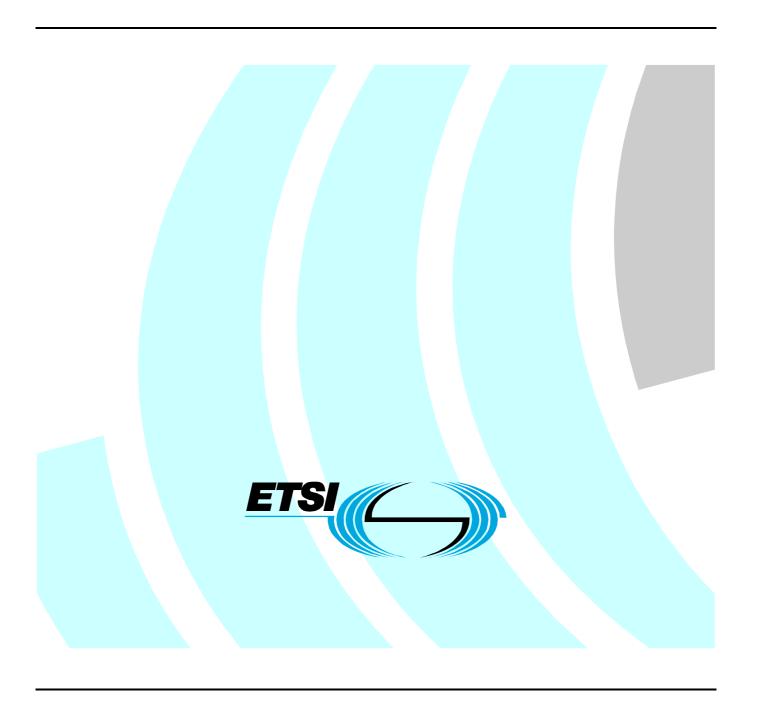
# ETSITS 186 015-2 V2.1.1 (2009-07)

Technical Specification

Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN);
PSTN/ISDN simulation services:
Explicit Communication Transfer (ECT);
Part 2: Test Suite Structure and Test Purposes (TSS&TP)



# Reference DTS/TISPAN-06032-2-NGN-R2

Keywords testing, ECT, TSS&TP, IMS

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### **Foreword**

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

The present document is part 2 Test Suite Structure and Test Purposes (TSS&TP)of the Explicit Communication transfer (ECT) simulation service, based on stage one and two of the ISDN ECT supplementary service. Within the Next Generation Network (NGN) the stage 3 description is specified using the IP-Multimedia Communication Control Protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP) as described below:

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

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

# 1 Scope

The present document specifies the Test Suite Structure and Test Purposes (TSS&TP) of the Explicit Communication transfer (ECT) simulation service, based on stage one and two of the ISDN ECT supplementary service. Within the Next Generation Network (NGN) the stage 3 description is specified using the IP-Multimedia Call Control Protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP), TS 183 029 [1].

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

Within the TISPAN NGN, the stage 3 description is specified using the IP-Multimedia Call Control Protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP).

# 2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific.

- For a specific reference, subsequent revisions do not apply.
- Non-specific reference may be made only to a complete document or a part thereof and only in the following cases:
  - if it is accepted that it will be possible to use all future changes of the referenced document for the purposes of the referring document;
  - for informative references.

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

### 2.1 Normative references

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

- [1] ETSI TS 183 029: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); PSTN/ISDN simulation services: Explicit Communication Transfer (ECT); Protocol specification".
- [2] ETSI TS 186 015-1: "Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); PSTN/ISDN simulation services: Explicit Communication Transfer (ECT); Part 1: Protocol Implementation conformance Statement (PICS)".

### 2.2 Informative references

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

Not applicable.

# 3 Definitions and abbreviations

### 3.1 Definitions

For the purposes of the present document, the terms and definitions specified in [1] apply.

### 3.2 Abbreviations

For the purposes of the present document, the abbreviations specified in [1] apply.

l Test	Test Suite Structure (TSS) and configuration						
Netw							
	TransferorAS	ECT_N01_xxx					
	TransfereeAS	ECT_N02_xxx					
		·					
User	Transferor	ECT_U01_xxx					
	Transferee	ECT_U02_xxx					
	TransferTarget	ECT_U03_xxx					
Interaction	OIR	ECT_N03_xxx					
	ACR-CB	ECT_N04_xxx					
	CONF	ECT_N05_xxx					
	ECT	FCT N06 xxx					

Figure 1: Test suite structure

# 4.1 Configuration

The scope of the current specification is to test the signalling and procedural aspects of the stage 3 requirements as described in [1]. The stage 3 description respects the requirements to several network entities and also to requirements regarding to end devices. Therefore several interfaces (reference points) are addressed to satisfy the test of the different entities.

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

**Testing of the Application Server:** This entity is responsible to perform the service. Hence the ISC interface is the appropriate access point. Figure 2 points to this.

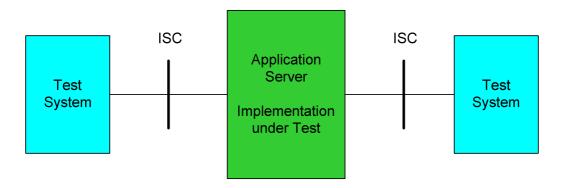


Figure 2: Applicable interface to test AS functionalities

If the ISC interface is not accessible it is also applicable to perform the test of the AS using any NNI (Mw, Mg, Mx) interface (consider figure 3). In case only the Gm interface is accessible this shall be used instead. In this case, be aware that the verification of several requirements is impeded.

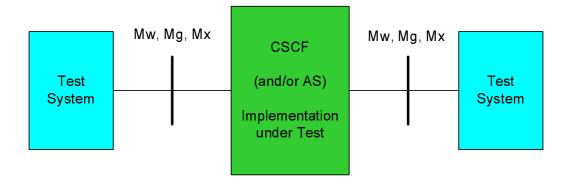


Figure 3: Applicable interfaces to test using the (generic) NNI interface

Figure 4 illustrates the usage of any NNI interface.

**Testing of User Equipment:** There are several requirements regarding to the end devices. Therefore a special configuration appears.

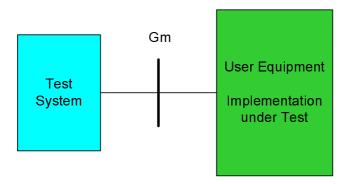


Figure 4: Applicable configuration to test the User Equipment

# 5 Test Purposes (TP)

### 5.1 Introduction

For each test requirement 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 1).

Table 1: TP identifier naming convention scheme

# 5.1.2 Test strategy

As the base standard TS 183 029 [1] 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 186 015-1 [2].

# 5.2 Signalling requirements

### 5.2.1 Actions at the Transferor AS

TSS	TP	Reference	Selection expression
Netw/TransferorAS	ECT_N01_001	4.5.2.4 [1]	PICS 1/2 1 AND
			NOT (PICS 1/4 OR PICS 1/5)

#### Test purpose

Communication transfer: Assured transfer. Transferor was originator of the originating call.

Ensure that a Transferor can successfully transfer the communication with the transferee set on hold before and the Transferor is notified about the processing. After the communication between the Transferee and the Transfer Target is confirmed, the communication between Transferor and Transferee is terminated. The Transferor was the initiator of the originating communication.

#### SIP header values:

REFER 1: Refer-To contains ISC#3 URI; method=invite

Referred-By contains ISC#1 URI

REFER 2: Refer-To contains ECT Session Identifier URI; method=invite

Referred-By contains ISC#ISC#1 URI

INVITE 3: Request URI = ECT Session Identifier URI

INVITE 4: Request URI = ISC#3 URI NOTIFY(100):Event contains refer

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY(200):Event contains refer

Comments:	orrag contains SIP/2.0 200 OK		
ISC#1	AS Transferor Establishment of session #1	ISC#2	ISC#3
INVITE 1	<b>→</b>	→ INVITE	
180 Ringing	<b>←</b>	← 180 Ringing	
200 OK (INVITE)	<del>_</del>	← 200 OK (INVITE)	
ACK	<b>→</b>	→ ACK	
INVITE 2 (sendonly)	<b>→</b>	→ INVITE (sendonly)	
200 OK (recvonly)	<b>←</b>	← 200 OK (recvonly)	
ACK	→ 100//4 to 100//6 to 100//	→ ACK	
REFER 1	ISC#1 transfers ISC#2 to ISC#  → REFER	<b>F3</b>	
	REFER 2	→ REFER	
	202 Accepted	← 202 Accepted	
202 Accepted	<ul> <li>202 Accepted</li> </ul>		
INVITE (inactive)	<del>(</del>	← INVITE (inactive)	
200 OK (inactive)	<b>→</b>	200 OK (inactive)	
ACK	<b>←</b>	← ACK	
NOTIFY(100)	<b>←</b>	← NOTIFY(100)	
200 OK NOTIFY	<b>→</b>	→ 200 OK NOTIFY	
	INVITE	← INVITE 3	> 0.00TE
	INVITE 4	<b>→</b> ←	<ul><li>→ INVITE</li><li>← 180 Ringing</li></ul>
	180 Ringing 180 Ringing	→ 180 Ringing	← 180 Ringing
	200 OK	+ 100 Kinging	← 200 OK
	200 OK	→ 200 OK	200 011
		ACK	→ ACK
NOTIFY(200)	<b>←</b>	← NOTIFY(200)	
200 OK NOTIFY	<b>→</b>	→ 200 OK NOTIFY	
BYE	<b>→</b>	→ BYE	
200 OK (BYE)	<b>←</b>	← 200 OK (BYE)	- 10040;th 10040
	BYE	← BYE 2	n ISC#2 with ISC#3
	BYE	• DIE 2	→ BYE
	200 OK (BYE)	<del>,</del>	€ 200 OK (BYE)
	200 OK (BYE)	→ 200 OK (BYE)	
	,	,	

TSS	TP	Reference	Selection expression
Netw/TransferorAS	ECT_N01_002	4.5.2.4 [1]	PICS 1/2 AND
			NOT (PICS 1/4 OR PICS 1/5)

Communication transfer: Assured transfer. Transferee was originator of the originating call.

Ensure that a Transferor can successfully transfer the communication with the transferee set on hold before and the Transferor is notified about the processing. After the communication between the Transferee and the Transfer Target is confirmed, the communication between Transferor and Transferee is terminated. The Transferee was the initiator of the originating communication.

#### SIP header values:

REFER 1: Refer-To contains ISC#3 URI; method=invite

Referred-By contains ISC#1 URI

REFER 2: Refer-To contains ECT Session Identifier URI; method=invite

Referred-By contains ISC#1 URI

INVITE 3: Request URI = ECT Session Identifier URI

INVITE 4: Request URI = ISC#3 URI

NOTIFY(100):Event contains refer

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY(200):Event contains refer

	/sipfrag co	ntains SIP/2.0 200 OK				
Comments:						
ISC#1		AS Transferor		ISC#2		SC#3
		olishment of session #1				
INVITE	<b>←</b>		←	INVITE 1		
180 Ringing	<b>→</b>		<b>→</b>	180 Ringing		
200 OK (INVITE)	<b>→</b>		<b>→</b>	200 OK (INVITE)		
ACK	+		<b>←</b>	ACK		
INVITE 2 (sendonly)	<b>→</b>		<b>→</b>	INVITE (sendonly)		
200 OK (recvonly)	<b>←</b>		<b>←</b>	200 OK (recvonly)		
ACK	<b>→</b>		<b>→</b>	ACK		
	ISC#1	transfers ISC#2 to ISC#	3			
REFER 1	→	REFER				
			<b>→</b>	REFER 2		
		202 Accepted	<del>-</del>	202 Accepted		
202 Accepted	+	202 Accepted	-			
INVITE (inactive)	÷	202 / 1000pt0a	<b>←</b>	INVITE (inactive)		
200 OK (inactive)	÷		÷	200 OK (inactive)		
ACK	ŕ		É	ACK		
AOR	•		•	AOR		
NOTIFY(100)	+		<b>←</b>	NOTIFY(100)		
200 OK NOTIFY	→		<b>→</b>	200 OK NOTIFY		
		INVITE	<b>←</b>	INVITE 3		
		INVITE 4	<b>→</b>		<b>→</b>	INVITE
		180 Ringing	<del>-</del>		<del>-</del>	180 Ringing
		180 Ringing	<b>→</b>	180 Ringing	_	100 1 111191119
		200 OK	÷	100 Kinging	<b>←</b>	200 OK
		200 OK 200 OK	÷	200 OK	•	200 010
		200 OR	•	ACK	<b>→</b>	ACK
NOTIFY(200)	<b>←</b>		<b>←</b>	NOTIFY(200)	7	AUN
200 OK NOTIFY	<b>→</b>		<b>→</b>	200 OK NOTIFY		
BYE	<b>→</b>		<b>→</b>	BYE		
200 OK (BYE)	<del>(</del>		<b>←</b>	200 OK (BYE)	100	#0 ···-!ul- 100#6
			-	Communicatio	n ISC	#2 with ISC#3
		BYE	<del>(</del>	BYE 2	_	
		BYE	<b>→</b>		<b>→</b>	BYE
		200 OK (BYE)	<b>←</b>		<b>←</b>	200 OK (BYE)
		200 OK (BYE)	<b>→</b>	200 OK (BYE)		

TSS	TP	Reference	Selection expression
Netw/TransferorAS	ECT_N01_003	4.5.2.4 [1]	PICS 1/1 AND
			NOT (PICS 1/4 OR PICS 1/5)

Communication transfer: Blind transfer. Transferor was originator of the originating call.

