Test Purpose	Ensure that on receipt of a 181 Being forwarded with encapsulated CPG the Event indicator is set to 'Progress' a Redirection number and the Call diversion parameter is present as an indication a call diversion occurred, if the Call diversion information Notification subscription options is set to **presentation not allowed** no 181 (Being forwarded) is sent		
ISUP Parameter values	**CPG:** Event=Progress Generic notification=call is diverting Redirection number Call diversion information Notification subscription options=presentation not allowed		
SIP Parameter values			
Comments			
Message flows	**SIP NNI** / **MGCF** / **SIP-I** INVITE → → INVITE (IAM) 180 Ringing ← ← 180 Ringing (ACM) ← 183 Session Progress (CPG - call is diverting) **Apply post test routine**		

TP number	TP_403_060	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.9
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of a 183 Session Progress with encapsulated CPG Notification subscription options into 181 (Being forwarded) escaped Privacy header		
Test Purpose	Ensure that on receipt of a 183 Session Progress with encapsulated CPG the Event indicator is set to 'Progress' a Redirection number and the Call diversion parameter is present as an indication a call diversion occurred, a 181 (Being forwarded) is sent. The escaped Privacy header of the hi-targeted-to-uri in a History-Info header in the sent 181 is set to 'history'. When a 200 OK INVITE containing an encapsulated ANM message is received, a 200 OK INVITE is sent and a History-Info header is present, an escaped Privacy header is present the value is set as indicated in table 6.3.3-26		
ISUP Parameter values	**CPG:** Event=Progress Generic notification=call is diverting Redirection number Call diversion information Notification subscription options=**NSO_value**		
SIP Parameter values	181: History-Info: <sip:any proper URI;cause=any?Privacy=**history**>; index=1 **181 (CPG):** History-Info **not present** **200 OK** History-Info: sip: **LAST_HIST_URI**;cause=any?Privacy=**PRIV_value**>; index=1		
Comments			
Message flows	**SIP NNI** / **MGCF** / **SIP-I** INVITE → → INVITE (IAM) 180 Ringing ← ← 180 Ringing (ACM) 181 Being forwarded ← ← 183 Session Progress (CPG - call is diverting) 180 Ringing ← ← 180 Ringing (CPG – Alerting) 200 OK ← ← 200 OK (ANM) ACK → → ACK **Apply post test routine**		

TP number	TP_403_061	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.10
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of a 180 Ringing with encapsulated CPG Alerting Redirection number into 180 (Ringing) History-Info header URI parameter		
Test Purpose	Ensure that on receipt of a 180 Ringing with encapsulated CPG the Event indicator is set to 'Alerting' a Redirection number is present, a 180 (Ringing) is sent. The Redirection number Address signal digits are mapped into the hi-targeted-to-uri in a History-Info header in the sent 180 (Ringing) as indicated in table 6.3.3-24.		
ISUP Parameter values	**ACM:** Call diversion information Redirection number **CPG:** Event indicator=Alerting Call diversion information Redirection number Nature of address indicator=**NOA_value** Address signal **Digits**		
SIP Parameter values	180: History-Info: <sip:**derived from Redirection number in CPG**;cause=**Cause_value**>; index=1 **180 (ACM):** History-Info **not present**		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	181 Being forwarded	←		←	183 Session Progress (ACM)
	180 Ringing	←		←	180 Ringing (CPG - call is diverting)
	Apply post test routine				

TP number	TP_403_061A	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.10
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of a 180 with encapsulated CPG Alerting Redirection number into 180 (Ringing) History-Info header Redirecting reason is mapped into the cause parameter		
Test Purpose	Ensure that on receipt of a 180 (Ringing) with encapsulated CPG the Event indicator is set to 'Alerting' a Redirection number is present, a 180 (Ringing) is sent. The cause parameter value is mapped from the received Redirecting reason as indicated in table 6.3.3-25.		
ISUP Parameter values	**ACM:** Call diversion information Redirection number **CPG:** Event indicator=Alerting Redirection number Call diversion information Redirecting reason =**REAS_value**		
SIP Parameter values	180: History-Info: <sip:any proper URI;cause=**CAUSE _value**>; index=1 **180 (ACM):** History-Info **not present**		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	181 Being forwarded	←		←	183 Session Progress (ACM)
	180 Ringing	←		←	180 Ringing (CPG - call is diverting)
	Apply post test routine				

TP number	TP_403_061B	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.10
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of a 180 with encapsulated CPG Alerting Notification subscription option the 180 (Ringing) containing a History-Info header is sent		
Test Purpose	Ensure that on receipt of a180 Ringing with encapsulated CPG the Event indicator is set to 'Alerting' a Redirection number is present, a 180 (Ringing) is sent. The Privacy value is set to 'history'. When a 200 OK INVITE containing an encapsulated ANM message is received, a 200 OK INVITE is sent and a History-Info header is present, an escaped Privacy header is present as indicated in table 6.3.3-26		
ISUP Parameter values	**ACM:** Call diversion information Redirection number **CPG:** Event indicator=Alerting Redirection number Call diversion information Notification subscription options=**NSO_value**		
SIP Parameter values	180: History-Info: <sip:any proper URI;cause=any?Privacy=**history**>; index=1 **180 (ACM):** History-Info **not present** **200 OK** History-Info: sip: **LAST_HIST_URI**;cause=any?Privacy=**PRIV_value**>; index=1		
Comments			

Message flows

SIP NNI		MGCF		SIP-I
INVITE	→		→	INVITE (IAM)
181 Being forwarded	←		←	183 Session Progress (ACM)
180 Ringing	←		←	180 Ringing (CPG - call is diverting)
200 OK	←		←	200 OK (ANM)
ACK	→		→	ACK
Apply post test routine				

TP number	TP_403_061C	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.10
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of a 180 Ringing with an encapsulated CPG Alerting **without Call Diversion Information parameters** the 180 (Ringing) containing a History-Info header is sent, **cause parameter**		
Test Purpose	Ensure that on receipt of a 180 Ringing with encapsulated CPG the Event indicator is set to 'Alerting' no Call diversion Information parameters are present, a 180 (Ringing) is sent. The cause parameter value is derived from the Redirection reason indicator of a previous received Call diversion information parameter as indicated in table 6.3.3-25.		
ISUP Parameter values	**ACM:** Redirection number Call diversion information Call diversion information Redirecting reason=**REAS_value** Redirection number **CPG:** Event indicator=Alerting		
SIP Parameter values	181: History-Info: <sip:any proper URI;cause=any?Privacy=**history**>; index=1 **180 (ACM):** History-Info **not present** 180: History-Info: <sip: any proper URI;cause=**CAUSE _value**?Privacy=history>; index=1		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	181 Being forwarded	←		←	183 Session Progress (ACM)
	180 Ringing	←		←	180 Ringing (CPG - Alerting)
	Apply post test routine				

TP number	TP_403_061D	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.10
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of a 180 Ringing with an encapsulated CPG Alerting **without Call Diversion Information parameters** the 180 (Ringing) containing a History-Info header is sent, **Privacy value**		
Test Purpose	Ensure that on receipt of a 180 Ringing with encapsulated CPG the Event indicator is set to 'Alerting' no Call diversion Information parameters are present, a 180 (Ringing) is sent. The Privacy value is set to 'history'. On receipt of a 200 OK INVITE with an encapsulated ISUP ANM message is received, a 200 OK INVITE is sent and a History-Info header is present an escaped Privacy header is presentas indicated in table 6.3.3-26.		
ISUP Parameter values	**ACM:** Call diversion information Redirection number Call diversion information Notification subscription options=**NSO_value** **CPG:** Event indicator=Alerting		
SIP Parameter values	181: History-Info: <sip:any proper URI;cause=any?Privacy=**history**>; index=1 **180 (ACM):** History-Info **not present** **200 OK** History-Info: sip: **LAST_HIST_URI**;cause=any?Privacy=**PRIV_value**>; index=1		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	181 Being forwarded ←	←	183 Session Progress (ACM)
	180 Ringing ←	←	180 Ringing (CPG - Alerting)
	200 OK ←	←	200 OK (ANM)
	ACK →	→	ACK
	Apply post test routine		

TP number	TP_403_061E	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.10
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of a 180 Ringing with an encapsulated CPG Alerting **without Call Diversion Information parameters** the 180 (Ringing) a History-Info header is not present		
Test Purpose	183 Session Progress with encapsulated ACM Call diversion Information parameters are present the Notification subscription options is set to 'presentation not allowed'. Ensure that on receipt of a 180 Ringing with encapsulated CPG the Event indicator is set to 'Alerting' no Call diversion Information parameters are present, a 180 (Ringing) is sent. A History-Info header is not present.		
ISUP Parameter values	**ACM:** Redirection number Call diversion information Notification subscription options=presentation not allowed **CPG:** Event indicator=Alerting		
SIP Parameter values	180: History-Info header not present		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
		←	183 Session Progress (ACM)
	180 Ringing ←	←	180 Ringing (CPG - Alerting)
	Apply post test routine		

TP number	TP_403_062	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.7
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of a 181 Being forwarded with encapsulated CPG Alerting Redirection Number Restriction into 180 (Ringing) Privacy header		
Test Purpose	Ensure that on receipt of a 181 Being forwarded with encapsulated CPG the Event indicator is set to 'Alerting' a Redirection Number Restriction parameter is present, a 180 (Ringing) is sent. The Redirection Number Restriction parameter value is mapped into the Privacy header in the sent 180 as indicated in table 6.3.3-27		
ISUP Parameter values	**ACM:** Backward call indicator Called party status=no indication Generic notification=call is diverting Call diversion information Notification subscription options=**NSO_value** Redirection number **CPG:** Event indicator=Alerting Redirection Number Restriction=**PRES_restr**		
SIP Parameter values	180: History-Info: <sip:any proper URI;cause=any?Privacy=**PRIV_value**>; index=1		
Comments			

Message flows

SIP NNI		MGCF		SIP-I
INVITE	→		→	INVITE (IAM)
181 Being forwarded	←		←	183 Session Progress (ACM)
180 Ringing	←		←	180 Ringing (CPG - Alerting)

Apply post test routine

Table 6.3.3-27: Mapping of Redirection Number Restriction parameter into Privacy header

CAUSE	Redirection Number Restriction PRES_restr	Privacy PRIV_value
VA_01	Presentation allowed AND previous received Notification subscription option **NSO_value** was NOT "*presentation not allowed*" AND was NOT "*presentation allowed without redirection number*"	'none' OR Header not present
VA_02	Presentation restricted	'History'
VA_03	Parameter absent AND previous received Notification subscription option **NSO_value** was NOT "*presentation not allowed*" AND was NOT "*presentation allowed without redirection number*"	'none' OR Header not present

TP number	TP_403_064	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.4.3, table, 7.5.4.3.7
TSS reference	IMS-SS/CDIV/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/5		
Test Purpose name	Mapping of 200 OK INVITE with encapsulated ANM Redirection Number Restriction into 200 OK INVITE Privacy header		
Test Purpose	Ensure that on receipt of a 200 OK INVITE with encapsulated ANM a Redirection Number Restriction parameter is present as an indication a call diversion occurred, a 200 OK INVITE is sent. The Redirection Number Restriction parameter value is mapped into the Privacy header in the sent 200 OK INVITE as indicated in table 6.3.3-27		
ISUP Parameter values	**ACM:** Generic notification=call is diverting Call diversion information Notification subscription options=**NSO_value** Redirection number **ANM:** Redirection Number Restriction=**PRES_restr**		
SIP Parameter values	200 OK INVITE: History-Info: <sip:any proper URI;cause=any?Privacy=**PRIV_value**>; index=1 **200 (ANM):** History-Info **not present**		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	181 Being forwarded	←		←	183 Session Progress (ACM)
	180 Ringing	←		←	180 Ringing (CPG)
	200 OK INVITE	←		←	200 OK INVITE (ANM)
	ACK	→		→	ACK
	Apply post test routine				

6.3.4 Conference call (CONF)

TP number	TP_404_001	**Reference**	[1], clause 7.2.1 [2], clause 7.5.6.2
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/20 AND PICS 6.3.9/1		
Test Purpose name	'isfocus' parameter and conference URI in Contact header in ACK received, a SUBSCRIBE is sent		
Test Purpose	Ensure that on receipt of an INVITE request and a Contact header field is present containing the conference URI and the 'isfocus' parameter, a SUBSCRIBE request is sent after the ACK was received. The Request URI contains the value received in the Contact header in the ACK, the To header is set to the value sent in the 180 Ringing, the P-Asserted-Identity is set to the value of the P-Asserted-Identity sent in the 180 Ringing or the 200 OK INVITE the Privacy header is sent as in the 180 Ringing or 200 OK INVITE		
ISUP Parameter values			
SIP Parameter values	**INVITE:** Contact: <conference URI>; isfocus SUBSCRIBE: Request URI derived from the Contact header To: <URI equal to the value in the 180> P-Asserted-Identity: < URI equal to the value in the 180 or 200>		
Comments			

