ETSI

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STANDARD

Integrated Services Digital Network (ISDN);
Signalling System No.7;
ISDN User Part (ISUP) version 2 for the International interface;
Part 35: Test Suite Structure and Test Purposes (TSS&TP)
specification for supplementary services

ETSI

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Foreword

This final draft European Telecommunication Standard (ETS) has been produced by the Signalling Protocols and Switching (SPS) Technical Committee of the European Telecommunications Standards Institute (ETSI), and is now submitted for the Voting phase of the ETSI standards approval procedure

This ETS is part 35 of a multi-part standard covering the ISDN User Part (ISUP) version 2 for the international interface, as described below:

Part 1:   "Basic services";
Part 2:   "ISDN supplementary services";
Part 3:   "Calling Line Identification Presentation (CLIP) supplementary service";
Part 4:   "Calling Line Identification Restriction (CLIR) supplementary service";
Part 5:   "Connected Line Identification Presentation (COLP) supplementary service";
Part 6:   "Connected Line Identification Restriction (COLR) supplementary service";
Part 7:   "Terminal Portability (TP) supplementary service";
Part 8:   "User-to-User Signalling (UUS) supplementary service";
Part 9:   "Closed User Group (CUG) supplementary service";
Part 10:   "Subaddressing (SUB) supplementary service";
Part 11:   "Malicious Call Identification (MCID) supplementary service";
Part 12:   "Conference call, add-on (CONF) supplementary service";
Part 14:   "Explicit Call Transfer (ECT) supplementary service";
Part 15:   "Diversion supplementary services";
Part 16:   "Call Hold (HOLD) supplementary service";
Part 17:   "Call Waiting (CW) supplementary service";
Part 18:   "Completion of Calls to Busy Subscriber (CCBS) supplementary service";
Part 19:   "Three party (3PTY) supplementary service";
Part 31:   "Protocol Implementation Conformance Statement (PICS) proforma specification for basic services";
Part 32:   "Test Suite Structure and Test Purposes (TSS&TP) specification for basic services";
Part 33:   "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for basic services";
Part 34:   "PICS proforma specification for supplementary services";
Part 35:   "TSS&TP specification for supplementary services";
Part 36:   "ATS and partial PIXIT proforma specification for supplementary services".

> NOTE: Part 13 has been withdrawn.

Proposed transposition dates	
Date of latest announcement of this ETS (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	6 months after doa
Date of withdrawal of any conflicting National Standard (dow):	6 months after doa

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1 Scope

This thirty-fifth part of ETS 300 356 provides the Test Suite Structure and Test Purposes (TSS&TP) for the ISDN User Part (ISUP) version 2 supplementary services defined in ETS 300 356-2 [2] to ETS 300 356-19 [18] in compliance with the relevant requirements and in accordance with the relevant guidance given in ISO/IEC 9646-1 [22].

2 Normative references

This ETS incorporates by dated and undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

An ETS is referenced where it (partly) overrides the corresponding ITU-T Recommendation or where a corresponding ITU-T Recommendation does not exist (yet). For convenience, the respective section of an ITU-T Recommendation is referenced when it is not overridden by a corresponding ETS.

[1]   ETS 300 356-1 (1995): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 2 for the international interface; Part 1: Basic services [ITU-T Recommendations Q.761 to Q.764 (1993), modified]".

[2]   ETS 300 356-2 (1995): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 2 for the international interface; Part 2: ISDN supplementary services [ITU-T Recommendation Q.730 (1993), modified]".

[3]   ETS 300 356-3 (1995): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 2 for the international interface; Part 3: Calling Line Identification Presentation (CLIP) supplementary service [ITU-T Recommendation Q.731, clause 3 (1993), modified]".

[4]   ETS 300 356-4 (1995): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 2 for the international interface; Part 4: Calling Line Identification Restriction (CLIR) supplementary service [ITU-T Recommendation Q.731, clause 4 (1993), modified]".

[5]   ETS 300 356-5 (1995): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 2 for the international interface; Part 5: Connected Line Identification Presentation (COLP) supplementary service [ITU-T Recommendation Q.731, clause 5 (1993), modified]".

[6]   ETS 300 356-6 (1995): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 2 for the international interface; Part 6: Connected Line Identification Restriction (COLR) supplementary service [ITU-T Recommendation Q.731, clause 6 (1993), modified]".