Ensure that a Transferor can successfully transfer the communication with the transferee set on hold before and the Transferor is notified about the processing. After the REFER request to the Transferee is sent, the communication between Transferor and Transferee is terminated. The Transferor was the initiator of the originating communication.

#### SIP header values:

REFER 1: Refer-To contains ISC#3 URI; method=invite

Referred-By contains SC#1 URI

REFER 2: Refer-To contains ECT Session Identifier URI; method=invite

Referred-By contains ISC#1 URI

INVITE 3: Request URI = ECT Session Identifier URI

INVITE 4: Request URI = ISC#3 URI

NOTIFY(100): Event contains refer

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY(200):Event contains refer

	sipfrag contains SIP/2.0 200 OK	
Comments: ISC#1	AS Transferor Establishment of session #1	ISC#2 ISC#3
INVITE 1 180 Ringing 200 OK (INVITE) ACK	+ + + + + + + + + + + + + + + + + + +	<ul> <li>→ INVITE</li> <li>← 180 Ringing</li> <li>← 200 OK (INVITE)</li> <li>→ ACK</li> </ul>
INVITE 2 (sendonly) 200 OK (recvonly) ACK	→ ← → ISC#1 transfers ISC#2 to ISC#	→ INVITE (sendonly) ← 200 OK (recvonly) → ACK
REFER 1	REFER 2 202 Accepted  202 Accepted	→ REFER ← 202 Accepted
202 Accepted BYE 200 OK (BYE)	202 Accepted	<ul><li>→ BYE</li><li>← 200 OK (BYE)</li></ul>
NOTIFY(100) 200 OK NOTIFY	<b>←</b> → INVITE	<ul><li>NOTIFY(100)</li><li>→ 200 OK NOTIFY</li><li>► INVITE 3</li></ul>
	INVITE 4 180 Ringing 180 Ringing	<ul> <li>→ INVITE</li> <li>← ± 180 Ringing</li> <li>→ 180 Ringing</li> </ul>
	200 OK 200 OK	<ul><li>← 200 OK</li><li>→ 200 OK</li><li>ACK → ACK</li></ul>
NOTIFY(200) 200 OK NOTIFY	÷ →	<ul> <li>NOTIFY(200)</li> <li>200 OK NOTIFY</li> <li>Communication ISC#2 with ISC#3</li> </ul>
	BYE BYE 200 OK (BYE)	<ul> <li>★ BYE 2</li> <li>→ BYE</li> <li>← 200 OK (BYE)</li> </ul>
	200 OK (BYE)	→ 200 OK (BYE)

TSS	TP	Reference	Selection expression
Netw/TransferorAS	ECT_N01_004	4.5.2.4 [1]	PICS 1/1 AND
			NOT (PICS 1/4 OR PICS 1/5)

Communication transfer: Blind transfer. Transferee was originator of the originating call. Ensure that a Transferor can successfully transfer the communication with the transferee set on hold before and the Transferor is notified about the processing. After the REFER request to the Transferee is sent, the communication between Transferor and Transferee is terminated. The Transferee was the initiator of the originating communication.

#### SIP header values:

REFER 1: Refer-To contains ISC#3 URI; method=invite

Referred-By contains ISC#1 URI

REFER 2: Refer-To contains ECT Session Identifier URI; method=invite

Referred-By contains ISC#1 URI

INVITE 3: Request URI = ECT Session Identifier URI

INVITE 4: Request URI = ISC#3 URI

NOTIFY(100):Event contains refer

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY(200):Event contains refer

message/sinfrag contains SIP/2.0 200 OK

	s/sipfrag contains SIP/2.0 200 OK		
Comments:			
ISC#1	AS Transferor Establishment of session #	ISC#2	ISC#3
INVITE	Establishment of session #	· ← INVITE 1	
180 Ringing	<b>→</b>	→ 180 Ringing	
200 OK (INVITE)	<b>→</b>	→ 200 OK (INVITE)	
ACK	<b>←</b>	← ACK	
INVITE 2 (sendonly)	<b>→</b>	→ INVITE (sendonly)	
200 OK (recvonly)	<b>←</b>	← 200 OK (recvonly)	
ACK	<b>→</b>	→ ACK	
	ISC#1 transfers ISC#2 to ISC	#3	
REFER 1	→ REFER	> DEFED 0	
	202 A coested	<ul><li>→ REFER 2</li><li>← 202 Accepted</li></ul>	
202 Asserted	202 Accepted  ← 202 Accepted	← 202 Accepted	
202 Accepted BYE	← 202 Accepted	<b>→</b> BYE	
200 OK (BYE)	É	€ 200 OK (BYE)	
200 OK (DTL)	•	200 01 (812)	
NOTIFY(100)	<b>←</b>	← NOTIFY(100)	
200 OK NOTIFY	<b>→</b>	→ 200 OK NOTIFY	
	INVITE	← INVITE 3	
	INVITE 4	<b>→</b>	→ INVITE
	180 Ringing	<b>←</b>	<ul> <li>180 Ringing</li> </ul>
	180 Ringing	→ 180 Ringing	
	200 OK	<b>+</b>	<b>←</b> 200 OK
	200 OK	→ 200 OK	<b>3</b> A O K
NOTIFY(200)	_	ACK	→ ACK
NOTIFY(200) 200 OK NOTIFY	<b>←</b> →	<ul><li>NOTIFY(200)</li><li>→ 200 OK NOTIFY</li></ul>	
200 OK NOTIFT	7		on ISC#2 with ISC#3
	BYE	← BYE 2	511 10 0 # 2 WILLI 10 0 # 3
	BYE	<b>→</b>	→ BYE
	200 OK (BYE)	<del>`</del>	€ 200 OK (BYE)
	200 OK (BYE)	→ 200 OK (BYE)	=== (= : <b>=</b> )
	200 OK (BYE)	→ 200 OK (BYE)	

TSS	TP	Reference	Selection expression
Netw/TransferorAS	ECT_N01_005	4.5.2.4 [1]	PICS 1/3 AND
			NOT (PICS 1/4 OR PICS 1/5)

Communication transfer: **Consultative transfer**. Transferor was originator of the originating call. Ensure that a Transferor can successfully transfer the communication with the transferee set on hold before and the Transferor is notified about the processing. The Transferor has a session with Transferee and the Transfer target set on hold. The Transferor refers the Transferee to establish a session to the Transfer target. After the successful session between Transferee and Transfer target, the sessions of the Transferor are released by the Transferor. The Transferor was the initiator of the originating communication.

#### SIP header values:

REFER 1: Require=replaces; Refer-To contains ISC#3 URI?Replaces=call-id1%3B

to-tag=S1%3Bfrom-tag=S1; method=invite

Referred-By contains ISC#1 URI

REFER 2: Require=replaces; Refer-To contains ECT Session Identifier URI?Replaces=call-id1%3B

to-tag=S1%3Bfrom-tag=S1; method=invite

Referred-By contains ISC#1 URI

INVITE 3: Request URI = ECT Session Identifier URI; Replaces=call-id1;to-tag=S1; from-tag=S1

INVITE 4: Request URI = ISC#3 URI; Replaces=call-id1;to-tag=S1;from-tag=S1

NOTIFY(100):Event contains refer;

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY(200):Event contains refer;

Comments: ISC#1					
ISC#1					
	AS Transferor		ISC#2		ISC#3
E:	tablishment of session #1	1			
INVITE 1	<b>→</b>	<b>→</b>	INVITE		
	<b>_</b>	<b>←</b>	180 Ringing		
		÷	200 OK (INVITE)		
	•	÷	ACK		
ACK	7	7	ACK		
INVITE (sendonly)	<b>&gt;</b>	<b>→</b>	INVITE (sendonly)		
200 OK (recvonly)	<b>-</b>	<b>←</b>	200 OK (recvonly)		
	<b>→</b>	<b>→</b>	ACK `		
	tablishment of session #2	2			
INVITE 2	<b>→</b>			<b>→</b>	INVITE
180 Ringing	<del>(</del>			<b>←</b>	180 Ringing
3 3	_			<b>←</b>	200 OK (INVITE)
	•			À	ACK
,	#1 transfers ISC#3 to ISC#	40			ACK
	REFER	+2			
KEFEK I			DEEED		
	REFER 2	<b>→</b>	REFER		
	202 Accepted	<b>←</b>	202 Accepted		
	202 Accepted				
INVITE (inactive)	<del>-</del>	<b>←</b>	INVITE (inactive)		
200 OK (inactive)	<b>&gt;</b>	<b>→</b>	200 OK (inactive)		
	<del>-</del>	<b>←</b>	ACK `		
NOTIFY(100)	<b>-</b>	<b>←</b>	NOTIFY(100)		
	<b>→</b>	<b>→</b>	200 OK NOTIFY		
	INVITE	<b>←</b>	INVITE 3		
	INVITE 4	<b>→</b>		<b>→</b>	INVITE
	180 Ringing	÷		ŕ	180 Ringing
			400 Dinging		180 Kinging
	180 Ringing	<b>→</b>	180 Ringing	,	000 014
	200 OK	<del>(</del>		<b>←</b>	200 OK
	200 OK	<b>→</b>	200 OK	_	4.017
	_	_	ACK	<b>→</b>	ACK
	-	←	NOTIFY(200)		
200 OK NOTIFY	<b>&gt;</b>	<b>→</b>	200 OK NOTIFY		
BYE	<del>(</del>			<b>←</b>	BYE
	•			<b>→</b>	
200 OK (BYE)	7			7	200 OK (BYE)

TSS		TP		Reference	Selection e	xpression
Netw/TransferorAS		ECT_N01_00	5	4.5.2.4 [1]	PICS 1/3 AN	NĎ
					NOT (PICS	1/4 OR PICS 1/5)
BYE	<b>→</b>	<u>.</u>			<b>→</b>	BYE
200 OK (BYE)	<b>←</b>				<b>←</b>	200 OK (BYE)
				Commu	nication ISC	#2 with ISC#3
		BYE	←		<b>←</b>	BYE 2
		BYE	<b>→</b>	BYE		
		200 OK (BYE)	←		<b>←</b>	200 OK (BYE)
		200 OK (BYE)	<b>→</b>	200 OK (BYE)		. ,
		, ,		, ,		

TSS	TP	Reference	Selection expression
Netw/TransferorAS	ECT_N01_006	4.5.2.4 [1]	PICS 1/3 AND
			NOT (PICS 1/4 OR PICS 1/5)

Communication transfer: **Consultative transfer**. Transferee was originator of the originating call. Ensure that a Transferor can successfully transfer the communication with the transferee set on hold before and the Transferor is notified about the processing. The Transferor has a session with Transferee and the Transfer target. The Transferor refers the Transferee to establish a session to the Transfer target. After the successful session between Transferee and Transfer target set on hold, the sessions of the Transferor are released by the Transferor. The Transferee was the initiator of the originating communication.