Message flows	**SIP NNI**		**MGCF**		**SIP-I**
	INVITE	→		→	INVITE (IAM)
	100 Trying	←			
	180 Ringing	←		←	180 Ringing (ACM)
	200 OK (INVITE)	←		←	200 OK (INVITE) (ANM)
	ACK	→			
	SUBSCRIBE	←			
	202 Accepted	→			
	Apply post test routine				

TP number	TP_404_002	**Reference**	[1], clause 7.3.1 [2], clause 7.5.6.2
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/20 AND PICS 6.3.9/1		
Test Purpose name	'isfocus' parameter and conference URI in Contact header in 200 OK received, a SUBSCRIBE is sent		
Test Purpose	Ensure that on receipt of a 200 OK INVITE successful final response and a Contact header field is present containing the conference URI and the 'isfocus' parameter, a SUBSCRIBE request is sent. The Request URI contains the value received in the Contact header in the 200 OK, the From header is set to the value sent in the initial INVITE request, the P-Asserted-Identity is set to the value of the P-Asserted-Identity sent in the initial INVITE request the Privacy header is sent as in the initial INVITE		
ISUP Parameter values			
SIP Parameter values	200: Contact: <conference URI>; isfocus SUBSCRIBE: From: <URI equal to the value in the INVITE> P-Asserted-Identity: < URI equal to the value in the INVITE>		
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →		→ INVITE
	100 Trying ←		← 100 Trying
	180 Ringing (ACM) ←		← 180 Ringing
	200 OK (INVITE) (ANM) ←		← 200 OK (INVITE)
	ACK →		→ ACK
			→ SUBSCRIBE
			← 202 Accepted
	Apply post test routine		

TP number	TP_404_003	**Reference**	[1], clause 7.2.1 [2], clause 7.5.6.3
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/20 AND PICS 6.3.9/1		
Test Purpose name	Interworking of notification of 'Conference established' at the I-MGCF		
Test Purpose	Ensure that on receipt of an initial INVITE request and the Contact header contains the **isfocus** parameter, a SUBCRIBE request is sent. Ensure that on receipt of a NOTIFY request as a response to the SUBSCRIBE request and a XML conference-info instance is present, the 'conference-state' 'active' element is set to 'true' an ISUP CPG message is set and the Generic notification parameter is set to '**Conference established**'		
ISUP Parameter values	**CPG:** Generic notification Conference established		
SIP Parameter values	**INVITE:** Contact: <conference URI>; isfocus NOTIFY: Subscription-State: active Event: conference Content-Type: application/conference-info+xml <?xml version="1.0" conference-info conference-state active>true<		
Comments			

Message flows

SIP NNI		MGCF		SIP-I
INVITE	→		→	INVITE (IAM)
100 Trying	←		←	100 Trying
180 Ringing	←		←	180 Ringing (ACM)
200 OK (INVITE)	←		←	200 OK (INVITE) (ANM)
ACK	→		→	ACK
SUBSCRIBE	←			
202 Accepted	→			
NOTIFY	→		→	INFO (CPG)
200 OK (NOTIFY)	←			200 OK (INFO)

Apply post test routine

TP number	TP_404_004	**Reference**	[1], clause 7.3.1 [2], clause 7.5.6.3
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/20 AND PICS 6.3.9/1		
Test Purpose name	Interworking of notification of 'Conference established' at the O-MGCF		
Test Purpose	Ensure that on receipt of an INVITE request after a session was established and the Contact header contains the **isfocus** parameter, a SUBCRIBE request is sent. Ensure that on receipt of a NOTIFY request as a response to the SUBSCRIBE request and a XML conference-info instance is present, the 'active' sub element of the 'conference-state' element is set to 'true' an INFO with encapsulated ISUP CPG message is set and the Generic notification parameter is set to '**Conference established**'. The INVITE request contains also a Replaces header to terminate the originally session by sending a BYE request		
ISUP Parameter values	**CPG:** Generic notification Conference established		
SIP Parameter values	INVITE 1: CallID: xxx INVITE 2: CallID: yyy Contact: <conference URI>; isfocus Replaces: xxx; to-tag=<>;from-tag=<> NOTIFY: Subscription-State: active Event: conference Content-Type: application/conference-info+xml <?xml version="1.0" conference-info conference-state active>true< BYE: CallID: xxx		
Comments	Note that the INVITE received in the confirmed dialogue is originated by the conference focus. The originally dialogue have to terminated.		

Message flows

SIP-I		**MGCF**		**SIP NNI**
INVITE (IAM)	→		→	INVITE 1
100 Trying	←		←	100 Trying
180 Ringing (ACM)	←		←	180 Ringing
200 OK (INVITE) (ANM)	←		←	200 OK (INVITE)
ACK	→		→	ACK
			←	INVITE 2
			→	200 OK (INVITE)
			←	ACK
			→	SUBSCRIBE
			←	202 Accepted
INFO (CPG)	←		←	NOTIFY
200 OK INFO	→		→	200 OK (NOTIFY)
			←	BYE
			→	200 OK (BYE)

Apply post test routine

TP number	TP_404_005	**Reference**	[1], clause 7.2.1 [2], clause 7.5.6.3
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/20 AND PICS 6.3.9/1		
Test Purpose name	Interworking of notification of 'other party added' at the I-MGCF		
Test Purpose	An established conference is already indicated by receipt of an adequate NOTIFY request at the I-MGCF. Ensure that on receipt of a NOTIFY request and the 'entity' attribute of the 'endpoint' element does not contain the ISUP address as received in the To header and the 'status' sub element of the 'endpoint' element is set to **connected**, an INFO with encapsulated ISUP CPG message is sent the Generic notification indicator is set to '**other party added**'		
ISUP Parameter values	**CPG:** Generic notification other party added		
SIP Parameter values	NOTIFY: To: <SIP-I address> Subscription-State: active Event: conference Content-Type: application/conference-info+xml <?xml version="1.0" conference-info users user endpoint entity="<not URI of ISUP>" status>connected<		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** **Session is established and joined in a conference** NOTIFY → → INFO (CPG) 200 OK (NOTIFY) ← ← 200 OK (INFO) **Apply post test routine**		

TP number	TP_404_006	**Reference**	[1], clause 7.3.1 [2], clause 7.5.6.3
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/20 AND PICS 6.3.9/1		
Test Purpose name	Interworking of notification of 'other party added' at the O-MGCF		
Test Purpose	An established conference is already indicated by receipt of an adequate NOTIFY request at the O-MGCF. Ensure that on receipt of a NOTIFY request and the 'entity' attribute of the 'endpoint' element does not contain the ISUP address as received in the To header and the 'status' sub element of the 'endpoint' element is set to **connected**, an INFO with encapsulated ISUP CPG message is sent the Generic notification indicator is set to '**other party added**'		
ISUP Parameter values	**CPG:** Generic notification other party added		
SIP Parameter values	NOTIFY: To: <SIP-I address> Subscription-State: active Event: conference Content-Type: application/conference-info+xml <?xml version="1.0" conference-info users user endpoint entity="<not URI of ISUP>" status>connected<		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** **Session is established and joined in a conference** INFO (CPG) ← ← NOTIFY 200 OK INFO → → 200 OK (NOTIFY) **Apply post test routine**		

TP number	TP_404_007	**Reference**	[1], clause 7.2.1 [2], clause 7.5.6.3
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/20 AND PICS 6.3.9/1		
Test Purpose name	Interworking of notification of 'isolated' at the I-MGCF		
Test Purpose	An established conference is already indicated by receipt of an adequate NOTIFY request at the I-MGCF. Ensure that on receipt of a NOTIFY request and the 'entity' attribute of the 'endpoint' element contains the ISUP address as received in the To header and the 'status' sub element of the 'endpoint' element is set to **on-hold**, an INFO with encapsulated ISUP CPG message is sent the Generic notification indicator is set to '**isolated**'		
ISUP Parameter values	**CPG:** Generic notification Isolated		
SIP Parameter values	NOTIFY: To: <SIP-I address> Subscription-State: active Event: conference Content-Type: application/conference-info+xml <?xml version="1.0" conference-info users user endpoint entity="<URI of SIP-I>" status>on-hold<		
Comments			

Message flows

SIP NNI		MGCF		SIP-I
Session is established and joined in a conference				
CASE A				
NOTIFY	→		→	INFO (CPG)
200 OK (NOTIFY)	←		←	200 OK INFO
CASE B				
NOTIFY	→		→	INFO (CPG)
200 OK (NOTIFY)	←		←	200 OK INFO
INVITE(sendonly)	→		→	INVITE (sendonly)
200 OK (INVITE)	←		←	200 OK (INVITE)
ACK	→		→	ACK
Apply post test routine				

TP number	TP_404_008	**Reference**	[1], clause 7.3.1 [2], clause 7.5.6.3
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/20 AND PICS 6.3.9/1		
Test Purpose name	Interworking of notification of 'isolated' at the O-MGCF		
Test Purpose	An established conference is already indicated by receipt of an adequate NOTIFY request at the O-MGCF. Ensure that on receipt of a NOTIFY request and the 'entity' attribute of the 'endpoint' element contains the ISUP address as received in the To header and the 'status' sub element of the 'endpoint' element is set to **on-hold**, an INFO with encapsulated ISUP CPG message is sent the Generic notification indicator is set to '**isolated**'		
ISUP Parameter values	**CPG:** Generic notification Isolated		
SIP Parameter values	NOTIFY: To: <SIP-I address> Subscription-State: active Event: conference Content-Type: application/conference-info+xml <?xml version="1.0" conference-info users user endpoint entity="<URI of SIP-I>" status>on-hold<		
Comments			

Message flows

SIP-I		MGCF		SIP NNI
Session is established and joined in a conference				
CASE A				
INFO (CPG)	←		←	NOTIFY
200 OK (INFO)	→		→	200 OK (NOTIFY)
CASE B				
INFO (CPG)	←		←	NOTIFY
200 OK INFO	→		→	200 OK (NOTIFY)
INVITE(sendonly)	←		←	INVITE(sendonly)
200 OK (INVITE)	→		→	200 OK (INVITE)
ACK	←		←	ACK
Apply post test routine				

TP number	TP_404_009	**Reference**	[1], clause 7.2.1 [2], clause 7.5.6.3
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/20 AND PICS 6.3.9/1		
Test Purpose name	Interworking of notification of 'other party isolated' at the I-MGCF		
Test Purpose	An established conference is already indicated by receipt of an adequate NOTIFY request at the I-MGCF. Ensure that on receipt of a NOTIFY request and the 'entity' attribute of the 'endpoint' element does not contain the ISUP address as received in the To header and the 'status' sub element of the 'endpoint' element is set to **on-hold**, an INFO with encapsulated ISUP CPG message is sent the Generic notification indicator is set to '**other party isolated**'		
ISUP Parameter values	**CPG:** Generic notification other party isolated		
SIP Parameter values	NOTIFY: To: <SIP-I address> Subscription-State: active Event: conference Content-Type: application/conference-info+xml <?xml version="1.0" conference-info users user endpoint entity="<not URI of ISUP>" status>on-hold<		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** **Session is established and joined in a conference** NOTIFY → → INFO (CPG) 200 OK (NOTIFY) ← ← 200 OK INFO **Apply post test routine**		

TP number	TP_404_010	**Reference**	[1], clause 7.2.1 [2], clause 7.5.6.3
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/20 AND PICS 6.3.9/1		
Test Purpose name	Interworking of notification of 'other party isolated' at the O-MGCF		
Test Purpose	An established conference is already indicated by receipt of an adequate NOTIFY request at the O-MGCF. Ensure that on receipt of a NOTIFY request and the 'entity' attribute of the 'endpoint' element does not contain the ISUP address as received in the To header and the 'status' sub element of the 'endpoint' element is set to **on-hold**, an INFO with encapsulated ISUP CPG message is sent the Generic notification indicator is set to '**other party isolated**'		
ISUP Parameter values	**CPG:** Generic notification other party isolated		
SIP Parameter values	NOTIFY: To: <SIP-I address> Subscription-State: active Event: conference Content-Type: application/conference-info+xml <?xml version="1.0" conference-info users user endpoint entity="<not URI of ISUP>" status>on-hold<		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** **Session is established and joined in a conference** INFO (CPG) ← ← NOTIFY 200 OK INFO → → 200 OK (NOTIFY) **Apply post test routine**		