[7]   ETS 300 356-7 (1995): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 2 for the international interface; Part 7: Terminal Portability (TP) supplementary service [ITU-T Recommendation Q.733, clause 4 (1993), modified]".

[8]   ETS 300 356-8 (1995): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 2 for the international interface; Part 8: User-to-User Signalling (UUS) supplementary service [ITU-T Recommendation Q.737, clause 1 (1993), modified]".

[9]   ETS 300 356-9 (1995): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 2 for the international interface; Part 9: Closed User Group (CUG) supplementary service [ITU-T Recommendation Q.735, clause 1 (1993), modified]".

[10]   ETS 300 356-10 (1995): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 2 for the international interface; Part 10: Subaddressing (SUB) supplementary service [CCITT Recommendation Q.731, section 8 (1992), modified]".

[11]   ETS 300 356-11 (1995): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 2 for the international interface; Part 11: Malicious Call Identification (MCID) supplementary service".

[12]   ETS 300 356-12 (1995): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 2 for the international interface; Part 12: Conference call, add-on (CONF) supplementary service [ITU-T Recommendation Q.734, clause 1 (1993), modified]".

[13]   ETS 300 356-14 (1995): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 2 for the international interface; Part 14: Explicit Call Transfer (ECT) supplementary service".

[14]   ETS 300 356-15 (1995): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 2 for the international interface; Part 15: Diversion supplementary services [ITU-T Recommendation Q.732, clauses 2 to 5 (1993), modified]".

[15]   ETS 300 356-16 (1995): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 2 for the international interface; Part 16: Call Hold (HOLD) supplementary service [ITU-T Recommendation Q.733, clause 2 (1993), modified]".

[16]   ETS 300 356-17 (1995): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 2 for the international interface; Part 17: Call Waiting (CW) supplementary service [CCITT Recommendation Q.733, section 1 (1992), modified]".

[17]   ETS 300 356-18 (1995): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 2 for the international interface; Part 18: Completion of Calls to Busy Subscriber (CCBS) supplementary service".

[18]   ETS 300 356-19 (1995): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 2 for the international interface; Part 19: Three party (3PTY) supplementary service [ITU-T Recommendation Q.734, clause 2 (1993), modified]".

[19]   ETS 300 356-31 (1997): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 2 for the international interface; Part 31: Protocol Implementation Conformance Statement (PICS) proforma specification for basic services".

[20]   ETS 300 356-34: "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 2 for the international interface; Part 31: Protocol Implementation Conformance Statement (PICS) proforma specification for supplementary services".

[21]   Draft new ITU-T Recommendation Q.788: "User-network interface to user-network interface compatibility test specifications for ISDN, non-ISDN and undetermined accesses interworking over international ISUP".

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

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

3   Definitions and abbreviations

3.1   Definitions

For the purposes of this ETS, the following definitions apply:

-        terms defined in the ISUP version 2 reference specifications [1-18];
-        terms defined in ISO/IEC 9646-1 [22] and in ISO/IEC 9646-2 [23].

3.2   Abbreviations

For the purposes of this ETS, the following abbreviations apply, together with those given in ETS 300 356-1 [1] (e.g. the ISUP message acronyms):

3PTY	Three-Party
ASE	Application Service Entity
CCBS	Completion of Calls to Busy Subscriber
CD	Call Deflection
CFB	Call Forwarding Busy
CFNR	Call Forwarding No Reply
CFU	Call Forwarding Unconditional
CLIP	Calling Line Identification Presentation
CLIR	Calling Line Identification Restriction
CntrlE	Controlling Exchange
COLP	Connected Line Identification Presentation
COLR	Connected Line Identification Restriction
CONF	Conference call, add-on
CUG	Closed User Group
CW	Call Waiting
DLE	Destination Exchange
ECT	Explicit Call Transfer
HOLD	Call Hold
InatE	International Exchange
InclE	Incoming International Exchange
IntermE	Intermediate Exchange
ISDN	Integrated Services Digital Network
ISUP	ISDN User Part
ITE	International Transit Exchange
IUT	Implementation Under Test
IWorkE	Interworking Exchange
MCID	Malicious Call Identification
NE	National Exchange
NTE	National Transit Exchange
OLE	Originating Local Exchange
OutIE	Outgoing International Exchange
PICS	Protocol Implementation Conformance Statement
SCS	System Conformance Statement
SUB	Subaddressing
SUT	System Under Test
TP	Terminal Portability
TP	Test Purpose (context dependent)
TSS	Test Suite Structure
UUS	User-to-User Signalling
UUSn	UUS service n (n = 1..3)