#### SIP header values:

REFER 1: Require=replaces; Refer-To contains ISC#3 URI?Replaces=call-id1%3B

to-tag=S1%3Bfrom-tag=S1; method=invite

Referred-By contains ISC#1 URI

REFER 2: Require=replaces; Refer-To contains ECT Session Identifier URI?Replaces=call-id1%3B

to-tag=S1%3Bfrom-tag=S1; method=invite

Referred-By contains ISC#1 URI

INVITE 3: Request URI = ECT Session Identifier URI; Replaces=call-id1; to-tag=S1; from-tag=S1

INVITE 4: Request URI = ISC#3 URI; Replaces=call-id1;to-tag=S1; from-tag=S1

NOTIFY(100): Event contains refer

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY(200):Event contains refer

messag	e/sipfrag co	ontains SIP/2.0 200 OK				
Comments:						
ISC#1		AS Transferor		ISC#2		ISC#3
	Estab	lishment of session #1				
INVITE	<b>←</b>		<b>←</b>	INVITE 1		
180 Ringing	<b>→</b>		<b>→</b>	180 Ringing		
200 OK (INVITE)	<b>→</b>		<b>→</b>	200 OK (INVITE)		
ACK `	<b>←</b>		<b>←</b>	ACK `		
INVITE (sendonly)	<b>→</b>		<b>→</b>	INVITE (sendonly)		
200 OK (recvonly)	<b>←</b>		<b>←</b>	200 OK (recvonly)		
ACK	<b>→</b>		<b>→</b>	ACK		
	Estab	lishment of session #2	<u> </u>			
INVITE 2	<b>→</b>				<b>→</b>	INVITE
180 Ringing	<b>←</b>				<b>←</b>	180 Ringing
200 OK (INVITE)	<b>←</b>				<b>←</b>	200 OK (INVITE)
ACK	→				<b>→</b>	ACK
	ISC#1 1	transfers ISC#2 to ISC#	<b>‡</b> 3			
REFER 1	<b>→</b>	REFER				
			<b>→</b>	REFER 2		
		202 Accepted	<b>←</b>	202 Accepted		
202 Accepted	+	202 Accepted	_	2027.00001.00		
INVITE (inactive)	÷	202 / (000pt0d	<b>←</b>	INVITE (inactive)		
200 OK (inactive)	÷		À	200 OK (inactive)		
ACK	ŕ		<del>´</del>	ACK		
ACK	_		•	ACK		
NOTIFY(100)	<b>←</b>		<b>←</b>	NOTIFY(100)		
200 OK NOTIFY	→		<b>→</b>	200 OK NOTIFY		
ZUU UK NUTIF I	7	INVITE	<del>-</del>	INVITE 3		
		INVITE 4	<b>→</b>	HAVIIE 3	<b>→</b>	INVITE
		180 Ringing	<b>→</b>		<del>-</del>	180 Ringing
		0 0		100 Dinging	7	100 Kinging
		180 Ringing 200 OK	<b>→</b>	180 Ringing	<b>←</b>	200 OK
		200 OK	_			200 OR

TSS		TP	Reference	Selection expression
Netw/TransferorAS		ECT_N01_006	4.5.2.4 [1]	PICS 1/3 AND
				NOT (PICS 1/4 OR PICS 1/5)
		200 OK 🗦	200 OK	
				ACK → ACK
NOTIFY(200)	<b>←</b>	•	<ul> <li>NOTIFY(200)</li> </ul>	
200 OK NOTIFY	<b>→</b>	-	200 OK NOTIF	ŦΥ
BYE	<b>←</b>			<b>←</b> BYE
200 OK (BYE)	<b>→</b>			→ 200 OK (BYE)
BYE ` ´	<b>→</b>		BYE	,
200 OK (BYE)	<b>←</b>	•	- 200 OK (BYE)	
, ,				unication ISC#2 with ISC#3
		BYE •	<ul> <li>BYE 2</li> </ul>	
		BYE =	•	→ BYE
		200 OK (BYE)	•	← 200 OK (BYE)
		` ,	200 OK (BYE)	- ( /

TSS	TP	Reference	Selection expression
Netw/TransferorAS	ECT_N01_007	4.5.2.4.1.2.2 [1]	-
Test purpose			
The method in the Refer-To header is not the	ne INVITE method.		
Ensure that the REFER request is rejected	if the Method in the Re	fer-To header used in	this dialogue is not the
INVITE method e.g. BYE.			
SIP header values:			
REFER: :Refer-To contains ISC#3 URI; m			
Referred-By contains ISC#1 URI			
Comments:			
1	Transferor	ISC#2	ISC#3
	nt of session #1		
INVITE →	<b>→</b>	INVITE	
180 Ringing ←	<b>←</b>	180 Ringing	
200 OK (INVITE)	<b>←</b>	200 OK (INVITE)	
ACK →	<b>→</b>	ACK	
INVITE (sendonly) →	<b>→</b>	INVITE (sendonly)	
200 OK (recvonly)	<del>(</del>	200 OK (recvonly)	
ACK →	<b>→</b>	ACK ` '	
ISC#1 transfe	rs ISC#2 to ISC#3		
REFER → REFER			
4xx or 5xx Response ← 4xx or 5	xx Response		
	Apply post test rou	tine	

TSS	TP	Reference	Selection expression
	ECT_N01_008	4.5.2.4.1.2.2 [1]	
Test purpose			
The request-URI is not tal	rgeted at the same UE instance i	that is involved in the dialog.	
Ensure that the ECT simu	lation service does not apply if the	he Request URI is not the Tra	nsferee URI. The REFER
request is rejected.			
SIP header values:			
REFER: Request URI co	ontained the other URI (PIXIT)		
Refer-To conta	ins the URI of ISC#3, method=in	nvite	
Referred-By co	ntains SIP or tel URI of ISC#1		
Comments:			
ISC#1	AS Transferor	ISC#2	ISC#3
INVITE	<b>→</b>	→ INVITE	
180 Ringing	<b>←</b>	<ul> <li>180 Ringing</li> </ul>	
200 OK (INVITE)	<b>←</b>	← 200 OK (INVITE)	
ACK	<b>→</b>	→ ACK	
INVITE (sendonly)	<b>→</b>	→ INVITE (sendonly)	
200 OK (recvonly)	<b>←</b>	← 200 OK (recvonly)	
ACK	<b>→</b>	→ ACK	
REFER	→ REFER		
4xx or 5xx Response	<ul> <li>4xx or 5xx Response</li> </ul>		
	Apply post t	test routine	

TSS	TP	Reference	Selection expression		
Netw/TransferorAS	ECT_N01_009	4.5.2.4.1.2.2 [1]	_		
Test purpose					
There is no method parameter contained in	the Refer-To header.				
Ensure that the REFER request is rejected	if there is no Method p	arameter contained in t	he Refer-To header.		
SIP header values:					
REFER: Refer-To To contains ISC#3 UR		r)			
Referred-By contains ISC#1 UR					
Comments:					
1	Transferor	ISC#2	ISC#3		
	it of session #1				
INVITE →	<b>→</b>	INVITE			
180 Ringing ←	<del>(</del>	180 Ringing			
200 OK (INVITE) ←	<b>←</b>	200 OK (INVITE)			
ACK →	→ ACK				
INVITE (sendonly) →	<b>→</b>	INVITE (sendonly)			
200 OK (recvonly) ←	<b>←</b>	, ,,,			
ACK →	```` <b>`</b>				
ISC#1 transfers	s ISC#2 to ISC#3				
REFER → REFER					
4xx or 5xx Response ← 4xx or 5xx Response					
	Apply post test rou	tine			

TSS	TP	Reference	Selection expression
Netw/TransferorAS	ECT_N01_010	4.5.2.4.2.3 [1]	NOT (PICS 1/4 OR PICS 1/5)

In the **REFER** request, the Referred-By header does not contain the valid identity of the served user.

A Referred-By header is available in the REFER request, the AS verifies if the provided Referred-By header contains a valid identity of the served user. If not it will replace the Referred-By header with a valid value matching the REFER request's P-Asserted-Identity.

### SIP header values:

REFER 1: Request URI: ISC#2

Referred-By contains ISC#x URI P-Asserted-Identity=ISC#1

REFER 1: Request URI: ISC#2

	contains ISC#1 URI				
Comments: ISC#1	AS Trans Establishment of s		ISC#2		ISC#3
Sess	ion #1 on hold				
	ISC#1 transfers ISC	#2 to ISC#3			
REFER 1	→ REFER				
	R	EFER 2 →	REFER		
202 Accepted	202 A <b>←</b> 202 Accepte	ccepted <del>←</del>	202 Accepted		
INVITE (inactive)	<b>←</b>	~ <b>←</b>	INVITE (inactive)		
200 OK (inactive)	<b>→</b>	<b>→</b>	200 OK (inactive)		
ACK	<b>←</b>	<b>←</b>	ACK		
NOTIFY(100)	<b>←</b>	<b>←</b>	NOTIFY(100)		
200 OK NOTIFY	<b>→</b>	<b>→</b>	200 OK NOTIFY		
		INVITE ←	INVITE 3		
	li li	NVITE 4 →		<b>→</b>	INVITE
		Ringing		<b>←</b>	180 Ringing
	180	Ringing -	180 Ringing		
		200 OK ←		<b>←</b>	200 OK
		200 OK →	200 OK		
			ACK	→	ACK
NOTIFY(200)	<b>←</b>	+	NOTIFY(200)		
200 OK NOTIFY	<b>→</b>	<b>→</b>	200 OK NOTIFY		
BYE	<b>→</b>	<b>→</b>	BYE		
200 OK (BYE)		_	200 OK (BYE)		
200 OK (BYE)	<b>←</b>	→ Oply post test re	200 OK (BYE)		

TSS	TP	Reference	Selection expression			
Netw/TransferorAS	ECT_N01_011	4.5.2.4.2.3 [1]	NOT (PICS 1/4 OR PICS 1/5)			
Test purpose						
The <b>REFER</b> request does not contain a R						
If no Referred-By header is available in th	e REFER request a l	Referred-By header	is added that matches the			
REFER method's P-Asserted-Identity.						
SIP header values:						
REFER 1: Request URI: ISC#2						
Referred-By not present						
P-Asserted-Identity=ISC#1						
REFER 1: Request URI: ISC#2	D.					
Referred-By contains ISC#1 UI	RI					
Comments:	T	10040	100#0			
	Transferor	ISC#2	ISC#3			
	ent of session #1					
Session #1 on hold ISC#1 transfers ISC#2 to ISC#3						
REFER 1 → REFE						
REFER I 7 REFE	REFER 2 →	REFER				
	202 Accepted $\leftarrow$					
202 Accepted ← 202 A	ccepted	202 Accepted				
INVITE (inactive)	ccepted +	INVITE (inactive	<u>a)</u>			
200 OK (inactive)	÷					
ACK	· ·		0)			
,	_					
NOTIFY(100) <b>←</b>	+	NOTIFY(100)				
200 OK NOTIFY →	<b>→</b>		Y			
	INVITE 🗲	INVITE 3				
	INVITE 4 🔿	•	→ INVITE			
	180 Ringing ←		180 Ringing			
	180 Ringing →					
	200 OK 🗲		<b>←</b> 200 OK			
	200 OK →	200 OK				
	_		ACK → ACK			
NOTIFY(200) ←	<del>(</del>					
200 OK NOTIFY →	<b>→</b>		Y			
BYE -	<del>)</del>					
200 OK (BYE) ←	<b>A</b>					
	Apply post test routine					

TSS		TP	Reference	Selection expression
Netw/TransferorAS		ECT_N01_012	4.5.2.4.2.1 [2]	NOT (PICS 1/4 OR PICS 1/5)
Test purpose				
		ived <b>INVITE</b> does not c		
				provided Referred-By header
			ace the Referred-By h	eader with a valid value matching
the REFER request's F	P-Asserted-Ide	entity.		
SIP header values:				
REFER 1: Refer-To co				
	Identity=ISC#			
INVITE 3: Request UR				
	contains ISC			
INVITE 4: Request UR				
-	contains ISC	#1 URI		
Comments:		40 T	100//0	100//0
ISC#1	E-1-1-1	AS Transferor	ISC#2	ISC#3
0		ishment of session #1		
Sess	ion #1 on ho	อเฉ ansfers ISC#2 to ISC#	10	
REFER 1		ansiers isc#2 to isc# REFER	·3	
KEFEK I	7	REFER 2	→ REFER	
		202 Accepted	€ 202 Accepted	1
202 Accepted	<b>←</b> 2	202 Accepted 202 Accepted	202 Accepted	
INVITE (inactive)	÷ *	202 Accepted	← INVITE (inact	ive)
200 OK (inactive)	÷		→ 200 OK (inact	
ACK	É		← ACK	uve)
71011	•		7.010	
NOTIFY(100)	<b>←</b>		← NOTIFY(100)	
200 OK NOTIFY	<b>→</b>		→ 200 OK NOTI	
		INVITE	← INVITE 3	
		INVITE 4	<b>→</b>	→ INVITE
		180 Ringing	<b>←</b>	180 Ringing
		180 Ringing	→ 180 Ringing	3 3
		200 OK	←	← 200 OK
		200 OK	→ 200 OK	
				ACK A ACK

NOTIFY(200) 200 OK NOTIFY

← NOTIFY(200)
→ 200 OK NOTIFY

Apply post test routine

ACK →

ACK

TSS	TP	Reference	Selection expression
Netw/TransferorAS	ECT_N01_013	4.5.2.4.2.1 [2]	NOT (PICS 1/4 OR PICS 1/5)
Test purpose			
The received <b>INVITE</b> does not contain a			
If no Referred-By header is available in	the INVITE request a	Referred-By heade	r is added that matches the
REFER request's P-Asserted-Identity.			
SIP header values:			
REFER 1: Refer-To contains ISC#3 UR	I; method=invite		
P-Asserted-Identity=ISC#1			
INVITE 3: Request URI = ECT Session	Identifier URI		
Referred-By not present			
INVITE 4: Request URI = ISC#3 URI			
Referred-By contains ISC#1	URI		
Comments:			
ISC#1 A	S Transferor	ISC#2	ISC#3
	ment of session #1		
Session #1 on hold			
ISC#1 trans	fers ISC#2 to ISC#3		
REFER 1 → REF	ER		
	REFER 2	→ REFER	
	202 Accepted	<ul> <li>202 Accepted</li> </ul>	
	Accepted	•	
INVITE (inactive) ←	•	INVITE (inaction	ve)
200 OK (inactive) →	-	200 OK (inact	ive)
ACK ←	•	€ ACK	
NOTIFY(100)		NOTIFY(100)	
200 OK NOTIFY →		→ 200 OK NOTI	FY
		► INVITE 3	
		<b>→</b>	→ INVITE
		F	<ul><li>180 Ringing</li></ul>
	5 5	→ 180 Ringing	
		F	← 200 OK
	200 OK <b>-</b>	<b>→</b> 200 OK	
			ACK → ACK
NOTIFY(200) ←		NOTIFY(200)	
200 OK NOTIFY →		→ 200 OK NOTI	FY
BYE →		<b>→</b> BYE	
200 OK (BYE) ←		200 OK (BYE	)
	Apply post test	routine	

TSS	TP	Reference	Selection expression
Netw/TransferorAS	ECT_N01_014	4.5.2.4.1.2.3 [1]	PICS 1/2 AND PICS 1/4

Assured transfer. The AS receives a 403 Forbidden indicating the Transferee does not support the REFER method

Ensure that three party call control applies when a 403 Forbidden is received upon a REFER was sent to the Transferee:

- A 202 Accepted for the REFER is sent.
- An INVITE is sent to the Transfer Target containing the P-Asserted\_identity of the Transferee and the Referred-By header with the identity of the Transferor.
- After the 200 OK is received, a reINVITE is sent to the Transferee containing the P-Asserted\_identity of the Transfer Target and the Referred-By header with the identity of the Transferor.