TP number	TP_404_011	**Reference**	[1], clause 7.2.1 [2], clause 7.5.6.3
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/20 AND PICS 6.3.9/1		
Test Purpose name	Interworking of notification of 'reattached' at the I-MGCF		
Test Purpose	An established conference is already indicated by receipt of an adequate NOTIFY request and isolated at the I-MGCF. Ensure that on receipt of a NOTIFY request and the 'entity' attribute of the 'endpoint' element contains the ISUP address as received in the To header and the 'status' sub element of the 'endpoint' element is set to **connected**, an INFO with encapsulated ISUP CPG message is sent the Generic notification indicator is set to '**reattached**'		
ISUP Parameter values	**CPG:** Generic notification reattached		
SIP Parameter values	NOTIFY: To: <SIP-I address> Subscription-State: active Event: conference Content-Type: application/conference-info+xml <?xml version="1.0" conference-info users user endpoint entity="<URI of SIP-I>" status>connected<		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** **Session is established joined in a conference and isolated** **CASE A** NOTIFY → → INFO (CPG) 200 OK (NOTIFY) ← ← 200 OK (INFO) **CASE B** NOTIFY → → INFO (CPG) 200 OK (NOTIFY) ← ← 200 OK (INFO) INVITE(sendrecv) → → INVITE(sendrecv) 200 OK (INVITE) ← ← 200 OK (INVITE) ACK → → ACK **Apply post test routine**		

TP number	TP_404_012	**Reference**	[1], clause 7.3.1 [2], clause 7.5.6.3
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/20 AND PICS 6.3.9/1		
Test Purpose name	Interworking of notification of 'reattached' at the O-MGCF		
Test Purpose	An established conference is already indicated by receipt of an adequate NOTIFY request and isolated at the I-MGCF. Ensure that on receipt of a NOTIFY request and the 'entity' attribute of the 'endpoint' element contains the ISUP address as received in the To header and the 'status' sub element of the 'endpoint' element is set to **connected**, an INFO with encapsulated ISUP CPG message is sent the Generic notification indicator is set to '**reattached**'		
ISUP Parameter values	**CPG:** Generic notification Reattached		
SIP Parameter values	NOTIFY: To: <SIP-I address> Subscription-State: active Event: conference Content-Type: application/conference-info+xml <?xml version="1.0" conference-info users user endpoint entity="<URI of SIP-I>" status>connected<		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** **Session is established joined in a conference and isolated** **CASE A** INFO (CPG) ← ← NOTIFY 200 OK (INFO) → → 200 OK (NOTIFY) **CASE B** INFO (CPG) ← ← NOTIFY 200 OK (INFO) → → 200 OK (NOTIFY) INVITE(sendrecv) ← ← INVITE(sendrecv) 200 OK (INVITE) → → 200 OK (INVITE) ACK ← ← ACK **Apply post test routine**		

TP number	TP_404_013	**Reference**	[1], clause 7.2.1 [2], clause 7.5.6.3
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/20 AND PICS 6.3.9/1		
Test Purpose name	Interworking of notification of 'other party reattached' at the I-MGCF		
Test Purpose	An established conference is already indicated by receipt of an adequate NOTIFY request and another party is isolated at the I-MGCF. Ensure that on receipt of a NOTIFY request and the 'entity' attribute of the 'endpoint' element does not contain the ISUP address as received in the To header and the 'status' sub element of the 'endpoint' element is set to **connected**, an INFO with encapsulated ISUP CPG message is sent the Generic notification indicator is set to '**other party reattached**'		
ISUP Parameter values	**CPG:** Generic notification other party reattached		
SIP Parameter values	NOTIFY: To: <SIP-I address> Subscription-State: active Event: conference Content-Type: application/conference-info+xml <?xml version="1.0" conference-info users user endpoint entity="<not URI of ISUP>" status>connected<		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** **Session is established joined in a conference and another party was isolated** NOTIFY → → INFO (CPG) 200 OK (NOTIFY) ← ← 200 OK (INFO) **Apply post test routine**		

TP number	TP_404_014	**Reference**	[1], clause 7.2.1 [2], clause 7.5.6.3
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/20 AND PICS 6.3.9/1		
Test Purpose name	Interworking of notification of 'other party reattached' at the O-MGCF		
Test Purpose	An established conference is already indicated by receipt of an adequate NOTIFY request and another party is isolated at the O-MGCF. Ensure that on receipt of a NOTIFY request and the 'entity' attribute of the 'endpoint' element does not contain the ISUP address as received in the To header and the 'status' sub element of the 'endpoint' element is set to **connected**, an INFO with encapsulated ISUP CPG message is sent the Generic notification indicator is set to '**other party reattached**'		
ISUP Parameter values	**CPG:** Generic notification other party reattached		
SIP Parameter values	NOTIFY: To: <SIP-I address> Subscription-State: active Event: conference Content-Type: application/conference-info+xml <?xml version="1.0" conference-info users user endpoint entity="<not URI of ISUP>" status>connected<		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** **Session is established joined in a conference and another party was isolated** INFO (CPG) ← ← NOTIFY 200 OK (INFO) → 200 OK (NOTIFY) **Apply post test routine**		

TP number	TP_404_015	**Reference**	[1], clause 7.2.1 [2], clause 7.5.6.3
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/20 AND PICS 6.3.9/1		
Test Purpose name	Interworking of notification of 'other party disconnected' at the I-MGCF		
Test Purpose	An established conference is already indicated by receipt of an adequate NOTIFY request at the I-MGCF. Ensure that on receipt of a NOTIFY request and the 'entity' attribute of the 'endpoint' element does not the ISUP address as received in the To header and the 'status' sub element of the 'endpoint' element is set to **dialled-out**, an INFO with encapsulated ISUP CPG message is sent the Generic notification indicator is set to '**other party disconnected**'		
ISUP Parameter values	**CPG:** Generic notification other party disconnected		
SIP Parameter values	NOTIFY: To: <SIP-I address> Subscription-State: active Event: conference Content-Type: application/conference-info+xml <?xml version="1.0" conference-info users user endpoint entity="<not URI of ISUP>" status>disconnected< joining-method>dialled-in< **or** joining-method>dialled-out<		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	Session is established and joined in a conference		
	NOTIFY →	→	INFO (CPG)
	200 OK (NOTIFY) ←	←	200 OK (NOTIFY)
	Apply post test routine		

TP number	TP_404_016	**Reference**	[1], clause 7.2.1 [2], clause 7.5.6.3
TSS reference	PSTN-SS/CONF/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/20 AND PICS 6.3.9/1		
Test Purpose name	Interworking of notification of 'other party disconnected' at the O-MGCF		
Test Purpose	An established conference is already indicated by receipt of an adequate NOTIFY request at the O-MGCF. Ensure that on receipt of a NOTIFY request and the 'entity' attribute of the 'endpoint' element does not contain the ISUP address as received in the To header and the 'status' sub element of the 'endpoint' element is set to **dialled-out**, an INFO with encapsulated ISUP CPG message is sent the Generic notification indicator is set to '**other party disconnected**'		
ISUP Parameter values	**CPG:** Generic notification other party disconnected		
SIP Parameter values	NOTIFY: To: <SIP-I address> Subscription-State: active Event: conference Content-Type: application/conference-info+xml <?xml version="1.0" conference-info users user endpoint entity="<not URI of ISUP>" status>disconnected< **or** joining-method>dialled-out<		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	Session is established and joined in a conference		
	INFO (CPG) ←	←	NOTIFY
	200 OK (INFO) →	→	200 OK (NOTIFY)
	Apply post test routine		

6.3.5 Message Waiting Indication (MWI)

Void.

6.3.6 Malicious Communication Identification (MCID)

Table 6.3.6-1: Void

Table 6.3.6-2: Void

Table 6.3.6-3: Void

Table 6.3.6-4: Void

TP number	TP_406_005	**Reference**	[1], clause 7.2.1 [2], clause 7.5.9.2.2
TSS reference	IMS-SS/MCID/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/3		
Test Purpose name	ISUP IDR is mapped into INFO request		
Test Purpose	Ensure that on receipt of INFO with encapsulated ISUP IDR containing a MCID request indicators indicator set to **MCID_req**, an INFO request is sent. A XML 'mcid' McidRequestIndicator is included set to **XML_McidReq** as indicated in table 6.3.6-5		
ISUP Parameter values	**IDR:** MCID request indicators **MCID_req**		
SIP Parameter values	INFO: <?xml version="1.0" mcid request> McidRequestIndicator>**XML_McidReq**</ HoldingIndicator>1</ INFO (IDR) no xml body present		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←	←	100 Trying
	INFO ←	←	INFO (IDR)
	200 OK INFO →	→	200 OK INFO
	Apply post test routine		

Table 6.3.6-5: Mapping of ISUP MCID request indicator into XML McidRequestIndicator

	MCID_req	**XML_McidReq**
VA_01	MCID not requested	0
VA_02	MCID requested	1

TP number	TP_406_006	**Reference**	[1], clause 7.2.1 [2], clause 7.5.9.2.3
TSS reference	IMS-SS/MCID/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/3		
Test Purpose name	INFO request is mapped into ISUP IRS		
Test Purpose	Ensure that on receipt of an INFO request the XML 'mcid' McidResponseIndicator is set to **MCID_rsp**, an INFO with encapsulated ISUP IRS is sent. The MCID response indicator is set to MCID_rsp as indicated in table 6.3.6-6		
ISUP Parameter values	**IRS:** MCID response indicator **MCID_rsp**		
SIP Parameter values	INFO: <?xml version="1.0" mcid response> McidResponseIndicator>**XML_McidRsp**</ INFO (IDR) no xml body present		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←	←	100 Trying
	INFO ←	←	INFO (IDR)
	200 OK INFO →	→	200 OK INFO
	INFO →	→	INFO (IRS)
	200 OK INFO ←	←	200 OK INFO
	Apply post test routine		

Table 6.3.6-6: Mapping of XML McidResponseIndicator into ISUP MCID response indicator

	XML_McidRsp	MCID_rsp
VA_01	0	MCID not included
VA_02	1	MCID included

TP number	TP_406_007	**Reference**	[1], clause 7.2.1 [2], clause 7.5.9.2.3
TSS reference	IMS-SS/MCID/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/3		
Test Purpose name	XML OrigPartyIdentity is mapped into ISUP IRS Calling Party number		
Test Purpose	Ensure that on receipt of an INFO request the XML 'mcid' McidResponseIndicator is set to **MCID_rsp**, an INFO with encapsulated ISUP IRS is sent. The XML OrigPartyIdentity is mapped into the Calling party: • If the country code of the OrigPartyIdentity URI is equal to the country code where the SUT is located the Nature of address is set to '**National (significant) number**', the '+' and the country code is removed from the user part of the XML OrigPartyIdentity URI and send in the Address signals of the Calling party number. • If the country code of the OrigPartyIdentity URI is not equal to the country code where the SUT is located the Nature of address is set to '**International number**', the '+' is removed from the user part of the XML OrigPartyIdentity URI and send in the Address signals of the Calling party number. The XML OrigPartyPresentationRestriction value **XML_orig_restr** is mapped into the Address presentation restriction indicator **APRI_value** of the Calling party number as indicated in table 6.3.6-7		
ISUP Parameter values	**IRS:** MCID response indicator MCID included Calling Party number Address presentation restriction indicator=**APRI_value** Address signal= ***derived from the OrigPartyIdentity***		
SIP Parameter values	INFO: <?xml version="1.0" mcid response> McidResponseIndicator>**1**</ OrigPartyIdentity>***any valid URI***</ OrigPartyPresentationRestriction>**XML_orig_restr**</ INFO (IDR) no xml body present		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←	←	100 Trying
	INFO ←	←	INFO (IDR)
	200 OK INFO →	→	200 OK INFO
	INFO →	→	INFO (IRS)
	200 OK INFO ←	←	200 OK INFO
	Apply post test routine		

Table 6.3.6-7: Mapping of XML OrigPartyPresentationRestriction into ISUP Calling party number APRI

	XML_orig_restr	APRI_value
VA_01	True	Presentation restricted
VA_02	False	Presentation allowed