4 Test Suite Structure (TSS)

ISUP_v2_Suppl_Services

1	CLIP
2	CLIR
3	COLP
4	COLR
5	TP
	NO_TP
6	UUS

	UUS1_I
7	CUG	NO_UUS1_I
	NO_CUG	UUS1_E
8	SUB	NO_UUS1_E
		UUS2
9	MCID	NO_UUS2
	NO_MCID	UUS3
10	CONF	NO_UUS3

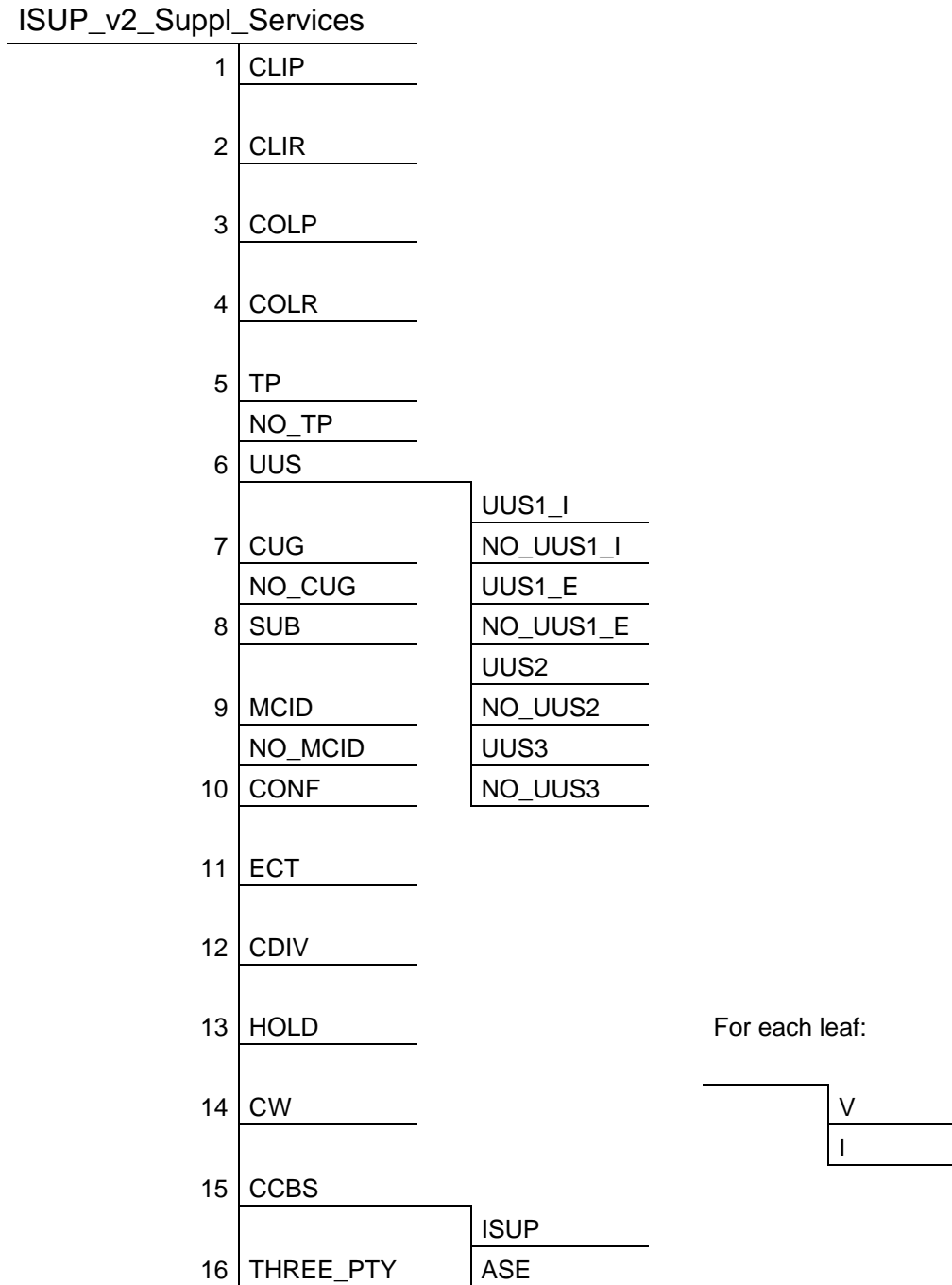|	
11	ECT
12	CDIV
13	HOLD
14	CW
15	CCBS
		ISUP
16	THREE_PTY	ASE