#### SIP header values:

REFER 1: Refer-To contains ISC#3 URI; method=invite

Referred-By contains ISC#1 URI

INVITE 3: Request URI = ISC#3, P-Asserted-Identity=ISC#2, Referred-By=ISC#1

INVITE 4: Request URI = ISC#2, P-Asserted-Identity=ISC#3, Referred-By=ISC#1

NOTIFY(100):Event contains refer

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY(200):Event contains refer

111000	age/sipirag contains on 72.0 200 ort			
Comments:	AC Transferer	10040		10042
ISC#1	AS Transferor Establishment of session #1 Session #1 on hold	ISC#2		ISC#3
REFER 1		REFER 403 Forbidden		
202 Accepted	← 202 Accepted			
	3 party call contr	ol applies		
NOTIFY(100)	← NOTIFY(100)			
200 OK NOTIFY	180 Ringing 4 200 OK	<b>→</b> <del>←</del> <b>→</b>	<b>→</b>	INVITE 180 Ringing 200 OK ACK
NOTIFY(200) 200 OK NOTIFY	200 OK	➤ INVITE E 200 OK ACK		
BYE 200 OK (BYE)	→ BYE ← 200 OK (BYE) Apply post test	: routine		

TSS	TP	Reference	Selection expression
Netw/TransferorAS	ECT_N01_015	4.5.2.4.1.2.3 [1]	PICS 1/1 AND PICS 1/4

**Blind transfer**. The AS receives a 403 Forbidden indicating the Transferee does not support the REFER method. Ensure that three party call control applies when a 403 Forbidden is received upon a REFER was sent to the Transferee:

- A 202 Accepted for the REFER is sent.
- An INVITE is sent to the Transfer Target containing the P-Asserted\_identity of the Transferee and the Referred-By header with the identity of the Transferor.
- After the 200 OK is received, a reINVITE is sent to the Transferee containing the P-Asserted\_identity of the Transfer Target and the Referred-By header with the identity of the Transferor.

#### SIP header values:

REFER 1: Refer-To contains ISC#3 URI; method=invite

Referred-By contains ISC#1 URI

INVITE 3: Request URI = ISC#3, P-Asserted-Identity=ISC#2, Referred-By=ISC#1

INVITE 4: Request URI = ISC#2, P-Asserted-Identity=ISC#3, Referred-By=ISC#1

NOTIFY(100):Event contains refer

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY(200):Event contains refer

Comments:	<u> </u>					
ISC#1	Esta Session #1	AS Transferor blishment of session # I on hold	1	ISC#2		ISC#3
REFER 1	<b>→</b>	REFER REFER 403 Forbidden	<b>→</b>	REFER 403 Forbidden		
202 Accepted BYE 200 OK (BYE)	<b>←</b> <b>→</b> <b>←</b>	202 Accepted	`	403 i Orbiddeir		
200 OK (B1E)	~	3 party call co	ntrol a	applies		
NOTIFY(100) 200 OK NOTIFY	<b>←</b>	, m., c				
200 010101111	,	INVITE 3 180 Ringing 200 OK ACK	<b>→</b>		<b>→</b> <b>←</b> <b>→</b>	INVITE 180 Ringing 200 OK ACK
NOTIFY(200) 200 OK NOTIFY	<b>←</b> →	NOTIFY(200) 200 OK NOTIFY INVITE 4 200 OK ACK	→ ← →	INVITE 200 OK ACK	Í	
		Apply post t				

TSS	TP	Reference	Selection expression
Netw/TransferorAS	ECT_N01_016	4.5.2.4.1.2.3 [1]	PICS 1/3 AND PICS 1/4

Consultative transfer. The AS receives a 403 Forbidden indicating the Transferee does not support the REFER method.

Ensure that three party call control applies when a 403 Forbidden is received upon a REFER was sent to the Transferee:

- A 202 Accepted for the REFER is sent.
- A reINVITE is sent to the Transfer Target containing the P-Asserted\_identity of the Transferee and the Referred-By header with the identity of the Transferor.
- After the 200 OK is received, a reINVITE is sent to the Transferee containing the P-Asserted\_identity of the Transfer Target and the Referred-By header with the identity of the Transferor.

#### SIP header values:

REFER 1: Refer-To contains ISC#3 URI; method=invite

Referred-By contains ISC#1 URI

INVITE 3: Request URI = ISC#3, P-Asserted-Identity=ISC#2, Referred-By=ISC#1

INVITE 4: Request URI = ISC#2, P-Asserted-Identity=ISC#3, Referred-By=ISC#1

NOTIFY(100):Event contains refer

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY(200):Event contains refer

Comments:	agoroipinag contains en 7210 200 ent	
ISC#1	AS Transferor ISC#2 Establishment of session #1 Establishment of session #2 Session #1 on hold	ISC#3
REFER 1	→ REFER REFER → REFER 403 Forbidden ← 403 Forbidder	n
202 Accepted	← 202 Accepted	
	3 party call control applies	
NOTIFY(100) 200 OK NOTIFY	<ul> <li>NOTIFY(100)</li> <li>200 OK NOTIFY</li> <li>INVITE 3</li> <li>180 Ringing</li> <li>200 OK</li> <li>ACK</li> </ul>	<ul> <li>→ INVITE</li> <li>← 180 Ringing</li> <li>← 200 OK</li> <li>→ ACK</li> </ul>
NOTIFY(200) 200 OK NOTIFY	<ul> <li>NOTIFY(200)</li> <li>200 OK NOTIFY</li> <li>INVITE 4</li> <li>200 OK</li> <li>← 200 OK</li> <li>ACK</li> <li>ACK</li> </ul>	
BYE 200 OK (BYE)	<ul><li>← BYE</li><li>→ 200 OK (BYE)</li></ul>	
BYE 200 OK (BYE)	<ul><li>→ BYE</li><li>← 200 OK (BYE)</li><li>Apply post test routine</li></ul>	

TSS	TP	Reference	Selection expression
Netw/TransferorAS	ECT_N01_017	4.5.2.4.1.2.3 [1]	PICS 1/2 AND PICS 1/4

**Assured transfer**. The AS receives a 501 Not implemented indicating the Transferee does not support the REFER method.

Ensure that three party call control applies when a 501 Not implemented is received upon a REFER was sent to the Transferee:

- A 202 Accepted for the REFER is sent.
- An INVITE is sent to the Transfer Target containing the P-Asserted\_identity of the Transferee and the Referred-By header with the identity of the Transferor.
- After the 200 OK is received, a reINVITE is sent to the Transferee containing the P-Asserted\_identity of the Transfer Target and the Referred-By header with the identity of the Transferor.

#### SIP header values:

REFER 1: Refer-To contains ISC#3 URI; method=invite

Referred-By contains ISC#1 URI

INVITE 3: Request URI = ISC#3, P-Asserted-Identity=ISC#2, Referred-By=ISC#1

INVITE 4: Request URI = ISC#2, P-Asserted-Identity=ISC#3, Referred-By=ISC#1

NOTIFY(100):Event contains refer

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY(200):Event contains refer

Comments:	sage, or many contains on 7210 200 ort	
ISC#1	AS Transferor ISC#2 Establishment of session #1 Session #1 on hold	ISC#3
REFER 1	→ REFER  REFER → REFER  501 Not implemented ← 501 Not implement	ed
202 Accepted	← 202 Accepted	
	3 party call control applies	
NOTIFY(100)	← NOTIFY(100)	
200 OK NOTIFY	→ 200 OK NOTIFY  INVITE 3 →  180 Ringing ←  200 OK ←  ACK →	→ INVITE ← 180 Ringing ← 200 OK → ACK
NOTIFY(200) 200 OK NOTIFY	<ul> <li>NOTIFY(200)</li> <li>200 OK NOTIFY</li> <li>INVITE 4</li> <li>200 OK</li> <li>4</li> <li>200 OK</li> <li>ACK</li> <li>ACK</li> </ul>	
BYE 200 OK (BYE)	<ul><li>→ BYE</li><li>← 200 OK (BYE)</li><li>Apply post test routine</li></ul>	

TSS	TP	Reference	Selection expression
Netw/TransferorAS	ECT_N01_018	4.5.2.4.1.2.3 [1]	PICS 1/1 AND PICS 1/4

**Blind transfer**. The AS receives a 501 Not implemented indicating the Transferee does not support the REFER method.

Ensure that three party call control applies when a 501 Not implemented is received upon a REFER was sent to the Transferee:

- A 202 Accepted for the REFER is sent.
- An INVITE is sent to the Transfer Target containing the P-Asserted\_identity of the Transferee and the Referred-By header with the identity of the Transferor.
- After the 200 OK is received, a reINVITE is sent to the Transferee containing the P-Asserted\_identity of the Transfer Target and the Referred-By header with the identity of the Transferor.

#### SIP header values:

REFER 1: Refer-To contains ISC#3 URI; method=invite

Referred-By contains ISC#1 URI

INVITE 3: Request URI = ISC#3, P-Asserted-Identity=ISC#2, Referred-By=ISC#1

INVITE 4: Request URI = ISC#2, P-Asserted-Identity=ISC#3, Referred-By=ISC#1

NOTIFY(100):Event contains refer

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY(200):Event contains refer

	ocitaino di 72.0 200 di				
	40 T		100"0		100//0
_			ISC#2		ISC#3
		1			
sion #	1 on hold				
<b>→</b>	REFER				
	REFER	<b>→</b>	REFER		
	501 Not implemented	<b>←</b>	501 Not implemented		
<b>←</b>	•		, , , , , , , , , , , , , , , , , , , ,		
_	3 narty call co	ntrol	annlies		
_	5 party can co	111101	applies		
7		_		_	
	_			_	INVITE
	180 Ringing	<b>←</b>		<b>←</b>	180 Ringing
	200 OK	←		<b>←</b>	200 OK
	ACK	<b>→</b>		<b>→</b>	ACK
<b>←</b>	NOTIFY(200)				
<b>→</b>					
		<b>→</b>	INVITE		
	_		=		
	Es sion # ->	AS Transferor Establishment of session # sion #1 on hold  REFER  REFER  501 Not implemented  202 Accepted  3 party call co  INVITE 3  180 Ringing  200 OK  ACK  NOTIFY(200)  200 OK NOTIFY  INVITE 4  200 OK  ACK	AS Transferor Establishment of session #1 sion #1 on hold  REFER  REFER  Sol Not implemented  202 Accepted  INVITE 3  INVITE 3  180 Ringing  200 OK  ACK  NOTIFY(200)  200 OK NOTIFY  INVITE 4  200 OK  ACK  ACK  ACK	AS Transferor ISC#2  Establishment of session #1 sion #1 on hold  REFER  REFER  REFER  S01 Not implemented  202 Accepted  3 party call control applies  INVITE 3  180 Ringing  200 OK  ACK  NOTIFY(200)  200 OK NOTIFY  INVITE 4 INVITE 200 OK  200 OK	AS Transferor ISC#2  Establishment of session #1 sion #1 on hold  REFER  REFER  REFER  S01 Not implemented  501 Not implemented  202 Accepted  INVITE 3  180 Ringing  200 OK  ACK  NOTIFY(200)  INVITE 4  INVITE 200 OK  ACK  ACK  ACK  ACK  ACK  ACK  ACK  AC

TSS	TP	Reference	Selection expression
Netw/TransferorAS	ECT_N01_019	4.5.2.4.1.2.3 [1]	PICS 1/3 AND PICS 1/4

**Consultative transfer**. The AS receives a 501 Not implemented indicating the Transferee does not support the REFER method.