TP number	TP_406_008	**Reference**	[1], clause 7.2.1 [2], clause 7.5.9.2.3
TSS reference	IMS-SS/MCID/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/3		
Test Purpose name	XML GenericNumber is mapped into ISUP IRS Additional calling Party number		
Test Purpose	Ensure that on receipt of an INFO request the XML 'mcid' McidResponseIndicator is set to **MCID_rsp**, an INFO with encapsulated ISUP IRS is sent. The XML GenericNumber is mapped into the Additional calling party: • If the country code of the GenericNumber URI is equal to the country code where the SUT is located the Nature of address is set to '**National (significant) number**', the '+' and the country code is removed from the user part of the XML GenericNumber URI and send in the Address signals of the Additional calling party number. • If the country code of the GenericNumber URI is not equal to the country code where the SUT is located the Nature of address is set to '**International number**', the '+' is removed from the user part of the XML GenericNumber URI and send in the Address signals of the Additional calling party number. The XML GenericNumberPresentationRestriction value **XML_gen_restr** is mapped into the Address presentation restriction indicator **APRI_value** of the Additional calling party number as indicated in table 6.3.6-8		
ISUP Parameter values	**IRS:** MCID response indicator MCID included Generic number Additional calling Party number Address presentation restriction indicator=**APRI_value** Address signal		
SIP Parameter values	INFO: <?xml version="1.0" mcid response> McidResponseIndicator>**1**</ GenericNumber>***derived from the Generic number Address signal***</ GenericNumberPresentationRestriction>**XML_gen_restr**</ INFO (IDR) no xml body present		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←	←	100 Trying
	INFO ←	←	INFO (IDR)
	200 OK INFO →	→	200 OK INFO
	INFO →	→	INFO (IRS)
	200 OK INFO ←	←	200 OK INFO
	Apply post test routine		

Table 6.3.6-8: Mapping of XML GenericNumberPresentationRestriction into ISUP Additional calling party number APRI

	XML_gen_restr	APRI_value
VA_01	True	Presentation restricted
VA_02	False	Presentation allowed

6.3.7 Closed User Group (CUG)

TP number	TP_407_001	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.10.1, table, 7.5.10.1.1, table, 7.5.10.1.2
TSS reference	IMS-SS/CUG/		
Selection criteria	PICS 6.3.2/23 AND NOT PICS 6.3.10/2		
Test Purpose name	Mapping of the SIP XML CUG Element to the ISUP closed usergroup interlock code parameter		
Test Purpose	Ensure that on receipt of an INVITE request containing the Content-Type application/vnd.etsi.cug+xml and the 'cug' XML body, an INVITE with encapsulated IAM is sent. The XML 'networkIndicator' is mapped into the ISUP Closed user group interlock code Network Identity indicator and the XML 'cugInterlockBinaryCode' is mapped into the ISUP Closed user group interlock code Binary code indicator		
ISUP Parameter values	**IAM:** Optional forward call indicator Closed user group call indicator Closed user group interlock code ***Network Identity*** mapped from XML networkIndicator ***Binary code*** mapped from XML cugInterlockBinaryCode		
SIP Parameter values	**INVITE:** Content-Type: application/vnd.etsi.cug+xml <?xml version="1.0" cug **networkIndicator=any proper value** **cugInterlockBinaryCode=any proper value** cugCommunicationIndicator INVITE(IAM): no xml body present		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	Apply post test routine		

TP number	TP_407_002	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.10.1, table 7.5.10.1.1, table, 7.5.10.1.3
TSS reference	IMS-SS/CUG/		
Selection criteria	PICS 6.3.2/23 AND NOT PICS 6.3.10/2		
Test Purpose name	Mapping of the SIP XML CUG Element to the ISUP *closed user group call indicator included in the* optional Forward Call Indicator Parameter		
Test Purpose	Ensure that on receipt of an INVITE request containing the Content-Type application/vnd.etsi.cug+xml and the 'cug' XML body, an INVITE with encapsulated IAM is sent. The XML 'cugCommunicationIndicator' is mapped into the ISUP Optional forward call indicator Closed user group call indicator as indicated in table 6.3.7-1		
ISUP Parameter values	**IAM:** Optional forward call indicator Closed user group call indicator=**CUG_ind** Closed user group interlock code Network Identity Binary code		
SIP Parameter values	**INVITE:** Content-Type: application/vnd.etsi.cug+xml <?xml version="1.0" cug networkIndicator cugInterlockBinaryCode cugCommunicationIndicator=**CUG_COM_ind** INVITE(IAM): no xml body present		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	100 Trying ←		
	Apply post test routine		

Table 6.3.7-1: Mapping of XML cugCommunicationIndicator into ISUP Optional forward call indicator Closed user group call indicator

	CUG_COM_ind	CUG_ind
VA_01	00	non-CUG call
VA_02	01	Spare
VA_03	10	closed user group call, outgoing access allowed
VA_04	11	closed user group call, outgoing access not allowed

TP number	TP_407_003	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.10.1, table, 7.5.10.1.4
TSS reference	IMS-SS/CUG/		
Selection criteria	PICS 6.3.2/23 AND PICS 6.3.10/2		
Test Purpose name	Communication is released if the PSTN/ISDN network does not support CUG, CUG without outgoing access		
Test Purpose	Ensure that on receipt of an INVITE request containing the Content-Type application/vnd.etsi.cug+xml and the 'cug' XML body the cugCommunicationIndicator set to '11', the communication is released with 403 (Forbidden) final response if the PSTN/ISDN network does not support CUG		
ISUP Parameter values			
SIP Parameter values	**INVITE:** Content-Type: application/vnd.etsi.cug+xml <?xml version="1.0" cug networkIndicator cugInterlockBinaryCode cugCommunicationIndicator=**'11'** INVITE(IAM): no xml body present		
Comments			
Message flows	**SIP NNI** → **MGCF** → **SIP-I** INVITE → 403 Forbidden ← ACK → **Apply post test routine**		

TP number	TP_407_004	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.10.1, table, 7.5.10.1.4
TSS reference	IMS-SS/CUG/		
Selection criteria	PICS 6.3.2/23 AND PICS 6.3.10/2		
Test Purpose name	Communication is treated as an ordinary call if the PSTN/ISDN network does not support CUG, CUG with outgoing access		
Test Purpose	Ensure that on receipt of an INVITE request containing the Content-Type application/vnd.etsi.cug+xml and the 'cug' XML body the cugCommunicationIndicator set to '10', the communication is treated as an ordinary call if the PSTN/ISDN network does not support CUG. A Closed user group interlock code is not present in the sent INVITE with encapsulated IAM		
ISUP Parameter values			
SIP Parameter values	**INVITE:** Content-Type: application/vnd.etsi.cug+xml <?xml version="1.0" cug networkIndicator cugInterlockBinaryCode cugCommunicationIndicator=**'10'** INVITE(IAM): no xml body present		
Comments			
Message flows	**SIP NNI** → **MGCF** → **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_407_005	**Reference**	[1], clause 7.2.1 [2], clauses 7.5.10.1, table, 7.5.10.1.4
TSS reference	IMS-SS/CUG/		
Selection criteria	PICS 6.3.2/23 AND PICS 6.3.10/2		
Test Purpose name	Communication is treated as an ordinary call if the PSTN/ISDN network does not support CUG, Non-CUG call		
Test Purpose	Ensure that on receipt of an INVITE request containing the Content-Type application/vnd.etsi.cug+xml and the 'cug' XML body the cugCommunicationIndicator set to '00', the communication is treated as an ordinary call if the PSTN/ISDN network does not support CUG. A Closed user group interlock code is not present in the sent INVITE with encapsulated IAM		
ISUP Parameter values			
SIP Parameter values	**INVITE:** Content-Type: application/vnd.etsi.cug+xml <?xml version="1.0" cug networkIndicator cugInterlockBinaryCode cugCommunicationIndicator=**'00'** INVITE(IAM): no xml body present		
Comments			
Message flows	**SIP NNI** → **MGCF** → **SIP-I** INVITE → → INVITE (IAM) 100 Trying ← **Apply post test routine**		

TP number	TP_407_006	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.10.2, table, 7.5.10.2.2
TSS reference	IMS-SS/CUG/		
Selection criteria	PICS 6.3.2/23 AND NOT PICS 6.3.10/1		
Test Purpose name	Mapping of the ISUP closed usergroup interloccode to SIP XML CUG element		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and a Closed user group interlock code parameter is present, an INVITE request is sent. The Network Identity indicator is mapped into the XML networkIndicator element, the Binary code is mapped into the XML cugInterlockBinaryCode		
ISUP Parameter values	**IAM:** Optional forward call indicator Closed user group call indicator Closed user group interlock code ***Network Identity*=any proper value** ***Binary code*=any proper value**		
SIP Parameter values	**INVITE:** Content-Type: application/vnd.etsi.cug+xml <?xml version="1.0" cug **networkIndicator=** mapped from ***Network Identity*** **cugInterlockBinaryCode=** mapped from ***Binary code*** cugCommunicationIndicator INVITE(IAM): no xml body present		
Comments			
Message flows	**SIP-I** → **MGCF** → **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_407_007	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.10.2, table, 7.5.10.2.3
TSS reference	IMS-SS/CUG/		
Selection criteria	PICS 6.3.2/23 AND NOT PICS 6.3.10/1		
Test Purpose name	Mapping of the ISUP closed usergroup interloccode to SIP XML CUG element		
Test Purpose	Ensure that on receipt of an IAM and an Optional forward call indicator is present set to **CUG_ind**, an INVITE request is sent. The XML cugCommunicationIndicator is mapped from the ISUP Closed user group call indicator set to **CUG_ind** as indicated in table 6.3.7-2		
ISUP Parameter values	**IAM:** Optional forward call indicator Closed user group call indicator=**CUG_ind** Closed user group interlock code Network Identity Binary code		
SIP Parameter values	**INVITE:** Content-Type: application/vnd.etsi.cug+xml <?xml version="1.0" cug networkIndicator cugInterlockBinaryCode cugCommunicationIndicator=**CUG_COM_ind** INVITE(IAM): no xml body present		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE (IAM) → → INVITE ← 100 Trying **Apply post test routine**		

Table 6.3.7-2: Mapping of ISUP Optional forward call indicator Closed user group call indicator into XML cugCommunicationIndicator

	CUG_ind	CUG_COM_ind
VA_01	non-CUG call	00
VA_02	Spare	01
VA_03	closed user group call, outgoing access allowed	10
VA_04	closed user group call, outgoing access not allowed	11

TP number	TP_407_008	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.10.2, 1.5.2.4.2/Q.735.1
TSS reference	IMS-SS/CUG/		
Selection criteria	PICS 6.3.2/23 AND PICS 6.3.10/1 AND PICS 6.3.10/1		
Test Purpose name	Communication is released if the IMS network does not support CUG, CUG without outgoing access		
Test Purpose	Ensure that on receipt of an INVITE with encapsulated IAM and the Optional forward call indicator Closed user group call indicator is set to closed user group call, outgoing access not allowed and the IMS network does not support the CUG supplementary service, a REL is sent and the Cause value is set to #29 Facility rejected the diagnostics indicating CUG without access		
ISUP Parameter values	**IAM:** Optional forward call indicator Closed user group call indicator=C UG call, outgoing access not allowed Closed user group interlock code Network Identity Binary code **REL:** Cause indicator Cause value=29 Diagnostics=3		
SIP Parameter values			
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →		
	500 Server Internal Error (REL) ←		
	ACK (RLC) →		
	Apply post test routine		

TP number	TP_407_009	**Reference**	[1], clause 7.3.1 [2], clauses 7.5.10.2, 1.5.2.4.2/Q.735.1
TSS reference	IMS-SS/CUG/		
Selection criteria	PICS 6.3.2/23 AND PICS 6.3.10/1 AND PICS 6.3.10/1		
Test Purpose name	Communication is treated as an ordinary call if the IMS network does not support CUG, CUG with outgoing access		
Test Purpose	Ensure that on receipt of an IAM and the Optional forward call indicator Closed user group call indicator is set to closed user group call, outgoing access allowed and the IMS network does not support the CUG supplementary service, the communication is treated as an ordinary call		
ISUP Parameter values	**IAM:** Optional forward call indicator Closed user group call indicator=C UG call, outgoing access allowed Closed user group interlock code Network Identity Binary code		
SIP Parameter values			
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →	→	INVITE
		←	100 Trying
	Apply post test routine		

6.3.8 Call Completion Services

TP number	TP_408_001	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.1
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	Mapping of CCNR possible indication in the ACM		
Test Purpose	Ensure that on receipt of a 180 Ringing with encapsulated ACM and a CCNR possible indicator is present set to 'CCNR possible' a 180 Ringing is sent. A Call-Info header is present, the URI is derived from the Called party number, the purpose parameter is set to 'call-completion', the m parameter is set to 'NR'.		
ISUP Parameter values	**IAM:** Called party number Number digits **ACM:** Called party status Subscriber free CCNR possible indicator CCNR possible		
SIP Parameter values	180: Call-Info: <sip:Called party number digits>;purpose=call-completion;m=NR		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE(IAM) 180 Ringing ← ← 180 Ringing(ACM) **Apply post test routine**		