Ensure that three party call control applies when a 501 Not implemented is received upon a REFER was sent to the Transferee:

- A 202 Accepted for the REFER is sent.
- A reINVITE is sent to the Transfer Target containing the P-Asserted\_identity of the Transferee and the Referred-By header with the identity of the Transferor.
- After the 200 OK is received, a reINVITE is sent to the Transferee containing the P-Asserted\_identity of the Transfer Target and the Referred-By header with the identity of the Transferor.

#### SIP header values:

REFER 1: Refer-To contains ISC#3 URI; method=invite

Referred-By contains ISC#1 URI

INVITE 3: Request URI = ISC#3, P-Asserted-Identity=ISC#2, Referred-By=ISC#1

INVITE 4: Request URI = ISC#2, P-Asserted-Identity=ISC#3, Referred-By=ISC#1

NOTIFY(100):Event contains refer

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY(200):Event contains refer

	sage/sipirag contains SiF/2.0 200 OK		
Comments: ISC#1	AS Transferor ISC#2 Establishment of session #1 Session #1 on hold Establishment of session #2		ISC#3
REFER 1	→ REFER  REFER → REFER  501 Not implemented ← 501 Not implemented		
202 Accepted	← 202 Accepted		
NOTIFY (400)	3 party call control applies		
NOTIFY(100) 200 OK NOTIFY	<ul> <li>NOTIFY(100)</li> <li>200 OK NOTIFY</li> <li>INVITE 3</li> <li>180 Ringing</li> <li>200 OK</li> <li>ACK</li> </ul>	<b>→ ← ← →</b>	INVITE 180 Ringing 200 OK ACK
NOTIFY(200) 200 OK NOTIFY	<ul> <li>NOTIFY(200)</li> <li>200 OK NOTIFY</li> <li>INVITE 4 → INVITE</li> <li>200 OK ← 200 OK</li> <li>ACK → ACK</li> </ul>		
BYE 200 OK (BYE)	<ul><li>← BYE</li><li>→ 200 OK (BYE)</li></ul>		
BYE 200 OK (BYE)	<ul><li>→ BYE</li><li>← 200 OK (BYE)</li><li>Apply post test routine</li></ul>		

TSS	TP	Reference	Selection expression
Netw/TransferorAS	ECT_N01_020	4.5.2.4.1.2.3 [1]	PICS 1/2 AND PICS 1/5

Assured transfer. The AS initiate the special REFER handling procedures directly.

Ensure that three party call control applies directly when the AS has prior knowledge that the Transferee is not allowed to receive or does not support the REFER method:

- A 202 Accepted for the REFER is sent.
- An INVITE is sent to the Transfer Target containing the P-Asserted\_identity of the Transferee and the Referred-By header with the identity of the Transferor.
- After the 200 OK is received, a reINVITE is sent to the Transferee containing the P-Asserted\_identity of the Transfer Target and the Referred-By header with the identity of the Transferor.

#### SIP header values:

REFER 1: Refer-To contains ISC#3 URI; method=invite

Referred-By contains ISC#1 URI

INVITE 3: Request URI = ISC#3, P-Asserted-Identity=ISC#2, Referred-By=ISC#1

INVITE 4: Request URI = ISC#2, P-Asserted-Identity=ISC#3, Referred-By=ISC#1

NOTIFY(100):Event contains refer

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY(200):Event contains refer

` mess	sage/sipfrag contains SIP/2.0 200 OK		
Comments: ISC#1	AS Transferor Establishment of session # Session #1 on hold	ISC#2 #1	ISC#3
REFER 1 202 Accepted	<ul><li>→ REFER</li><li>← 202 Accepted</li><li>3 party call con</li></ul>	ntrol applies	
NOTIFY(100) 200 OK NOTIFY	◆ NOTIFY(100) → 200 OK NOTIFY  INVITE 3  180 Ringing  200 OK  ACK	→ ← ←	<ul> <li>→ INVITE</li> <li>← 180 Ringing</li> <li>← 200 OK</li> <li>→ ACK</li> </ul>
NOTIFY(200) 200 OK NOTIFY	<ul><li>NOTIFY(200)</li><li>→ 200 OK NOTIFY</li><li>INVITE 4</li><li>200 OK</li><li>ACK</li></ul>	→ INVITE ← 200 OK → ACK	
BYE 200 OK (BYE)	→ BYE ← 200 OK (BYE) Apply post to	est routine	

TSS	TP	Reference	Selection expression
Netw/TransferorAS	ECT_N01_021	4.5.2.4.1.2.3 [1]	PICS 1/1 AND PICS 1/5

Blind transfer. The AS initiate the special REFER handling procedures directly.

Ensure that three party call control applies directly when the AS has prior **knowledge** that **the Transferee is not allowed** to receive or **does not support the REFER method**:

- A 202 Accepted for the REFER is sent.
- An INVITE is sent to the Transfer Target containing the P-Asserted\_identity of the Transferee and the Referred-By header with the identity of the Transferor.
- After the 200 OK is received, a reINVITE is sent to the Transferee containing the P-Asserted\_identity of the Transfer Target and the Referred-By header with the identity of the Transferor.

#### SIP header values:

REFER 1: Refer-To contains ISC#3 URI; method=invite

Referred-By contains ISC#1 URI

INVITE 3: Request URI = ISC#3, P-Asserted-Identity=ISC#2, Referred-By=ISC#1

INVITE 4: Request URI = ISC#2, P-Asserted-Identity=ISC#3, Referred-By=ISC#1

NOTIFY(100):Event contains refer

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY(200): Event contains refer

Comments:						
ISC#1		AS Transferor tablishment of session # t1 on hold	:1	ISC#2		ISC#3
REFER 1 202 Accepted BYE 200 OK (BYE)	→ ← → ←	REFER 202 Accepted				
		3 party call co	ntrol	applies		
NOTIFY(100)	<b>←</b>					
200 OK NOTIFY	→					
NOTIFY(200)	<del>(</del>	INVITE 3 180 Ringing 200 OK ACK NOTIFY(200)	<b>+++</b>		<b>→ ← →</b>	INVITE 180 Ringing 200 OK ACK
200 OK NOTIFY	<b>→</b>	200 OK NOTIFY INVITE 4 200 OK ACK Apply post t	→ ← →	INVITE 200 OK ACK		

TSS	TP	Reference	Selection expression
Netw/TransferorAS	ECT_N01_022	4.5.2.4.1.2.3 [1]	PICS 1/3 AND PICS 1/5

Consultative transfer. The AS initiate the special REFER handling procedures directly.

Ensure that three party call control applies directly when the AS has prior **knowledge** that **the Transferee is not allowed** to receive or **does not support the REFER method**:

- A 202 Accepted for the REFER is sent.
- A reINVITE is sent to the Transfer Target containing the P-Asserted\_identity of the Transferee and the Referred-By header with the identity of the Transferor.
- After the 200 OK is received, a reINVITE is sent to the Transferee containing the P-Asserted\_identity of the Transfer Target and the Referred-By header with the identity of the Transferor.

#### SIP header values:

REFER 1: Refer-To contains ISC#3 URI; method=invite

Referred-By contains ISC#1 URI

INVITE 3: Request URI = ISC#3, P-Asserted-Identity=ISC#2, Referred-By=ISC#1

INVITE 4: Request URI = ISC#2, P-Asserted-Identity=ISC#3, Referred-By=ISC#1

NOTIFY(100):Event contains refer

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY(200):Event contains refer

mes	ssage/sipfrag contains SIP/2.0 200 OK	
Comments: ISC#1	AS Transferor ISC#2 Establishment of session #1 Session #1 on hold Establishment of session #2	ISC#3
REFER 1 202 Accepted	<ul> <li>→ REFER</li> <li>← 202 Accepted</li> <li>3 party call control applies</li> </ul>	
NOTIFY(100) 200 OK NOTIFY	<ul> <li>NOTIFY(100)</li> <li>→ 200 OK NOTIFY</li> <li>INVITE 3 →</li> <li>180 Ringing ←</li> <li>200 OK ←</li> <li>ACK →</li> </ul>	<ul> <li>→ INVITE</li> <li>← 180 Ringing</li> <li>← 200 OK</li> <li>→ ACK</li> </ul>
NOTIFY(200) 200 OK NOTIFY	<ul> <li>NOTIFY(200)</li> <li>200 OK NOTIFY</li> <li>INVITE 4 → INVITE</li> <li>200 OK ← 200 OK</li> <li>ACK → ACK</li> </ul>	
BYE 200 OK (BYE)	<ul><li>← BYE</li><li>→ 200 OK (BYE)</li></ul>	
BYE 200 OK (BYE)	<ul><li>→ BYE</li><li>← 200 OK (BYE)</li><li>Apply post test routine</li></ul>	

# 5.2.2 Action at the Transferee AS

TSS	TP	Reference	Selection expression
Netw/TransfereeAS	ECT_N02_001	4.5.2.7/ [1]	
Test purpose			
	Assured transfer applicable at the		
	e AS can act as a proxy when rece		uest, the INVITE request and the
BYE request for the call the	nat is transferred as an assured trai	nsfer.	
SIP header values:			
REFER 1: Refer-To ISC#	2 URI; method=invite		
	ntains ISC#1 URI		
REFER 2: Refer-To ISC#	2 URI; method=invite		
	ntains ISC#1 URI		
INVITE 3: Request URI =			
INVITE 4: Request URI =			
NOTIFY(100):Event conta			
	pfrag contains SIP/2.0 100 Trying		
NOTIFY(200):Event conta			
	g contains SIP/2.0 200 OK		
Comments:			
ISC#2	AS Transferee	ISC#3	ISC#1
	Establishment of		
			sion #1 on hold
	ISC#1 transfers IS		
	REFER •	•	← REFER 1
REFER	← REFER 2		
202 Accepted	→ 202 Accepted		
	202 Accepted		202 Accepted
INVITE (S2 inactive)	→ INVITE (inactive)		
200 OK (inactive)	← 200 OK (S2 inactive)		
ACK	→ ACK		
	_		
NOTIFY(100)	<del>}</del>		→ NOTIFY(100)
200 OK NOTIFY	<b>+</b>		← 200 OK NOTIFY
INVITE 3 (S2)	→ INVITE	N. 1. 1. 1. T. T.	
		INVITE	
100 D: :	180 Ringing €	180 Ringing	
180 Ringing	← 180 Ringing	000 01/	
000 01	<b>(</b>	- 200 OK	
200 OF		1016	
	< →	► ACK	NOTIFY(000)
NOTIFY(200)	<b>→</b>		→ NOTIFY(200)
200 OK NOTIFY	<b>←</b>		← 200 OK NOTIFY
DVE	-		F DVE (04)
BYE	<del>-</del>		← BYE (S1)
200 OK (BYE)	<b>→</b>	t routine	→ 200 OK (BYE)

TSS	TP	Reference	Selection expression
Netw/TransfereeAS	ECT_N02_002	4.5.2.7 [1]	-

Communication transfer: Blind transfer applicable at the Transferee AS.

Ensure that the Transferee AS can act as a proxy when receives the REFER request, the INVITE request and the BYE request for the call that is transferred as a blind transfer.

#### SIP header values:

REFER 1: Refer-To ISC#3 URI; method=invite

Referred-By contains ISC#1 URI

REFER 2: Refer-To ISC#3 URI; method=invite

Referred-By contains ISC#1 URI INVITE 3: Request URI = **ISC#3** URI

INVITE 4: Request URI = **ISC#3** URI NOTIFY(100):Event contains **refer** 

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY(200):Event contains refer

message/sinfrag contains SIP/2.0 200 OK

message/s	iptrag c	ontains SIP/2.0 200 OK			
Comments:					
ISC#2		AS Transferee	ISC#3		ISC#1
		Establishment of	of session #1		
				Session #1 o	n hold
		ISC#1 transfers IS	SC#2 to ISC#3	3	
		REFER	<b>←</b>	<b>←</b>	REFER 1
REFER	<b>←</b>	REFER 2			
202 Accepted	→	202 Accepted			
•		202 Accepted	<b>→</b>	<b>→</b>	202 Accepted
BYE	<b>←</b>	•		<b>←</b>	BYE (S1)
200 OK (BYE)	→			<b>→</b>	200 ÔK (BYE)
,					,
NOTIFY(100)	<b>→</b>			<b>→</b>	NOTIFY(100)
200 OK NOTIFY	<b>←</b>			<b>←</b>	200 OK NOTIFY
INVITE 3	<b>→</b>	INVITE			
		INVITE 4	→ INVITE		
		180 Ringing	← 180 Rir	nging	
180 Ringing	<b>←</b>	180 Ringing			
		0 0	← 200 OK	(	
200 OK	<b>←</b>	200 OK			
ACK	<b>→</b>		→ ACK		
NOTIFY(200)	<b>→</b>			<b>→</b>	NOTIFY(200)
200 OK NOTIFY	<b>←</b>			<b>←</b>	200 OK NOTIFY
		Apply post te	est routine		

TSS		TP		Reference	Sal	ection expression
Netw/TransfereeAS		ECT_N02_003		4.5.2.7 [1]	Sei	ection expression
Test purpose		LO1_N02_003		<del>+.</del> 5.2.7 [1]		
Communication transfer: Communication	neultativa t	ransfor annlicable	o at t	ha Transferee AS		
Ensure that the Transferee					ast tha	INIVITE request and the
BYE request for the call that	t is transforre	s a proxy when re	vo tra	es lile NEFEN lequi	est, the	invite request and the
SIP header values:	l is transient	u as a Consultati	ve uc	11131GI.		
	IDI: mothod	-invito				
REFER 1: Refer-To ISC#3						
Referred-By con						
REFER 2: Refer-To contain						
Referred-By con INVITE 3: Request URI = IS		JKI				
INVITE 3: Request URI = IS						
NOTIFY(100):Event contain						
		SIP/2.0 100 Tryir				
NOTIFY(200):Event contain		317/2.0 100 11 yii	ıy			
		SIP/2.0 200 OK				
Comments:	ray contains	317/2.0 200 UK				
	46	Transferes		10043		160#1
ISC#2	AS	Transferee	<b>-</b> 6 -	ISC#3		ISC#1
		Establishment				
		Cotoblish mest		sion #1 on hold		
	044 1	Establishment		ession #2		
ls is	C#1 transfe	rs ISC#2 to ISC#			,	DEEED 4
DEEED	<b>4</b> DEFEE	REFER	~		+	REFER 1
REFER	← REFER					
202 Accepted	→ 202 Ac					000 1
INIVITE (CO in a ativa)	<b>→</b> INI\/ITE	202 Accepted	7		<b>→</b>	202 Accepted
INVITE (S2 inactive)	→ INVITE					
200 OK (inactive)		(S2 inactive)				
ACK	→ ACK				,	DVE
BYE	<b>←</b> →					BYE
200 OK (BYE)	7				<b>→</b>	200 OK (BYE)
NOTIFY(400)	_				_	NOTIFY(400)
NOTIFY(100)	<b>→</b>				<b>→</b>	NOTIFY(100)
200 OK NOTIFY	<b>←</b>				<b>←</b>	200 OK NOTIFY
INVITE 3	→ INVITE		_	INIV/ITE		
		INVITE 4	_			
400 Dia sia s		180 Ringing	<b>←</b>	180 Ringing		
180 Ringing	← 180 Rir	nging	_	200 OK		
222 211	<b>7</b> 000 01	,	<b>←</b>	200 OK		
200 OK	€ 200 Ok	<b>X</b>				
ACK	→ ACK	4017	•	A 017		
NOTIFY ((CCC)	_	ACK	<b>→</b>	ACK	_	NOTIFY ((005)
NOTIFY(200)	<b>→</b>					NOTIFY(200)
200 OK NOTIFY	<del>(</del>				<del>-</del>	200 OK NOTIFY
BYE	<del>(</del>					BYE (S1)
200 OK (BYE)	<b>→</b>				<b>→</b>	200 OK (BYE)
			_	->/-		
		BYE		BYE	_	D) (E
		BYE			<b>→</b>	BYE
		200 OK (BYE)		000 014 (5) (5)	+	200 OK (BYE)
		200 OK (BYE)	<b>→</b>	200 OK (BYE)		
I		Apply post t	test i	routine		

				Reference		ction expression	
Netw/TransfereeAS Test purpose		ECT_N02_004		4.5.2.7.3 [1]	PICS	PICS 1/7	
in the i	received INVI	TE does not co	ontai	n the valid identity	of the s	erved user. Value is	
,		<i>u</i> == .				A O	
I-By nea	ader is replac	ed by the value	e or t	ine Referred-By n	eader red	ceived in the REFER	
41	ما نماند						
	a=invite						
	DI (DIVIT)						
	KI (FIAII)						
υυ <del>π</del> Ι							
	AS Tre	nsferee		ISC#3		ISC#1	
			f se			100#1	
	Lo	tabiioiiiioiit U	. 30		sion #1	on hold	
	Fs	tablishment o	f se		5.511 # 1 <b>(</b>	JII II JIU	
	Lo		. 30.		nsfers IS	C#2 to ISC#3	
		RFFFR	<b>←</b>		·····································	REFER 1	
+	REFER 2		_		_		
<b>→</b>	202 Accept	ed					
			<b>→</b>		<b>→</b>	202 Accepted	
		•				·	
<b>→</b>							
<b>←</b>		? inactive)					
<b>→</b>	ACK						
<b>→</b>					<b>→</b>	NOTIFY(100)	
					<b>←</b>	200 OK NOTIFY	
<b>→</b>	INVITE		_				
			_				
_	400 D: :		<b>←</b>	180 Ringing			
<b>←</b>	180 Ringing	9	,	000 01/			
	200 014		<b>←</b>	200 OK			
,κ <b>→</b>	ACK	A C14		4014			
_		ACK	7	ACK		NOTIFY(200)	
_						NOTIFY(200) 200 OK NOTIFY	
~					~	ZUU UK NUTIFY	
L					_	BYE	
					_	200 OK (BYE)	
7					7	200 OK (B1E)	
	metho SC#1 SC#1	in the received INVI is available in the INVI ader contains with the Invite Inv	as available in the INVITE request sender contains with the value stored I-By header is replaced by the value method=invite  SC#1  AS Transferee Establishment of  Establishment of  REFER  REFER 2  202 Accepted 202 Accepted 202 Accepted  NIVITE (inactive) 200 OK (S2 inactive) ACK  INVITE INVITE INVITE INVITE INVITE INVITE INVITE INVITE ACK  ACK  ACK  ACK	ECT_N02_004  in the received INVITE does not contain is available in the INVITE request sent to ader contains with the value stored in the I-By header is replaced by the value of the I-By header is replaced by the Value of the I-By header is replaced by the Value of the I-By header is	in the received INVITE does not contain the valid identity is available in the INVITE request sent to the Transfer Ta adder contains with the value stored in the received REFE I-By header is replaced by the value of the Referred-By h  method=invite SC#1  AS Transferee ISC#3 Establishment of session #1  Ses Establishment of session #2  ISC#1 transferee ISC#1  AS Transferee ISC#3 Establishment of session #2  ISC#1 transferee ISC#3  Establishment of sess	ECT_N02_004   4.5.2.7.3 [1]   PICS	

Apply post test routine

TSS	TP	Reference	Selection expression
Netw/TransfereeAS	ECT_N02_005	4.5.2.7.3 [1]	PICS 1/6

The Referred-By header in the received INVITE does not contain the valid identity of the served user. Request is rejected.

If a Referred-By header is available in the INVITE request sent to the Transfer Target, the AS verifies if the provided Referred-By header contains with the value stored in the received REFER request. If no match is found, the value of the Referred-By header is replaced by the value of the Referred-By header received in the REFER request.

#### SIP header values:

REFER 2: Refer-To URI; method=invite

Referred-By ISC#1

INVITE 3: Referred-By other URI (PIXIT)

Comments:

ISC#2 AS Transferee ISC#3 ISC#1

Establishment of session #1

Session #1 on hold

Establishment of session #2

ISC#1 transfers ISC#2 to ISC#3

REFER ← ← REFER 1

REFER ← REFER 2
202 Accepted → 202 Accepted

202 Accepted → 202 Accepted

INVITE (S2 inactive) → INVITE (inactive) 200 OK (inactive) ← 200 OK (S2 inactive)

ACK → ACK

NOTIFY(100) → NOTIFY(100) 200 OK NOTIFY ← 200 OK NOTIFY

INVITE 3 → INVITE 4xx ← 4xx → ACK

Apply post test routine

TSS		TP			Reference	Selec	ction expression	
Netw/TransfereeAS		ECT	_N02_006		4.5.2.7.3 [1]	PICS	1/8	
Test purpose								
The received INVITE does r								
If no <b>Referred-By</b> header is							e AS inserts a Referred-	
By header and the value is	equa	I to the value s	tored in the r	ecei	ved REFER request	t		
SIP header values:								
REFER 2: Refer-To URI; me		d=invite						
Referred-By ISC:		los)						
INVITE 3: (no Referred-By INVITE 4: Referred-By ISC)		ler)						
Comments:	<del>†</del> I							
ISC#2		AS Tran	sferee		ISC#3		ISC#1	
100#2			blishment o	f ses			100#1	
		_0.0				on #1 d	on hold	
		Esta	blishment o	f ses				
						ansfers ISC#2 to ISC#3		
			REFER	<b>←</b>		<b>←</b>	REFER 1	
REFER	←	REFER 2						
202 Accepted	<b>→</b>							
		20	2 Accepted	<b>→</b>		<b>→</b>	202 Accepted	
INVITE (S2 inactive) 200 OK (inactive) ACK	<b>→ ← →</b>	INVITE (inact 200 OK (S2 in ACK						
NOTIFY(100)	<b>→</b>					<b>→</b>	NOTIFY(100)	
200 OK NOTIFY	<del>-</del>					<del>-</del>	200 OK NOTIFY	
INVITE 3	À	INVITE				•	200 01(1011)	
	-		INVITE 4	<b>→</b>	INVITE			
			180 Ringing	<b>←</b>	180 Ringing			
180 Ringing	←	180 Ringing	5 5		0 0			
				<b>←</b>	200 OK			
200 OK								
ACK	<b>→</b>	ACK						
NOTIFY ((222)	-		ACK	<b>→</b>	ACK	_	NOTIFY ((00.5)	
NOTIFY(200)	<b>→</b>					<b>→</b>	NOTIFY(200)	
200 OK NOTIFY	<b>←</b>					<b>←</b>	200 OK NOTIFY	
BYE	<b>←</b>					<b>←</b>	BYE	
200 OK (BYE)	<b>→</b>					<b>→</b>	200 OK (BYE)	
200 01 (612)	•					-	200 OK (DTL)	
		Α	pply post te	st ro	utine			
			F 7 F 1					

TSS	TP	Reference	Selection expression			
Netw/TransfereeAS	ECT_N02_007	4.5.2.7.3 [1]	PICS 1/6			
Test purpose	·		•			
The method in the Refe	er-To header is not the INVITE method.					
Ensure that the REFER	request is rejected if the Method in the	Refer-To header	used in this dialogue is not the			
INVITE method e.g. BY	E.		· ·			
SIP header values:						
REFER 2: Refer-To ISC	C#2URI; method=BYE					
Referred-By	ISC#1					
Comments:						
ISC#2	AS Transferee	ISC#3	ISC#1			
	Establishment of s	ession #1				
		Session #1 on hold				
	Establishment of s	ession #2				
	ISC#1 transfers ISC#2 to ISC#3					
	REFER 🗲	•	← REFER 1			
	4xx <b>-</b>	•	<b>→</b> 4xx			
	Apply post test	outing				

TSS	TP	Reference	Selection expression		
Netw/TransfereeAS	ECT_N02_008	4.5.2.7.3 [1]	PICS 1/6		
Test purpose	·				
The request-URI is not targe	ted at the same UE instance that	t is involved in the d	lialog.		
Ensure that the ECT simulat	ion service does not apply if the F	Request URI is not	the Transferee URI. The REFER		
request is rejected.		·			
SIP header values:					
REFER 2: Refer-To other U	RI (PIXIT); method=invite				
Referred-By ISC#	<b>1</b>				
Comments:					
ISC#2	AS Transferee	ISC#3	ISC#1		
	Establishment of	session #1			
		Ses	ssion #1 on hold		
	Establishment of	session #2			
ISC#1 transfers ISC#2 to ISC#3					
	REFER ·	<del>(</del>	← REFER 1		
	4xx	<b>→</b>	<b>→</b> 4xx		
	Apply post test	t routine			

TSS	TP	Reference	Selection expression			
Netw/TransfereeAS	ECT_N02_009	4.5.2.7.3 [1]	PICS 1/6			
Test purpose			<u> </u>			
There is no method parameter contain	ned in the Refer-To hea	der.				
Ensure that the REFER request is re	ected if there is no Meth	nod parameter contai	ined in the Refer-To header.			
SIP header values:						
REFER 2: Refer-To ISC#2URI						
Referred-By ISC#1						
Comments:						
ISC#2	AS Transferee	ISC#3	ISC#1			
	Establishment of	session #1				
	Session #1 on hold					
	Establishment of	session #2				
	ISC#1 transfers ISC#2 to ISC#3					
	REFER	<del>(</del>	← REFER 1			
	4xx	<b>→</b>	<b>→</b> 4xx			
	Apply post test	t routine				

### 5.2.3 Action at the User equipment

#### 5.2.3.1 Actions at the Transferor UE

TSS	TP	Reference	Selection expression
User/Transferor	ECT_U01_001	4.5.2.1 [1]	PICS 2/1

#### **Test purpose**

The UE transfers a communication with a Transferee to the Transfer Target (Transferor, blind transfer). Ensure that the UE is able to transfer a communication with the Transferee, put on hold before, to the Transfer Target using the blind transfer method. The session with user Transferee is terminated before information about the progress of the transfer is received.