TP number	TP_408_002	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.1
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	Mapping of CCNR possible indication in the CPG		
Test Purpose	Ensure that on receipt of a 180 Ringing with encapsulated CPG Event indicator set to 'Alerting' and a CCNR possible indicator is present set to 'CCNR possible' a 180 Ringing is sent. A Call-Info header is present, the URI is derived from the Called party number, the purpose parameter is set to 'call-completion', the m parameter is set to 'NR'.		
ISUP Parameter values	**IAM:** Called party number Number digits **ACM:** Called party status No indication **CPG:** Event indicator Alerting CCNR possible indicator CCNR possible		
SIP Parameter values	180: Call-Info: <sip:Called party number digits>;purpose=call-completion;m=NR		
Comments			
Message flows	**SIP NNI** **MGCF** **SIP-I** INVITE → → INVITE(IAM) ← 183 Session Progress(ACM(no indication)) 180 Ringing ← ← 180 Ringing(CPG(Alerting)) **Apply post test routine**		

TP number	TP_408_003	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.1
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	Mapping of CCBS possible indication in the REL		
Test Purpose	Ensure that on receipt of a 486 Busy Here with encapsulated ISUP REL message Cause #17 and a CCBS possible indicator in the Diagnostic field is set to 'CCBS possible' a 486 Busy here is sent. A Call-Info header is present, the URI is derived from the Called party number, the purpose parameter is set to 'call-completion', the m parameter is set to 'BS'.		
ISUP Parameter values	**IAM:** Called party number Number digits **REL:** Cause indicator Cause = 17 Diagnostic CCBS possible		
SIP Parameter values	486: Call-Info: <sip:Called party number digits>;purpose=call-completion;m=BS		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE(IAM)
	486 Busy here ←	←	486 Busy Here(REL)
	ACK →	←	ACK
	Apply post test routine		

TP number	TP_408_004	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.1
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	Mapping of m parameter in the INVITE request URI into CCSS parameter in the IAM		
Test Purpose	Ensure that on receipt of an INVITE request and a m parameter set to 'BS' or 'NR' an INVITE request with an encapsulated ISUP IAM is sent and the CCSS call indicator parameter is present and the value is set to 'CCSS call'.		
ISUP Parameter values	**IAM:** CCSS call indicator CCSS call		
SIP Parameter values	**INVITE:** <Request URI>;m=NR or ;m=BS		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE(IAM)
	100 Trying ←		
	Apply post test routine		

TP number	TP_408_005	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.1
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	Mapping of Call-Info header in the INVITE into CCSS parameter in the IAM		
Test Purpose	Ensure that on receipt of an INVITE request and a Call-Info header is present the purpose parameter is set to 'call-completion' and the m parameter set to 'BS' or 'NR' an IAM is sent and the CCSS call indicator parameter is present and the value is set to 'CCSS call'.		
ISUP Parameter values	**IAM:** CCSS call indicator CCSS call		
SIP Parameter values	**INVITE:** <Request URI> Call-Info: <sip:Called party number digits>;purpose=call-completion; m=BS or NR		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE(IAM)
	100 Trying ←		
	Apply post test routine		

TP number	TP_408_006	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.2
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	Invocation of CCBS in the I-MGCF m parameter in Start line		
Test Purpose	Ensure that on receipt of a SUBSCRIBE request the Request URI contains the m parameter set to 'BS' and Event header field contains the value 'call-completion', an M3UA SCCP UDT or XUDT is sent containing a TC-Begin REQUEST invoke Data field. The TC-Begin REQUEST invoke CalledPartyNumber is derived from the To header, the CallingPartyNumber is derived from the From header and the RetainSupported is set to 'TRUE'.		
TCAP Parameter values	TC Begin CCBS REQUEST invoke CalledPartyNumber derived from the **To** header CallingPartyNumber derived from the **P-Asserted-Identity** header RetainSupported TRUE		
SIP Parameter values	SUBSCRIBE: <Request URI>, m=BS Event: call-completion		
Comments			
Message flows	**SIP NNI** **MGCF** **M3UA** SUBSCRIBE → → DATA (SCCP (TC-Begin)) 202 Accepted ← **Apply post test routine**		

TP number	TP_408_007	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.2
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	Invocation of CCBS in the I-MGCF m parameter in Call-Info header		
Test Purpose	Ensure that on receipt of a SUBSCRIBE and the Event header field contains the value 'call-completion' and a Call-Info header with purpose parameter ser to call-completion and m parameter set to 'BS', an M3UA SCCP UDT or XUDT is sent containing a TC-Begin REQUEST invoke Data field. The TC-Begin REQUEST invoke CalledPartyNumber is derived from the To header, the CallingPartyNumber is derived from the From header and the RetainSupported is set to 'TRUE'.		
TCAP Parameter values	TC Begin CCBS REQUEST invoke CalledPartyNumber derived from the **To** header CallingPartyNumber derived from the **P-Asserted-Identity** header RetainSupported TRUE		
SIP Parameter values	SUBSCRIBE: <Requesr URI> Event: call-completion Call-Info: <sip:Calling party number digits>;purpose=call-completion; m=BS		
Comments			
Message flows	**SIP NNI** **MGCF** **M3UA** SUBSCRIBE → → DATA (SCCP (TC-Begin)) 202 Accepted ← **Apply post test routine**		

TP number	TP_408_008	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.2
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	Invocation of CCNR in the I-MGCF m parameter in Start line		
Test Purpose	Ensure that on receipt of a SUBSCRIBE request the Request URI contains the m parameter set to 'NR' and Event header field contains the value 'call-completion', an M3UA SCCP UDT or XUDT is sent containing a TC-Begin REQUEST invoke Data field. The TC-Begin REQUEST invoke CalledPartyNumber is derived from the To header, the CallingPartyNumber is derived from the From header and the RetainSupported is set to 'TRUE'.		
TCAP Parameter values	TC Begin CCNR REQUEST invoke CalledPartyNumber derived from the **To** header CallingPartyNumber derived from the **P-Asserted-Identity** header RetainSupported TRUE		
SIP Parameter values	SUBSCRIBE: <Request URI>, m=NR Event: call-completion		
Comments			
Message flows	**SIP NNI** **MGCF** **M3UA** SUBSCRIBE → → DATA (SCCP (TC-Begin)) 202 Accepted ← **Apply post test routine**		

TP number	TP_408_009	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.2
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	Invocation of CCNR in the I-MGCF m parameter in Call-Info header		
Test Purpose	Ensure that on receipt of a SUBSCRIBE and the Event header field contains the value 'call-completion' and a Call-Info header with purpose parameter ser to call-completion and m parameter set to 'NR', an M3UA SCCP UDT or XUDT is sent containing a TC-Begin REQUEST invoke Data field. The TC-Begin REQUEST invoke CalledPartyNumber is derived from the To header, the CallingPartyNumber is derived from the From header and the RetainSupported is set to 'TRUE'.		
TCAP Parameter values	TC Begin CCNR REQUEST invoke CalledPartyNumber derived from the **To** header CallingPartyNumber derived from the **P-Asserted-Identity** header RetainSupported TRUE		
SIP Parameter values	SUBSCRIBE: <Request URI> Event: call-completion Call-Info: <sip:Calling party number digits>;purpose=call-completion; m=NR		
Comments			
Message flows	**SIP NNI** **MGCF** **M3UA** SUBSCRIBE → → DATA (SCCP (TC-Begin)) 202 Accepted ← **Apply post test routine**		

TP number	TP_408_010	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.2
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	PUBLISH with m=BS parameter in the Request line and PIDF basic status "closed" is interworked into CCBS SUSPEND		
Test Purpose	Ensure that on receipt of a PUBLISH request and a m parameter is present in the Request line is set to 'BS' the Event header field contains the value 'presence', and a PIDF XML MIME body is present the presence status set to 'closed', an M3UA SCCP UDT or XUDT is sent containing a TC-Cont CCBS SUSPEND Data field.		
TCAP Parameter values	TC-Cont: CCBS SUSPEND		
SIP Parameter values	PUBLISH: <Request URI>; m=BS Event: presence Content-Type: application/pidf+xml <?xml version="1.0" encoding="UTF-8"?> <presence <status> <basic>closed</basic>		
Comments	Note the XML semantic is schematically the alias is not considered.		
Message flows	**SIP NNI** **MGCF** **M3UA** **Invoke a successful CCBS request and remote user is now free** PUBLISH → → DATA (SCCP (TC-Cont)) 200 OK (PUBLISH) ← **Apply post test routine**		

TP number	TP_408_011	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.2
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	PUBLISH with m=BS parameter in Call-Info header and PIDF basic status "closed" is interworked into CCBS SUSPEND		
Test Purpose	Ensure that on receipt of a PUBLISH request the Event header field contains the value 'presence' and a Call-Info header with purpose parameter ser to call-completion and m parameter set to 'BS' and a PIDF XML MIME body is present the presence status set to 'closed', an M3UA SCCP UDT or XUDT is sent containing a TC-Cont CCBS SUSPEND Data field.		
TCAP Parameter values	TC-Cont: CCBS SUSPEND		
SIP Parameter values	PUBLISH: <Request URI> Event: presence Call-Info: <sip:Calling party number digits>;purpose=call-completion; m=BS Content-Type: application/pidf+xml <?xml version="1.0" encoding="UTF-8"?> <presence <status> <basic>closed</basic>		
Comments	Note the XML semantic is schematically the alias is not considered.		
Message flows	**SIP NNI** **MGCF** **M3UA** **Invoke a successful CCBS request and remote user is now free** PUBLISH → → DATA (SCCP (TC-Cont)) 200 OK (PUBLISH) ← **Apply post test routine**		

TP number	TP_408_012	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.2
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	PUBLISH with m=BS parameter in the Request line and PIDF basic status "open" is interworked into CCBS RESUME		
Test Purpose	Ensure that on receipt of a PUBLISH request and a m parameter is present in the Request line is set to 'BS' the Event header field contains the value 'presence' and a PIDF XML MIME body is present the presence status set to 'open', an M3UA SCCP UDT or XUDT is sent containing a TC-Cont CCBS RESUME Data field.		
TCAP Parameter values	TC-Cont: CCBS RESUME		
SIP Parameter values	PUBLISH: <Request URI>; m=BS Event: presence Content-Type: application/pidf+xml <?xml version="1.0" encoding="UTF-8"?> <presence <status> <basic>open</basic>		
Comments	Note the XML semantic is schematically the alias is not considered.		
Message flows	**SIP NNI** **MGCF** **M3UA** **Successful CCBS request and remote user is free originating user suspended** PUBLISH → → DATA (SCCP (TC-Cont)) 200 OK (PUBLISH) ← **Apply post test routine**		

TP number	TP_408_013	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.2
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	PUBLISH with m=BS parameter in Call-Info header and PIDF basic status "open" is interworked into CCBS RESUME		
Test Purpose	Ensure that on receipt of a PUBLISH request and the Event header field contains the value 'presence', a Call-Info header with purpose parameter ser to call-completion and m parameter set to 'BS' and a PIDF XML MIME body is present the presence status set to 'open', an M3UA SCCP UDT or XUDT is sent containing a TC-Cont CCBS RESUME Data field.		
TCAP Parameter values	TC-Cont: CCBS RESUME		
SIP Parameter values	PUBLISH: <Request URI> Event: presence Call-Info: <sip:Calling party number digits>;purpose=call-completion; m=BS Content-Type: application/pidf+xml <?xml version="1.0" encoding="UTF-8"?> <presence <status> <basic>open</basic>		
Comments	Note the XML semantic is schematically the alias is not considered.		
Message flows	**SIP NNI** **MGCF** **M3UA** **Successful CCBS request and remote user is free originating user suspended** PUBLISH → → DATA (SCCP (TC-Cont)) 200 OK (PUBLISH) ← **Apply post test routine**		