#### SIP header values:

REFER: Request URI: Gm#2

Refer-To contains Gm#3 URI; method=invite

Referred-By contains Gm#1 URI

NOTIFY(100): Event contains refer

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY(200):Event contains refer

NOTIFY(200):Event contains refer							
message/sipfrag contains SIP/2.0 200 OK							
Comments:							
UE (Gm#1)		Test equipment (Gm#2)					
- ( · ,	Establishment of session						
Session #1 o							
REFER	→	REFER					
1	<del>=</del>						
202 Accepted	<b>←</b>	202 Accepted					
BYE	<b>→</b>	BYE					
200 OK (BYE)	<b>É</b>	200 OK (BYE)					
200 OK (BTE)	•	200 OK (BTL)					
NOTIFY(100)	<b>←</b>	NOTIFY(100)					
200 OK NOTIFY	<b>→</b>	200 OK NOTIFY					
	-	200 01(11011111					
NOTIFY(200)	<b>←</b>	NOTIFY(200)					
200 OK NOTIFY	<b>→</b>	200 OK NOTIFY					
	Apply post test routi						

TSS	TP	Reference	Selection expression
User/Transferor	ECT_U01_002	4.5.2.1 [1]	PICS 2/2

The UE transfers a communication with a Transferee to the Transfer Target (Transferor, assured transfer). Ensure that the UE is able to transfer a communication with the Transferee, put on hold before, to the Transfer Target using the assured transfer method. The session with Transferee is terminated after information about the progress of the transfer is received.

#### SIP header values:

REFER: Request URI: Gm#2

Refer-To contains Gm#3 URI; method=invite

Referred-By contains Gm#1 URI

NOTIFY(100):Event contains refer

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY(200):Event contains refer

message/sipfrag contai	ns <b>SIP/2.0 200 OK</b>		
Comments:			
UE ( Gm#1)		Test equipment ( Gm#2)	
	Establishment of session	on #1	
Session #1 o	on hold		
REFER	<b>→</b>	REFER	
202 Accepted	<b>←</b>	202 Accepted	
NOTIFY(100)	<b>←</b>	NOTIFY(100)	
200 OK NOTIFY	<b>→</b>	200 OK NOTIFY	
NOTIFY(200)	<b>←</b>	NOTIFY(200)	
200 OK NOTIFY	<b>→</b>	200 OK NOTIFY	
BYE	<b>→</b>	BYE	
200 OK (BYE)	<b>←</b>	200 OK (BYE)	
, ,	Apply post test routi	ine ` ´	

TSS	TP	Reference	Selection expression
User/Transferor	ECT_U01_003	4.5.2.1 [1]	PICS 2/3

#### **Test purpose**

The UE transfers a communication with a Transferee to the Transfer Target (Transferor, consultative transfer). Ensure that the UE is able to transfer a communication with the Transferee, put on hold before, to the Transfer Target, having an active session, using the consultative transfer method. The Transfer Target receives a replaces header to request the termination of the session between Transferor and Transfer Target.

#### SIP header values:

REFER 1: Request URI: Gm#2

Require=replaces;

Refer-To contains Gm#3 URI?Replaces=call-id1%3Bto-tagSession1%3Bfrom-tagSession1;

method=invite

Referred-By contains Gm#1 URI

NOTIFY(100):Event contains refer

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY(200): Event contains refer

message/sipfrag contains SIP/2.0 200 OK						
Comments:						
UE ( Gm#1)		Test equipment (ISC#2)		( Gm#3)		
		Establishment of session #1				
	Session #	1 on hold				
		Establishment of session #2				
REFER	<b>→</b>	REFER				
202 Accepted	<b>←</b>	202 Accepted				
NOTIFY(100)	<del>(</del>	NOTIFY(100)				
200 OK NOTIFY	<b>→</b>	200 OK NOTIFY				
NOTIFY(200)	<b>←</b>	NOTIFY(200)				
200 OK NOTIFY	<b>→</b>	200 OK NOTIFY				
BYE	<b>←</b>		<b>←</b>	BYE		
200 OK (BYE)	<b>→</b>		<b>→</b>	200 OK (BYE)		
·		Apply post test routine				

#### 5.2.3.2 Actions at the Transferee UE

TSS	TP	Reference	Selection expression
User/Transferee	ECT_U02_001	4.5.2.5 [1]	PICS 2/1 AND PICS 2/5

#### Test purpose

UE establishes s session with the Transfer target in blind transfer modus (Transferee).

Ensure that UE set on hold is able to establish a session with the Transfer target after a REFER referring this session was received. The session with the Transferor is terminated by the Transferor before information about the success of the session to the Transfer target was sent.

#### SIP header values:

REFER: Request URI=Gm#1, Refer-To contains Gm#3 URI; method=invite

Referred-By contains Gm#2 URI

Request URI= Gm#3, Referred-By=Gm#2 INVITE:

NOTIFY(100):Event contains refer

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY(200):Event contains refer

message/s	message/sipfrag contains SIP/2.0 200 OK						
Comments: UE ( Gm#1)		Test equipment (Gm#2) Establishment of session #1		Test equipment (Gm#3)			
REFER 202 Accepted	<b>←</b> →	Session #1 on hold REFER 202 Accepted					
BYE 200 OK (BYE)	<b>←</b> →	BYE (S1) 200 OK (BYE)					
NOTIFY(S1 100) 200 OK NOTIFY INVITE (S2) 180 Ringing 200 OK (INVITE) ACK	<b>→</b> ←	NOTIFY(100) 200 OK NOTIFY	<b>&gt;</b> + + +	INVITE 180 Ringing 200 OK (INVITE) ACK			
NOTIFY(S1 200) 200 OK NOTIFY	<b>→</b> ←	NOTIFY(200) 200 OK NOTIFY Apply post test routine					

TSS	TP	Reference	Selection expression
User/Transferee	ECT_U02_002	4.5.2.5 [1]	PICS 2/2 AND PICS 2/5

UE establishes s session with the Transfer target in assured transfer modus (Transferee).

Ensure that UE set on hold is able to establish a session with the Transfer target after a REFER referring this session was received. The session with the Transferor is terminated by the Transferor after information about the success of the session to the Transfer target was sent.

#### SIP header values:

REFER: Request URI=Gm#1, Refer- Gm#3 URI; method=invite

Referred-By Gm#2 URI

INVITE: Request URI= Gm#3, Referred-By=Gm#2

NOTIFY(100):Event contains refer

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY(200):Event contains refer

message/sipfrag contains SIP/2.0 200 OK

message/sipf	rag contair	ns <b>SIP/2.0 200 OK</b>		
Comments: UE (Gm#1)		Test equipment (Gm#2) Establishment of session #1 Session #1 on hold		Test equipment (Gm#3)
REFER	<b>←</b>	REFER		
202 Accepted	<b>→</b>	202 Accepted		
NOTIFY(100)	<b>→</b>	NOTIFY(100)		
200 OK NOTIFY	+	200 OK NOTIFY		
INVITE (S2) 180 Ringing 200 OK (INVITE) ACK			<b>→ ← →</b>	INVITE 180 Ringing 200 OK (INVITE) ACK
NOTIFY(200)	<b>→</b>	NOTIFY(200)		
200 OK NOTIFY	<b>←</b>	200 OK NOTIFY		
BYE	<b>←</b>	BYE (S1)		
200 OK (BYE)	<b>→</b>	200 OK (BYE)  Apply post test routine		

TSS	TP	Reference	Selection expression
User/Transferee	ECT_U02_003	4.5.2.5 [1]	PICS 2/1 AND PICS 2/5

UE establishes s session with the Transfer target in consultative transfer modus (Transferee).

Ensure that UE set on hold is able to establish a session with the Transfer target after a REFER referring this session was received. The session with the Transferor is terminated by the Transferor after information about the success of the session to the Transfer target was sent.

#### SIP header values:

REFER: Reguest URI=Gm#1, Refer-To=Gm#3; method=INVITE, Referred-By=Gm#2

INVITE: Request URI= Gm#3, Referred-By=Gm#2

NOTIFY(100):Event contains refer

message/sipfrag contains SIP/2.0 100 Trying

NOTIFY(200): Event contains refer

message/sipfrag contains SIP/2.0 200 OK

Co	m	m	er	nts
Co	m	m	er	ıτs

UE (Gm#1)

Test equipment (Gm#2)

Establishment of session #1

Session #1 on hold

REFER

← REFER

202 Accepted

Test equipment (Gm#3)

Establishment of session #1

Session #1 on hold

REFER

202 Accepted

NOTIFY(100) → NOTIFY(100)
200 OK NOTIFY ← 200 OK NOTIFY

INVITE (S2)

180 Ringing

200 OK (INVITE)

ACK

→ INVITE

180 Ringing

200 OK (INVITE)

ACK

→ ACK

NOTIFY(200) → NOTIFY(200) 200 OK NOTIFY ← 200 OK NOTIFY

Apply post test routine

TSS	TP	Reference	Selection expression
User/Transferee	ECT_U02_004	4.5.2.5 [ <b>1</b> ]	NOT PICS 2/5

#### Test purpose

UE has not the capability to handle the REFER request.

Ensure that the UE is able to send a 403 Forbidden or 501 Not implemented unsuccessful final response if the REFER handling is not implemented.

#### SIP header values:

REFER: Request URI=Gm#1, Refer-To other URI (PIXIT); method=invite

Referred-By contains Gm#2 URI

Comments:

UE ( Gm#1) Test equipment (Gm#2)

Establishment of session #1 Session #1 on hold

REFER ← REFER

CASE A

403 Forbidden → 403 Forbidden

CASE A

501 Not implemented → 501 Not implemented

Apply post test routine

## 5.2.3.3 Actions at the Transfer target UE

TSS	TP	Reference	Selection expression					
User/TransferTarget	ECT_U03_001	4.5.2.17 [1]	PICS 2/1 OR PICS 2/2					
Test purpose								
Transfer Target is in communication with	user Gm#2 (Trans	feree) in Blind/Assu	red mode.					
Ensure that the UE in a session with the	(Transferee). is tra	nsferred and receive	es a Referred-By header in the					
received INVITE identifying the Transferd	or.							
SIP header values:								
INVITE: Request URI = UE (Gm#1) Re	eferredBy=URI x (P	IXIT)						
BYE								
Comments:								
UE C (Gm#1)		Test equipment	(Gm#2)					
INVITE	+	INVITE						
180 Ringing	<b>→</b>	180 Ringing						
200 OK (INVITE)	<b>→</b>	200 OK (INVITE)						
ACK	<b>←</b>	ACK						
Apply post test routine								

TSS	TP	Reference	Selection expression						
User/TransferTarget	ECT_U03_002	4.5.2.17 [1]	PICS 2/3						
Test purpose									
Transfer Target is in communication with	the Transferor and t	he Transferee in consu	Itative transfer mode.						
Ensure that the UE in a session with the									
Transferee. In order to terminate the sess									
information of the session with the Trans									
with the Transferor is terminated by UE.									
SIP header values:									
INVITE: Replaces=call-id1; to-tag=S1	; from-tag=S1								
Referred-By= URI x (PIXIT)									
Comments:									
UE C (Gm#1)	Test equipment (Gn	n#2) T	est equipment (Gm#3)						
Establi	shment of session	#1 (S1)							

## 5.2.4 Interaction with other services

## 5.2.4.1 Originating identification restriction (OIR)

TSS		TP	Reference	Selec	tion expression
Interaction/OIR		ECT_N03_001	4.6.5		<u> </u>
Test purpose			•	•	
Referred-By header is	removed from th	e INVITE to the Trans	sfer Target due to the	e OIR service.	
Ensure that a Referred					
that contains the value	"user" received	from the Transferor re	egarding the OIR ser	vice of the serv	ved user.
SIP header values:					
REFER 1: Refer-To co					
	contains ISC#1	URI			
Privacy con					
INVITE 3: Referred-By		URI			
INVITE 4: (no Referred	d-By header)				
Comments:					
ISC#1	=	S Transferor	ISC#2		ISC#3
		ment of session #1			
Sess	sion #1 on hold				
		ment of session #2			
		sfers ISC#2 to ISC#3			
REFER 1	→ REF	—··			
			→ REFER		
	_		← 202 Accepted		
202 Accepted	<b>←</b> 202	Accepted			
NOTIFY ((4.00)	-		* NOTIFY((400)		
NOTIFY(100)	÷		★ NOTIFY(100)		
200 OK NOTIFY	<b>→</b>		→ 200 OK NOTII	ͰY	
			← INVITE 3	•	INIV/ITE
			<b>→</b>	<del>)</del>	INVITE
			<b>←</b>	<b>←</b>	180 Ringing
		5 5	→ 180 Ringing	_	200 01/
			<b>←</b> 200 OK	<b>←</b>	200 OK
		200 OK	→ 200 OK	ACK →	ACK
NOTIFY(200)	_		← NOTIFY(200)	ACK →	AUK
NOTIFY(200) 200 OK NOTIFY	<b>←</b> →		<ul><li>NOTIFY(200)</li><li>→ 200 OK NOTII</li></ul>	EV	
200 OK NOTIFT BYE	→ →		→ BYE	F <b>I</b>	
200 OK (BYE)	<del>-</del>		← 200 OK (BYE)		
200 OR (DTE)	•	Apply post tes	- 200 011 (212)		