TP number	TP_408_014	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.2
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	PUBLISH with m=NR parameter in the Request line and PIDF basic status "closed" is interworked into CCBS SUSPEND		
Test Purpose	Ensure that on receipt of a PUBLISH request and a m parameter is present in the Request line is set to 'NR' the Event header field contains the value 'presence' and a PIDF XML MIME body is present the presence status set to 'closed', an M3UA SCCP UDT or XUDT is sent containing a TC-Cont CCBS SUSPEND Data field.		
TCAP Parameter values	TC-Cont: CCBS SUSPEND		
SIP Parameter values	PUBLISH: <Request URI>; m=NR Event: presence Content-Type: application/pidf+xml <?xml version="1.0" encoding="UTF-8"?> <presence <status> <basic>closed</basic>		
Comments	Note the XML semantic is schematically the alias is not considered.		
Message flows	**SIP NNI** **MGCF** **M3UA** **Invoke a successful CCNR request and remote user is now free** PUBLISH → → DATA (SCCP (TC-Cont)) 200 OK (PUBLISH) ← **Apply post test routine**		

TP number	TP_408_015	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.2
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	PUBLISH with m=NR parameter in Call-Info header and PIDF basic status "closed" is interworked into CCBS SUSPEND		
Test Purpose	Ensure that on receipt of a PUBLISH request the Event header field contains the value 'presence', a Call-Info header with purpose parameter ser to call-completion and m parameter set to 'NR' and a PIDF XML MIME body is present the presence status set to 'closed', an M3UA SCCP UDT or XUDT is sent containing a TC-Cont CCBS SUSPEND Data field.		
TCAP Parameter values	TC-Cont: CCBS SUSPEND		
SIP Parameter values	PUBLISH: <Request URI> Event: presence Call-Info: <sip:Calling party number digits>;purpose=call-completion; m=NR Content-Type: application/pidf+xml <?xml version="1.0" encoding="UTF-8"?> <presence <status> <basic>closed</basic>		
Comments	Note the XML semantic is schematically the alias is not considered.		
Message flows	**SIP NNI** **MGCF** **M3UA** **Invoke a successful CCNR request and remote user is now free** PUBLISH → → DATA (SCCP (TC-Cont)) 200 OK (PUBLISH) ← **Apply post test routine**		

TP number	TP_408_016	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.2
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	PUBLISH with m=NR parameter in the Request line and PIDF basic status "open" is interworked into CCBS RESUME		
Test Purpose	Ensure that on receipt of a PUBLISH request and a m parameter is present in the Request line is set to 'NR' the Event header field contains the value 'presence' and a PIDF XML MIME body is present the presence status set to 'open', an M3UA SCCP UDT or XUDT is sent containing a TC-Cont CCBS RESUME Data field.		
TCAP Parameter values	TC-Cont: CCBS RESUME		
SIP Parameter values	PUBLISH: <Request URI>; m=NR Event: presence Content-Type: application/pidf+xml <?xml version="1.0" encoding="UTF-8"?> <presence <status> <basic>open</basic>		
Comments	Note the XML semantic is schematically the alias is not considered.		
Message flows	**SIP NNI** **MGCF** **M3UA** **Successful CCNR request and remote user is free originating user suspended** PUBLISH → → DATA (SCCP (TC-Cont)) 200 OK (PUBLISH) ← **Apply post test routine**		

TP number	TP_408_017	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.2
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	PUBLISH with m=NR parameter in Call-Info header and PIDF basic status "open" is interworked into CCBS RESUME		
Test Purpose	Ensure that on receipt of a PUBLISH request and Event header field contains the value 'presence' a Call-Info header with purpose parameter ser to call-completion and m parameter set to 'NR' and a PIDF XML MIME body is present the presence status set to 'open', an M3UA SCCP UDT or XUDT is sent containing a TC-Cont CCBS RESUME Data field.		
TCAP Parameter values	TC-Cont: CCBS RESUME		
SIP Parameter values	PUBLISH: <Request URI> Event: presence Call-Info: <sip:Calling party number digits>;purpose=call-completion; m=NR Content-Type: application/pidf+xml <?xml version="1.0" encoding="UTF-8"?> <presence <status> <basic>open</basic>		
Comments	Note the XML semantic is schematically the alias is not considered.		
Message flows	**SIP NNI** **MGCF** **M3UA** **Successful CCNR request and remote user is free originating user suspended** PUBLISH → → DATA (SCCP (TC-Cont)) 200 OK (PUBLISH) ← **Apply post test routine**		

TP number	TP_408_018	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.2
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	SUBSCRIBE with m=BS and Expires header set to '0' is interworked into CCBS CANCEL		
Test Purpose	Ensure that on receipt of a SUBSCRIBE request and a m parameter is present in the Request line is set to 'BS' **or** a Call-Info header with purpose parameter ser to call-completion and m parameter set to 'BS' and Event header field contains the value 'call-completion' and an Expires header set to '0', an M3UA SCCP UDT or XUDT is sent containing a TC-End CCBS CANCEL Data field.		
TCAP Parameter values	TC-End: CCBS CANCEL		
SIP Parameter values	SUBSCRIBE: <Request URI>; m=BS Event:call-completion Call-Info: <sip:Calling party number digits>;purpose=call-completion; m=BS Expires: 0		
Comments			
Message flows	**SIP NNI**	**MGCF**	**M3UA**
		A CCBS is successfully invoked	
	SUBSCRIBE →	→	DATA (SCCP (TC-End))
	202 Accepted ←		
		Apply post test routine	

TP number	TP_408_019	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.2
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	SUBSCRIBE with m=NR and Expires header set to '0' is interworked into CCBS CANCEL		
Test Purpose	Ensure that on receipt of a SUBSCRIBE request and a m parameter is present in the Request line is set to 'NR' **or** a Call-Info header with purpose parameter ser to call-completion and m parameter set to 'BS' and Event header field contains the value 'call-completion' and an Expires header set to '0', an M3UA SCCP UDT or XUDT is sent containing a TC-End CCBS CANCEL Data field.		
TCAP Parameter values	TC-End: CCBS CANCEL		
SIP Parameter values	SUBSCRIBE: <Request URI>; m=NR Event:call-completion Call-Info: <sip:Calling party number digits>;purpose=call-completion; m=NR Expires: 0		
Comments			
Message flows	**SIP NNI**	**MGCF**	**M3UA**
		A CCNR is successfully invoked	
	SUBSCRIBE →	→	DATA (SCCP (TC-End))
	202 Accepted ←		
		Apply post test routine	

TP number	TP_408_020	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.3
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	TC-Cont CCBS REQUEST (return result) is interworked into NOTIFY cc-service-retention present		
Test Purpose	Ensure that on receipt of an M3UA UDT or XUDT containing a TC-Cont CCBS REQUEST (return result) Data field and the RetainSupported element is set to TRUE, a NOTIFY request is sent and the cc-state body is set to 'queued' the cc-service-retention body is set to 'true'.		
TCAP Parameter values	TC-Cont: CCBS REQUEST (return result) RetainSupported=TRUE		
SIP Parameter values	NOTIFY: Event: call-completion Content-Type: application/call-completion cc-state: queued cc-service-retention: true		
Comments			

Message flows	**SIP NNI**		**MGCF**		**M3UA**
	SUBSCRIBE	→		→	(X)UDT (TC-Begin)
	202 Accepted	←			
	NOTIFY	←		←	DATA (SCCP (TC-Cont))
	200 OK (NOTIFY)	→			
	Apply post test routine				

TP number	TP_408_021	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.3
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	TC-Cont CCBS REQUEST (return result) is interworked into NOTIFY cc-service-retention not present		
Test Purpose	Ensure that on receipt of an M3UA UDT or XUDT containing a TC-Cont CCBS REQUEST (return result) Data field and the RetainSupported element is set to FALSE, a NOTIFY request is sent and the cc-state body is set to 'queued' a cc-service-retention body is not present.		
TCAP Parameter values	TC-Cont: CCBS REQUEST (return result) RetainSupported=FALSE		
SIP Parameter values	NOTIFY: Event: call-completion Content-Type: application/call-completion cc-state: queued		
Comments			

Message flows	**SIP NNI**		**MGCF**		**M3UA**
	SUBSCRIBE	→		→	DATA (SCCP (TC-Begin))
	202 Accepted	←			
	NOTIFY	←		←	DATA (SCCP (TC-Cont))
	200 OK (NOTIFY)	→			
	Apply post test routine				

TP number	TP_408_022	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.3
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	CCBS Return error TC-End ShortTermDenial received, 480 Temporarily Unavailable response to SUBCRIBE		
Test Purpose	Ensure that on receipt of an M3UA UDT or XUDT containing a TC-End CCBS REQUEST (Return error) component in the Data field set to 'ShortTermDenial', a 480 Temporarily Unavailable final response to the SUBCRIBE CCBS request is sent.		
TCAP Parameter values	TC Begin CCBS REQUEST invoke TC-End CCBS REQUEST (Return error) ShortTermDenial		
SIP Parameter values	SUBSCRIBE: <Request URI>, m=BS Event: call-completion		
Comments			
Message flows	**SIP NNI**	**MGCF**	**M3UA**
	SUBCRIBE →		→ DATA (SCCP (TC-Begin))
	480 Temporarily Unavailable ←		← DATA (SCCP (TC-End))
	Apply post test routine		

TP number	TP_408_023	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.3
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	CCBS Return error TC-End LongTermDenial received, 403 Forbidden unavailable response to SUBCRIBE		
Test Purpose	Ensure that on receipt of an M3UA UDT or XUDT containing a TC-End CCBS REQUEST (Return error) component in the Data field set to 'LongTermDenial', a 403 Forbidden final response to the SUBCRIBE CCBS request is sent.		
TCAP Parameter values	TC Begin CCBS REQUEST invoke TC-End CCBS REQUEST (Return error) LongTermDenial		
SIP Parameter values	SUBSCRIBE: <Request URI>, m=BS Event: call-completion		
Comments			
Message flows	**SIP NNI**	**MGCF**	**M3UA**
	SUBSCRIBE →		→ DATA (SCCP (TC-Begin))
	403 Forbidden ←		← DATA (SCCP (TC-End))
	Apply post test routine		

TP number	TP_408_024	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.3
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	CCNR Return error TC-End ShortTermDenial received, 480 Temporarily Unavailable response to SUBCRIBE		
Test Purpose	Ensure that on receipt of an M3UA UDT or XUDT containing a TC-End CCNR REQUEST (Return error) component in the Data field set to 'ShortTermDenial', a 480 Temporarily Unavailable final response to the SUBCRIBE CCNR request is sent.		
TCAP Parameter values	TC Begin CCNR REQUEST invoke TC-End CCNR REQUEST (Return error) ShortTermDenial		
SIP Parameter values	SUBSCRIBE: <Request URI>, m=NR Event: call-completion		
Comments			
Message flows	**SIP NNI**	**MGCF**	**M3UA**
	SUBCRIBE →		→ DATA (SCCP (TC-Begin))
	480 Temporarily Unavailable ←		← DATA (SCCP (TC-End))
	Apply post test routine		

TP number	TP_408_025	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.3
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	CCNR Return error TC-End LongTermDenial received, 403 Forbidden unavailable response to SUBCRIBE		
Test Purpose	Ensure that on receipt of a M3UA SCCP containing a TC-End CCNR REQUEST (Return error) component in the Data field set to 'LongTermDenial', a 403 Forbidden final response to the SUBCRIBE CCNR request is sent.		
TCAP Parameter values	TC Begin CCNR REQUEST invoke TC-End CCNR REQUEST (Return error) LongTermDenial		
SIP Parameter values	SUBSCRIBE: <Request URI>, m=NR Event: call-completion		
Comments			
Message flows	**SIP NNI**	**MGCF**	**M3UA**
	SUBSCRIBE →		→ DATA (SCCP (TC-Begin))
	403 Forbidden ←		← DATA (SCCP (TC-End))
	Apply post test routine		

TP number	TP_408_026	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.3
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	TC-End CCBS CANCEL received after CCBS was successfully invoked		
Test Purpose	Ensure that on receipt of an M3UA SCCP containing a TC-End CCBS CANCEL after a CCBS was successfully invoked, a NOTIFY request is sent containing a m parameter set to 'BS' in the Request line and a Subscription-State header set to 'terminated ' and the subexp-params **reason** set to 'noresource'.		
TCAP Parameter values	TC-End CCBS CANCEL		
SIP Parameter values	NOTIFY : <Request URI> Event:call-completion Subscription-State: terminated; reason=noresource		
Comments			
Message flows	**SIP NNI**	**MGCF**	**M3UA**
	CCBS request successfully invoked		
	NOTIFY ←		← DATA (SCCP (TC-End))
	200 OK NOTIFY →		
	Apply post test routine		

TP number	TP_408_027	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.3
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	TC-End CCBS CANCEL received after CCNR was successfully invoked		
Test Purpose	Ensure that on receipt of an M3UA SCCP containing a TC-End CCBS CANCEL after a CCNR was successfully invoked, a NOTIFY request is sent containing a m parameter set to 'NR' in the Request line and a Subscription-State header set to 'terminated ' and the subexp-params **reason** set to 'noresource'.		
TCAP Parameter values	TC-End CCBS CANCEL		
SIP Parameter values	NOTIFY : <Request URI> Event:call-completion Subscription-State: terminated; reason=noresource		
Comments			
Message flows	**SIP NNI**	**MGCF**	**M3UA**
	CCNR request successfully invoked		
	NOTIFY ←		← DATA (SCCP (TC-End))
	200 OK NOTIFY →		
	Apply post test routine		

TP number	TP_408_028	**Reference**	[1] 7.7.10.3 [2] 7.5.11.1, table 7.5.11.1.3
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	Interworking of Remote user free indication at the I-MGCF		
Test Purpose	Ensure that on receipt of an M3UA UDT or XUDT containing a TC-Cont REMOTE USER FREE invoke component in the Data field, a NOTIFY request is sent and a cc-state body is present set to 'ready'.		
TCAP Parameter values	TC-Cont CCBS REMOTE USER FREE		
SIP Parameter values	NOTIFY: Event: call-completion Content-Type: application/call-completion cc-state: ready		
Comments			
Message flows	**SIP NNI** **MGCF** **M3UA** **CCNR request successfully invoked** NOTIFY ← ← DATA (SCCP (TC-Cont)) 200 OK (NOTIFY) → **Apply post test routine**		

TP number	TP_408_029	**Reference**	[1] 7.7.10 [2] 7.5.11.2, table 7.5.11.2.1
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	Mapping of CCNR possible indication in a 180 into the CCNR possible indicator in the ACM		
Test Purpose	Ensure that on receipt of a 180 Ringing provisional response and a Call-Info header is present set to the URI of the terminating user and a purpose parameter set to 'call-completion' and m parameter ser to 'NR', a 180 Ringing with encapsulated ISUP ACM is sent and a CCNR possible indicator Parameter is present set to 'CCNR possible'.		
ISUP Parameter values	**IAM:** Called party number Number digits **ACM:** Called party status Subscriber free CCNR possible indicator CCNR possible		
SIP Parameter values	180: Call-Info: <sip:Called party number digits>;purpose=call-completion		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE(IAM) → → INVITE 180 Ringing (ACM) ← ← 180 Ringing **Apply post test routine**		

TP number	TP_408_030	**Reference**	[1] 7.7.10 [2] 7.5.11.2, table 7.5.11.2.1
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	486 with Call-Info header is mapped into REL cause 17 and CCBS possible		
Test Purpose	Ensure that on receipt of a 486 Busy Here and a Call-Info header is present set to the URI of the terminating user and a purpose parameter set to 'call-completion' and m parameter ser to 'BS', a 486 Busy Here with encapsulated ISUP REL message is sent and the Cause value is set to 17 or 34 the Diagnostics is set to 'CCBS possible'.		
ISUP Parameter values	**REL:** Cause indicator Cause=17 or 34 Diagnostics= CCBS possible		
SIP Parameter values	486: Call-Info: <sip:Called party number digits>;purpose=call-completion		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE(IAM) → → INVITE 486 Busy Here (REL) ← ← 486 Busy Here ACK → → ACK **Apply post test routine**		

TP number	TP_408_031	**Reference**	[1] 7.7.10 [2] 7.5.11.2, table 7.5.11.2.1
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	CCSS call indicator in IAM is mapped into the m parameter in the Request line in the sent INVITE		
Test Purpose	Ensure that on receipt of an INVITE request with encapsulated ISUP IAM and a CCSS call indicator parameter is present set to 'CCSS call', an INVITE request is sent and the Request line contains a m parameter set to 'NR' or 'BS'.		
ISUP Parameter values	**IAM:** CCSS call indicator CCSS call		
SIP Parameter values	**INVITE:** <Request URI>;m=NR **or** ;m=BS Call-Info: <sip:Called party number digits>;purpose=call-completion; m=BS **or** NR		
Comments			
Message flows	**SIP-I** **MGCF** **SIP NNI** INVITE(IAM) → → INVITE ← 100 Trying **Apply post test routine**		

TP number	TP_408_032	**Reference**	[1] 7.7.10 [2] 7.5.11.2, table 7.5.11.2.2
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	TC-Begin CCBS REQUEST (invoke) is mapped into SUBCRIBE request invokes CCBS		
Test Purpose	Ensure that on receipt of an M3UA SCCP containing a TC-Begin CCBS REQUEST (invoke) component, a SUBSCRIBE request is sent and the From and the P-Asserted-Identity header are derived from the CCBS REQUEST CallingPartyNumber the To header is derived from the CCBS REQUEST CalledPartyNumber the Event header field is set to 'call-completion' the Request line contains the m parameter set to 'BS'.		
TCAP Parameter values	TC-Begin CCBS REQUEST invoke CalledPartyNumber CallingPartyNumber retainSupported TRUE		
SIP Parameter values	SUBSCRIBE: <Request URI>, m=BS **From**: <derived from the CCBS REQUEST CallingPartyNumber > **To**: <derived from the CCBS REQUEST CalledPartyNumber > **P-Asserted-Identity**: <derived from the CCBS REQUEST CallingPartyNumber > Event: call-completion Expires: <any value>		
Comments			
Message flows	**M3UA** **MGCF** **SIP NNI** DATA (SCCP (TC-Begin)) → → SUBSCRIBE ← 202 Accepted **Apply post test routine**		

TP number	TP_408_033	**Reference**	[1] 7.7.10 [2] 7.5.11.2, table 7.5.11.2.2
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	TC-Begin CCNR REQUEST (invoke) is mapped into SUBCRIBE request invokes CCNR		
Test Purpose	Ensure that on receipt of an M3UA SCCP containing a TC-Begin CCNR REQUEST (invoke) component, a SUBSCRIBE request is sent and the From and the P-Asserted-Identity header are derived from the CCNR REQUEST CallingPartyNumber the To header is derived from the CCNR REQUEST CalledPartyNumber the Event header field is set to 'call-completion' the Request line contains the m parameter set to 'NR'.		
TCAP Parameter values	TC-Begin CCNR REQUEST invoke CalledPartyNumber CallingPartyNumber retainSupported TRUE		
SIP Parameter values	SUBSCRIBE: <Request URI>, m=NR **From**: <derived from the CCNR REQUEST CallingPartyNumber > **To**: <derived from the CCNR REQUEST CalledPartyNumber > **P-Asserted-Identity**: <derived from the CCBS REQUEST CallingPartyNumber > Event: call-completion Expires: <any value>		
Comments			
Message flows	**M3UA** **MGCF** **SIP NNI** DATA (SCCP (TC-Begin)) → → SUBSCRIBE ← 202 Accepted **Apply post test routine**		

TP number	TP_408_034	**Reference**	[1] 7.7.10 [2] 7.5.11.2, table 7.5.11.2.2
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	TC-Cont CCBS SUSPEND is interworked into PUBLISH with m=BS and PIDF basic status "closed"		
Test Purpose	CCBS or CCNR is invoked and the remote user is free. Ensure that on receipt of an M3UA SCCP TC-Cont CCBS SUSPEND invoke component, a PUBLISH request is sent containing the m parameter in the Request URI set to 'BS' or 'NR' the Event header set to 'presence' and a PIDF XML MIME body is present the presence status set to 'closed'.		
TCAP Parameter values	TC-Cont CCBS SUSPEND		
SIP Parameter values	PUBLISH: <Request URI>; m=BS **or** ;m=NR Event: presence Content-Type: application/pidf+xml <?xml version="1.0" encoding="UTF-8"?> <presence <status> <basic>closed</basic>		
Comments	Note the XML semantic is schematically the alias is not considered.		
Message flows	**M3UA** **MGCF** **SIP NNI** **Invoke a successful CCBS/CCNR request and remote user is now free** DATA (SCCP (TC-Cont)) → → PUBLISH ← 200 OK (PUBLISH) **Apply post test routine**		

TP number	TP_408_035	**Reference**	[1] 7.7.10 [2] 7.5.11.2, table 7.5.11.2.2
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	TC-Cont CCBS RESUME is interworked into PUBLISH with m=NR and PIDF basic status "open"		
Test Purpose	CCBS or CCNR is invoked and the remote user is free the originating user is suspended. Ensure that on receipt of an M3UA SCCP TC-Cont CCBS SUSPEND invoke component, a PUBLISH request is sent containing the m parameter in the Request URI set to 'BS' or 'NR' the Event header set to 'presence' and a PIDF XML MIME body is present the presence status set to 'open'.		
TCAP Parameter values	TC-Cont CCBS RESUME		
SIP Parameter values	PUBLISH: <Request URI>;m='BS' **or** ;m=NR Event: presence Content-Type: application/pidf+xml <?xml version="1.0" encoding="UTF-8"?> <presence <status> <basic>open</basic>		
Comments	Note the XML semantic is schematically the alias is not considered.		
Message flows	**M3UA** **MGCF** **SIP NNI** **Successful CCBS/CCNR request and originating user suspended** DATA (SCCP (TC-Cont)) ➔ ➔ PUBLISH ➔ 200 OK (PUBLISH) **Apply post test routine**		

TP number	TP_408_036	**Reference**	[1] 7.7.10 [2] 7.5.11.2, table 7.5.11.2.2
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	TC-End CCBS CANCEL is interworked into SUBSCRIBE with m=BS or NR and Expires header set to '0'		
Test Purpose	A CCBS or CCNR is successfully invoked. Ensure that on receipt of a UDT or XUDT containing an M3UA SCCP TC-End CCBS CANCEL Data field, a SUBSCRIBE request is sent and a m parameter is present in the Request URI set to 'BS' or 'NR the Event header field is set to 'call-completion' and the Expires header is set to '0'.		
TCAP Parameter values	TC-End: CCBS CANCEL		
SIP Parameter values	SUBSCRIBE: <Request URI>; m=BS or ;m='NR' Event:call-completion Call-Info: <sip:Calling party number digits>;purpose=call-completion; m=BS or m=NR Expires: 0		
Comments			
Message flows	**M3UA** **MGCF** **SIP NNI** **A CCBS or CCNR is successfully invoked** DATA (SCCP (TC-End)) ➔ ➔ SUBSCRIBE ➔ 202 Accepted **Apply post test routine**		

TP number	TP_408_037	**Reference**	[1] 7.7.10 [2] 7.5.11.2, table 7.5.11.2.3
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	A NOTIFY cc-state 'queued' and cc-service-retention 'true' is mapped into a TC-Cont CCBS REQUEST (return result) retain supported		
Test Purpose	Ensure that on receipt of a NOTIFY request the Event header field is set to 'call-completion' the cc-state body is set to 'queued' and the cc-service-retention body is set to 'true', an M3UA SCCP TC-Cont is sent and the CCBS REQUEST (return result) component is present the RetainSupported element is set to 'TRUE'.		
TCAP Parameter values	TC-Cont: CCBS REQUEST (return result) RetainSupported=TRUE		
SIP Parameter values	NOTIFY: Event: call-completion Content-Type: application/call-completion cc-state: queued cc-service-retention: true		
Comments			
Message flows	**M3UA** **MGCF** **SIP NNI** **CCBS request already invoked** DATA (SCCP (TC-Cont)) ← ← NOTIFY → 200 OK (NOTIFY) **Apply post test routine**		

TP number	TP_408_038	**Reference**	[1] 7.7.10 [2] 7.5.11.2, table 7.5.11.2.3
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	A NOTIFY cc-state 'queued' and no cc-service-retention body present is mapped into a TC-Cont CCBS REQUEST (return result) retain not supported		
Test Purpose	Ensure that on receipt of a NOTIFY request the Event header field is set to 'call-completion' the cc-state body is set to 'queued' and the cc-service-retention body is not present, an M3UA SCCP TC-Cont is sent and the CCBS REQUEST (return result) component is present the RetainSupported element is set to 'FALSE'.		
TCAP Parameter values	TC-Cont: CCBS REQUEST (return result) RetainSupported=FALSE		
SIP Parameter values	NOTIFY: Event: call-completion Content-Type: application/call-completion cc-state: queued		
Comments			
Message flows	**M3UA** **MGCF** **SIP NNI** **CCBS request already invoked** DATA (SCCP (TC-Cont)) ← ← NOTIFY → 200 OK (NOTIFY) **Apply post test routine**		