TSS	TP	Reference	Selection expression
Interaction/OIR	ECT_N03_00	2 4.6.5	-
Test purpose	•		•
No Referred-By heade	er is sent in the INVITE to the Transf	er Target due to the OIR s	ervice.
	I-By header is not sent in the INVITE		
contains the value "id"	received from the Transferor regard	ling the OIR service of the	served user.
SIP header values:			
	ntains ISC#3 URI; method=invite		
	contains ISC#1 URI		
Privacy con			
INVITE 4: (no Referred			
INVITE 4: (no Referred	a-By neader)		
ISC#1	AS Transferor	ISC#2	ISC#3
130#1	Establishment of session #		130#3
Sess	sion #1 on hold	•	
0000	Establishment of session #	2	
	ISC#1 transfers ISC#2 to ISC	#3	
REFER 1	→ REFER		
	REFER 2	→ REFER	
	202 Accepted	<ul> <li>202 Accepted</li> </ul>	
202 Accepted	← 202 Accepted		
NOTIFY(100)	<b>←</b>	← NOTIFY(100)	
200 OK NOTIFY	<b>→</b>	→ 200 OK NOTIFY	
200 010 10 111 1	INVITE	► INVITE 3	
	INVITE 4	<b>→</b>	→ INVITE
	180 Ringing	<b>←</b>	← 180 Ringing
	180 Ringing	→ 180 Ringing	3 3
	200 OK	←	← 200 OK
	200 OK	→ 200 OK	
			ACK → ACK
NOTIFY(200)	<del>(</del>	← NOTIFY(200)	
200 OK NOTIFY	<b>→</b>	→ 200 OK NOTIFY	
BYE	<b>→</b>	→ BYE	
200 OK (BYE)	← Apply post t	← 200 OK (BYE)	
	Apply post t	est routine	

## 5.2.4.2 Anonymous Communication Rejection and Communication Barring (ACR/CB)

TSSInteraction/ACR-CB		TP	Reference	Selection expression
		ECT_N04_001	4.6.9	_
Test purpose				
transfer requests with a	Transfer Target	that is barred by the	served users Out	going Communication Barring
(OCB) rules.				
Ensure that the As does	not accept a trai	nsfer requests with	a transfer Target th	nat is barred by the Transferor's
Outgoing Communication	n Barring (OCB)	rules.		
Precondition: The Tran	sfer Target is ba	rred by the Transfe	or's Outgoing Con	nmunication Barring rules.
SIP header values:				
REFER 1: Refer-To con	tains ISC#3 URI;	method=invite		
Referred-By cont	ains ISC#1 URI			
Comments:				
ISC#1	AS	S Transferor	ISC#2	ISC#3
	Establishm	ent of session #1		
INVITE	←		← INVITE 1	
180 Ringing	<b>→</b>		→ 180 Ringing	]
200 OK (INVITE)	<b>→</b>		→ 200 OK (IN)	VITE)
ACK	<b>←</b>		← ACK	
	_			
INVITE 2 (sendonly)	<b>→</b>		→ INVITE (ser	• •
200 OK (recvonly)	<del>(</del>		← 200 OK (red	evonly)
ACK	<b>→</b>		→ ACK	
		ers ISC#2 to ISC#3	}	
REFER 1	→ REFE	= : :		
403 Forbidden	<b>←</b> 403 F	Forbidden		

Apply post test routine

## 5.2.4.3 CONFerence Calling (CONF)

TSS		TP		Reference			ection expression
Interaction/CONF		ECT_N05_00	1	4.6.6 [1]		PIC	S 1/1
Test purpose							
ECt does not apply if tl							
does not apply if the "Is							
ECT AS does not repla					ession id	lentifi	er. The request line
of the INVITE destined	for the Transfer	Target is passed u	nchar	nged.			
SIP header values:							
INVITE 1: Request UR	I=conference fa	ctory URI					
200 OK (INVITE) 1: Co							
REFER 1: Request UR		,					
		focus; method=invi	te				
Referred-By		,					
REFER 2: Request UR							
		focus; method=invi	te				
Referred-By	ISC#1 URI	-,					
INVITE 2: Request UR		JRI; isfocus					
Referred-By		,					
INVITE 3: Request UR		JRI: isfocus					
Referred-By		,					
Comments:							
ISC#ISC#1		AS Transferor		ISC#ISC#2			ISC#ISC#3
		ment of session #	1				
Sess	ion #1 on hold						
	Establish	ment of session #	2				
INVITE 1 (S3)	<b>→</b>		<b>→</b>	INVITE			
200 OK (INVITE)	<b>←</b>		<b>←</b>	200 OK (INVITE	1 (		
ACK	<b>→</b>		<b>→</b>	ACK			
	ISC#1 tran	sfers ISC#2 to ISC	#3				
REFER 1	→ RE	FER					
		REFER 2	<b>→</b>	REFER			
		202 Accepted	<b>←</b>	202 Accepted			
202 Accepted	<b>←</b> 202	? Accepted					
BYE	<b>→</b>		<b>→</b>	BYE			
200 OK (BYE)	<b>←</b>		<b>←</b>	200 OK (BYE)			
, ,		INVITE	<b>←</b>	INVITE 2 (S2)			
		INVITE 3	<b>→</b>			<b>→</b>	INVITE
		180 Ringing	<b>←</b>			<b>←</b>	180 Ringing
		180 Ringing	<b>→</b>	180 Ringing			5 5
		200 OK	<b>←</b>	5 5		<b>←</b>	200 OK
		200 OK	<b>→</b>	200 OK			
		_			ACK	<b>→</b>	ACK
		Apply post t	est ro	outine			-

#### Explicit Communication Transfer (ECT) 5.2.4.4

TSS		TP	Reference			ection expression
Interaction/ECT		ECT_N06_001	4.6.10.2, 4.6.1	0.3 [1]	PIC	S 1/1
Test purpose						
Interaction with ECT: <b>B</b>	lind transfer.					
Ensure that if the INVIT				transferi	red co	mmunication
indicated by the presen	ce of a Referred	By header in the IN	IVITE request the			
<ul> <li>REFER is forwarde</li> </ul>	ed and the value	of the Refer-To hea	der is replaced by th	e ECT s	ession	Identifier.
<ul> <li>The Request URI of</li> </ul>	of the INVITE req	uest received to for	ward to the Transfer	Target is	s repla	ced with the value
of the Transfer Tar	get.					
SIP header values:						
INVITE 1: Request UR			PIXIT)			
REFER 1: Refer-To ISC	C#3 URI; method	=invite				
Referred-By						
REFER 2: Refer-To EC		ifier URI; method=i	nvite			
Referred-By						
INVITE 2: Request UR		Identifier URI				
Referred-By						
INVITE 3: Request UR						
Referred-By	ISC#1 URI					
Comments:	_					
ISC#ISC#1		S Transferor	ISC#ISC#2			ISC#ISC#3
INVITE 1 (S1)	<b>→</b>		→ INVITE			
180 Ringing	<del>(</del>		← 180 Ringing	\		
200 OK (INVITE)	<b>←</b> →		◆ 200 OK (INVIT  ◆ ACK	<b>L</b> )		
ACK	7		→ ACK			
9000	ion #1 on hold					
REFER 1	→ REF	FR				
		REFER 2	→ REFER			
		202 Accepted	← 202 Accepted			
202 Accepted	<b>←</b> 202	Accepted				
BYE	<b>→</b>	-1	→ BYE			
200 OK (BYE)	<b>←</b>		← 200 OK (BYE)			
,		INVITE	← INVITE 2 (S2)			
		INVITE 3	<b>→</b>		<b>→</b>	INVITE
		180 Ringing	<b>←</b>		<b>←</b>	180 Ringing
		180 Ringing	→ 180 Ringing			5 5
		200 OK	←		<b>←</b>	200 OK
		200 OK	→ 200 OK			
				۸CK	_	∧ C K

Apply post test routine

ACK →

ACK

TSS	TP	Reference	Selection expression
Interaction/ECT	ECT_N06_002	4.6.10.2, 4.6.10.3 [1]	PICS 1/2

Interaction with ECT: Assured transfer.

Ensure that if the INVITE dialog on which the REFER is received is a previously transferred communication indicated by the presence of a Referred-By header in the INVITE request the

- REFER is forwarded and the value of the Refer-To header is replaced by the ECT session Identifier.
- The Request URI of the INVITE request received to forward to the Transfer Target is replaced with the value of the Transfer Target.

#### SIP header values:

INVITE 1: Request URI = ISC#2; Referred-By=other URI (PIXIT)

REFER 1: Refer-To ISC#3 URI; method=invite

Referred-By ISC#1 URI

REFER 2: Refer-To ECT Session Identifier URI; method=invite

Referred-By ISC#ISC#1 URI

INVITE 2: Request URI = ECT Session Identifier URI

Referred-By ISC#1 URI

INVITE 3: Request URI = ISC#3 URI

Referred-By	ISC#1 URI				
Comments: ISC#1	AS Transferor		ISC#2		ISC#3
INVITE 1 (S1) 180 Ringing 200 OK (INVITE) ACK Sessi	→ ← ← → ion #1 on hold → REFER	<b>→ ← →</b>	INVITE 180 Ringing 200 OK (INVITE) ACK		
IXEI EIX I	REFER 2 202 Accepted INVITE INVITE 3 180 Ringing 180 Ringing 200 OK 200 OK	<b>++++</b>	REFER 202 Accepted INVITE 2 (S2)  180 Ringing 200 OK	<b>→</b> ←	INVITE 180 Ringing 200 OK
	Apply post	test re	ACI outine	<b>→</b>	ACK

TSS	TP	Reference	Selection expression
Interaction/ECT	ECT_N06_003	4.6.10.2, 4.6.10.3 [1]	PICS 1/3

Interaction with ECT: Consultative transfer.

Ensure that if the INVITE dialog on which the REFER is received is a previously transferred communication indicated by the presence of a Referred-By header in the INVITE request the

- REFER is forwarded and the value of the Refer-To header is replaced by the ECT session Identifier.
- The Request URI of the INVITE request received to forward to the Transfer Target is replaced with the value of the Transfer Target.

#### SIP header values:

INVITE 1: Request URI = ISC#2; Referred-By=other URI (PIXIT)

REFER 1: Require=replaces

Refer-To ISC#3 URI?Replaces=call-id-S2; to-tag=S2; from-tag=S2; method=invite

Referred-By ISC#1 URI

REFER 2: Require=replaces;

Refer-To contains **ECT Session Identifier URI**?Replaces=**call-id-S2**; **to-tag=S2**; **from-tag=S2**;

method=invite

Referred-By contains ISC#1 URI

INVITE 2: Request URI = ECT Session Identifier URI

Replaces=call-id-S2; to-tag=S2; from-tag=S2

Referred-By ISC#1 URI

INVITE 3: Request URI = ISC#3 URI

Replaces=call-id-S2; to-tag=S2; from-tag=S2

Referred-By ISC#1 URI

Referred-by 13C	ri Oik	.1						
Comments: ISC#1		AS Transferor		ISC#2			ISC#3	
INVITE 1 (S1) 180 Ringing 200 OK (INVITE) ACK Session #	→ ← ← →	hold	<b>→ ← ← →</b>	INVITE 180 Ringing 200 OK (INVITE) ACK				
Session #	1 011	Establishment	of s	ession #2				
REFER 1	<b>→</b>	REFER	. UI S	C331UII #Z				
202 Accepted	<del>-</del>	REFER 2 202 Accepted 202 Accepted	<b>→</b>	REFER 202 Accepted				
INVITE (inactive) 200 OK (inactive) ACK	÷ + +	202 / 1000ptou	<b>←</b> <b>→</b>	INVITE (inactive) 200 OK (inactive) ACK				
NOTIFY(100) 200 OK NOTIFY	<b>←</b> <b>→</b>	INVITE INVITE 3	<b>← → ← →</b>	NOTIFY(100) 200 OK NOTIFY INVITE 2 (S3)		<b>→</b>	INVITE	
		180 Ringing	<b>←</b>			<b>←</b>	180 Ringing	
		180 Ringing		180 Ringing		,	000 01/	
		200 OK 200 OK		200 OK		<b>←</b>	200 OK	
		200 OK	-	200 OK	ACK	<b>→</b>	ACK	
NOTIFY(200) 200 OK NOTIFY	<b>←</b> →		<b>←</b>	NOTIFY(200) 200 OK NOTIFY	,			
BYE 200 OK (BYE)	<b>←</b> <b>→</b>					<b>←</b>	BYE (S2) 200 OK (BYE)	
BYE (S1) 200 OK (BYE)	<b>→</b>	A. J	<b>→</b>	BYE 200 OK (BYE)				
Apply post test routine								

# Annex A (informative): Bibliography

ETSI TS 123 228: "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; IP Multimedia Subsystem (IMS); Stage 2 (3GPP TS 23.228 version 8.9.0 Release 8)".

## History

Document history		
V2.1.1	July 2009	Publication