TP number	TP_408_039	Reference	[1] 7.7.10 [2] 7.5.11.2, table 7.5.11.2.3
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	A NOTIFY cc-state 'queued' and cc-service-retention 'true' is mapped into a TC-Cont CCNR REQUEST (return result) retain supported		
Test Purpose	Ensure that on receipt of a NOTIFY request the Event header field is set to 'call-completion' the cc-state body is set to 'queued' and the cc-service-retention body is set to 'true', an M3UA SCCP TC-Cont is sent and the CCNR REQUEST (return result) component is present the RetainSupported element is set to 'TRUE'.		
TCAP Parameter values	TC-Cont: CCNR REQUEST (return result) RetainSupported=TRUE		
SIP Parameter values	NOTIFY: Event: call-completion Content-Type: application/call-completion cc-state: queued cc-service-retention: true		
Comments			
Message flows	**M3UA** / **MGCF** / **SIP NNI** **CCNR request already invoked** DATA (SCCP (TC-Cont)) ← / ← NOTIFY → 200 OK (NOTIFY) **Apply post test routine**		

TP number	TP_408_040	Reference	[1] 7.7.10 [2] 7.5.11.2, table 7.5.11.2.3
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	A NOTIFY cc-state 'queued' and cc-service-retention 'true' is mapped into a TC-Cont CCNR REQUEST (return result) retain not supported		
Test Purpose	Ensure that on receipt of a NOTIFY request the Event header field is set to 'call-completion' the cc-state body is set to 'queued' and the cc-service-retention body is not present, an M3UA SCCP TC-Cont is sent and the CCNR REQUEST (return result) component is present the RetainSupported element is set to 'FALSE'.		
TCAP Parameter values	TC-Cont: CCNR REQUEST (return result) RetainSupported=FALSE		
SIP Parameter values	NOTIFY: Event: call-completion Content-Type: application/call-completion cc-state: queued		
Comments			
Message flows	**M3UA** / **MGCF** / **SIP NNI** **CCNR request already invoked** DATA (SCCP (TC-Cont)) ← / ← NOTIFY → 200 OK (NOTIFY) **Apply post test routine**		

TP number	TP_408_041	Reference	[1] 7.7.10 [2] 7.5.11.2, table 7.5.11.2.3
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	CCBS request unsuccessful 480 Temporarily Unavailable is received		
Test Purpose	Ensure that on receipt of a 480 Temporarily Unavailable final response upon CCBS was requested, an M3UA SCCP TC-End CCBS REQUEST (Return error) component containing the ShortTermDenial Element is sent.		
TCAP Parameter values	TC-End CCBS REQUEST (Return error) ShortTermDenial		
SIP Parameter values	SUBSCRIBE: <Request URI>, m=BS Event: call-completion		
Comments			
Message flows	**M3UA** / **MGCF** / **SIP NNI** DATA (SCCP (TC-Begin)) → / → SUBCRIBE DATA (SCCP (TC-End)) ← / ← 480 Temporarily Unavailable **Apply post test routine**		

TP number	TP_408_042	**Reference**	[1] 7.7.10 [2] 7.5.11.2, table 7.5.11.2.3
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	CCNR request unsuccessful 480 Temporarily Unavailable is received		
Test Purpose	Ensure that on receipt of a 480 Temporarily Unavailable final response upon CCNR was requested, an M3UA SCCP TC-End CCNR REQUEST (Return error) component containing the ShortTermDenial Element is sent.		
TCAP Parameter values	TC-End CCNR REQUEST (Return error) ShortTermDenial		
SIP Parameter values	SUBSCRIBE: <Request URI>, m=NR Event: call-completion		
Comments			
Message flows	**M3UA** **MGCF** **SIP NNI** DATA (SCCP (TC-Begin)) → → SUBCRIBE DATA (SCCP (TC-End)) ← ← 480 Temporarily Unavailable **Apply post test routine**		

TP number	TP_408_043	**Reference**	[1] 7.7.10 [2] 7.5.11.2, table 7.5.11.2.3
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	CCBS request unsuccessful 403 Forbidden is received		
Test Purpose	Ensure that on receipt of a 403 Forbidden final response upon CCBS was requested, an M3UA SCCP TC-End CCBS REQUEST (Return error) component containing the LongTermDenial Element is sent.		
TCAP Parameter values	TC-End CCBS REQUEST (Return error) LongTermDenial		
SIP Parameter values	SUBSCRIBE: <Request URI>, m=BS Event: call-completion		
Comments			
Message flows	**M3UA** **MGCF** **SIP NNI** DATA (SCCP (TC-Begin)) → → SUBCRIBE DATA (SCCP (TC-End)) ← ← 403 Forbidden **Apply post test routine**		

TP number	TP_408_044	**Reference**	[1] 7.7.10 [2] 7.5.11.2, table 7.5.11.2.3
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	CCNR request unsuccessful 403 Forbidden is sent		
Test Purpose	Ensure that on receipt of a 403 Forbidden final response upon CCNR was requested, an M3UA SCCP TC-End CCNR REQUEST (Return error) component containing the LongTermDenial Element is sent.		
TCAP Parameter values	TC-End CCNR REQUEST (Return error) LongTermDenial		
SIP Parameter values	SUBSCRIBE: <Request URI>, m=NR Event: call-completion		
Comments			
Message flows	**M3UA** **MGCF** **SIP NNI** DATA (SCCP (TC-Begin)) → → SUBCRIBE DATA (SCCP (TC-End)) ← ← 403 Forbidden **Apply post test routine**		

TP number	TP_408_045	**Reference**	[1] 7.7.10 [2] 7.5.11.2, table 7.5.11.2.3
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	CCBS invoked. NOTIFY with State header field set to "terminated" received TC-End is sent		
Test Purpose	Ensure that on receipt of a NOTIFY request the Subscription-State header is set to 'terminated' and the subexp-params **reason** set to 'noresource' upon CCBS was successfully invoked, an M3UA SCCP TC-End message is sent containing the CCBS CANCEL component.		
TCAP Parameter values	TC-End CCBS CANCEL		
SIP Parameter values	NOTIFY: <Request URI> Event:call-completion Subscription-State: terminated; reason=noresource		
Comments			
Message flows	**M3UA** **MGCF** **SIP NNI** **CCBS request successfully invoked** DATA (SCCP (TC-End)) ← ← NOTIFY → 200 OK NOTIFY **Apply post test routine**		

TP number	TP_408_046	**Reference**	[1] 7.7.10 [2] 7.5.11.2, table 7.5.11.2.3
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	CCNR invoked at the O-MGCF NOTIFY with State header field set to "terminated" received TC-End is sent		
Test Purpose	Ensure that on receipt of a NOTIFY request the Subscription-State header is set to 'terminated' and the subexp-params **reason** set to 'noresource' upon CCNR was successfully invoked, an M3UA SCCP TC-End message is sent containing the CCBS CANCEL component.		
TCAP Parameter values	TC-End CCBS CANCEL		
SIP Parameter values	NOTIFY: <Request URI> Event:call-completion Subscription-State: terminated; reason=noresource		
Comments			
Message flows	**M3UA** **MGCF** **SIP NNI** **CCNR request successfully invoked** DATA (SCCP (TC-End)) ← ← NOTIFY → 200 OK NOTIFY **Apply post test routine**		

TP number	TP_408_047	**Reference**	[1] 7.7.10 [2] 7.5.11.2, table 7.5.11.2.3
TSS reference	IMS-SS/CC/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/24		
Test Purpose name	Interworking of Remote user free indication at the O-MGCF		
Test Purpose	Ensure that on receipt of a NOTIFY request the cc-state body is set to 'ready' upon Call completion was successfully invoked, an M3UA SCCP TC-Cont message is sent containing the CCBS REMOTE USER FREE component.		
TCAP Parameter values	TC-Cont CCBS REMOTE USER FREE		
SIP Parameter values	NOTIFY: Event: call-completion Content-Type: application/call-completion cc-state: ready		
Comments			
Message flows	**M3UA** **MGCF** **SIP NNI** **CCBS or CCNR request successfully invoked** DATA (SCCP (TC-Cont)) ← ← NOTIFY → 200 OK (NOTIFY) **Apply post test routine**		

6.3.9 Communication Waiting (CW)

TP number	TP_409_001	**Reference**	[1], clause 7.2.1 [2], clause 7.5.12
TSS reference	IMS-SS/CW/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/8		
Test Purpose name	Mapping of Generic notification 'call waiting' in a 180 Ringing with encapsulated ACM into Alert-Info header		
Test Purpose	Ensure that on receipt of a 180 Ringing with encapsulated ACM the Called party status indicator is set to 'subscriber free' and a Generic notification indicator parameter is present set to "Call is a waiting call', a 180 Ringing is sent. An Alert-Info header is present and the urn is set to 'urn:alert:service:call-waiting'		
ISUP Parameter values	**ACM:** Backward call indicator Called party status indicator Subscriber free Generic notification Call is a waiting call		
SIP Parameter values	180: Alert-Info urn:alert:service:call-waiting 180 (ACM): ern not present		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
	180 Ringing ←	←	180 Ringing (ACM)
	Apply post test routine		

TP number	TP_409_002	**Reference**	[1], clause 7.2.1 [2], clause 7.5.12
TSS reference	IMS-SS/CW/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/8		
Test Purpose name	Mapping of Generic notification 'call waiting' in a 180 Ringing with encapsulated CPG into Alert-Info header		
Test Purpose	Ensure that on receipt of a 180 Ringing with encapsulated CPG the Event indicator is set to 'Alerting' and a Generic notification indicator parameter is present set to "Call is a waiting call', a 180 Ringing is sent. An Alert-Info header is present and the urn is set to 'urn:alert:service:call-waiting'		
ISUP Parameter values	**CPG:** Event indicator Alerting Generic notification Call is a waiting call		
SIP Parameter values	180: Alert-Info urn:alert:service:call-waiting 180 (ACM): ern not present		
Comments			
Message flows	**SIP NNI**	**MGCF**	**SIP-I**
	INVITE →	→	INVITE (IAM)
		←	183 Session Progress (ACM)
	180 Ringing ←	←	180 Ringing (CPG)
	Apply post test routine		

TP number	TP_409_003	**Reference**	[1], clause 7.3.1 [2], clause 7.5.12
TSS reference	IMS-SS/CW/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/8		
Test Purpose name	Interworking of the Alert-Info header in a 180 into Generic notification 'Call waiting' in a 180 Ringing with encapsulated ACM		
Test Purpose	Ensure that on receipt of a 180 Ringing and an Alert Info header is present the value is set to 'urn:alert:service:call-waiting', an180 Ringing with encapsulated ACM is sent containing a Generic notification indication parameter set to 'Call is a waiting call'		
ISUP Parameter values	**ACM:** Backward call indicator Called party status indicator Subscriber free Generic notification Call is a waiting call		
SIP Parameter values	180: Alert-Info urn:alert:service:call-waiting 180 (ACM): ern not present		
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →		→ INVITE
			← 100 Trying
	180 Ringing (ACM) ←		← 180 Ringing
	Apply post test routine		

TP number	TP_409_004	**Reference**	[1], clause 7.3.1 [2], clause 7.5.12
TSS reference	IMS-SS/CW/		
Selection criteria	PICS 6.3.1/2 AND PICS 6.3.2/8		
Test Purpose name	Interworking of the Alert-Info header in a 180 into Generic notification 'Call waiting' in a 180 Ringing with encapsulated CPG		
Test Purpose	Ensure that on receipt of a 180 Ringing and an Alert Info header is present the value is set to 'urn:alert:service:call-waiting', a 180 Ringing with encapsulated CPG is sent containing a Generic notification indication parameter set to 'Call is a waiting call'. The Event indicator is set to 'Alerting'		
ISUP Parameter values	**CPG:** Event indicator Alerting Generic notification Call is a waiting call		
SIP Parameter values	180: Alert-Info urn:alert:service:call-waiting 180 (ACM): ern not present		
Comments			
Message flows	**SIP-I**	**MGCF**	**SIP NNI**
	INVITE (IAM) →		→ INVITE
			← 100 Trying
	180 Ringing (ACM)	**T i/w2 expired**	
	CPG ←		← 180 Ringing
	Apply post test routine		

Annex A (informative): Bibliography

- ETSI TS 102 710-1: "IMS Network Testing (INT); Interworking between the IP Multimedia (IM) Core Network (CN) subsystem and Circuit Switched (CS) networks (Release 8); Part 1: Protocol Implementation Conformance Statement (PICS)".
- Recommendation ITU-T Q.850: "Usage of cause and location in the Digital Subscriber Signalling System No. 1 and the Signalling System No. 7 ISDN user part".

History

Document history		
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