For each leaf:

	V
	I

Figure 1: Test suite structure

TSS naming conventions

CLIP	Calling Line Identification Presentation
CLIR	Calling Line Identification Restriction
COLP	Connected Line Identification Presentation
COLR	Connected Line Identification Restriction
TP	Terminal Portability
NO_TP	Terminal Portability not supported
UUS	User-to-User Signalling
UUS1_I	User-to-User Signalling service 1 implicit
NO_UUS1_I	User-to-User Signalling service 1 implicit not supported
UUS1_E	User-to-User Signalling service 1 explicit
NO_UUS1_E	User-to-User Signalling service 1 explicit not supported
UUS2	User-to-User Signalling service 2
NO_UUS2	User-to-User Signalling service 2 not supported
UUS3	User-to-User Signalling service 3
NO_UUS3	User-to-User Signalling service 3 not supported
CUG	Closed User Group
NO_CUG	Closed User Group not supported
SUB	Subaddressing
MCID	Malicious Call Identification
NO_MCID	Malicious Call Identification not supported
CONF	Conference Call, add-on
ECT	Explicit Call Transfer
CDIV	Call Diversion Services
CFB	Call Forwarding Busy
CFNR	Call Forwarding No Reply
CFU	Call Forwarding Unconditional
CD	Call Deflection
HOLD	Call Hold
CW	Call Waiting
CCBS	Completion of Calls to Busy Subscriber
CCBS_ISUP	CCBS - ISUP protocol
CCBS_ASE	CCBS - Application Service Element
THREE_PTY	Three-Party service
V	Valid behaviour stimulus
I	Inopportune stimulus

5　Test Purposes (TP)

5.1　Introduction

For each test requirement a TP is defined.

5.1.1　TP naming convention

TPs are numbered ascending within each group. Groups are organized according to the TSS down to the last but one level. The classification in the V/I groups is done by the inclusion of V or I in the test case name. Additional qualifiers, in form of lower case letters, are added to identify variants within one generic test case (see table 1).

Table 1: TP Identifier naming convention scheme

Identifier:	**ISS_{<TC>}_<group>_<N>_<n>_{<n>}_{<a>}**	
ISS	**=**	**ISUP version 2 Supplementary Services**
{<TC>}	=	Designation used for ASE test cases (e.g. CCBS): TC: Transaction Capabilities
<group>	=	One character representing the test group: V: Valid stimulus I: Inopportune stimulus
<N>	=	Sequence number for supplementary services according to the test suite structure
<n>	=	Sequence number used within the group
{<n>}	=	Optional additional number used (e.g. for UUS)
{<a>}	=	Optional lower-case character distinguishing tests with same reference number

5.1.2 Source of TP definition

The TPs cover validation testing aspects and are based on the ISUP version 2 supplementary service reference specifications [2-18].

5.1.3 TP structure

The TP structure overlaps with the TSS.

TPs that test normal behaviour are grouped in the **V** (Valid behaviour) group.

TPs that test the IUT behaviour in situations that are not normal operation are grouped in the **I** (Inopportune stimulus) group.

TPs for the Application Service Entity (ASE) defined for some supplementary services (e.g. CCBS) have been marked with the **TC** (Transaction Capabilities) designation.

5.2 TPs for the supplementary services

All of the following TPs belong to the main group ISUP_v2_Suppl_Services. Each TP is presented in a separate table.

The first row of the table contains the following items:

TSS: identifier in the test suite structure (test group/subgroup identifier);

TP: identifier of the test purpose;

ISUP v2 reference: the reference to the requirement in the ISUP standard (ITU-T Recommendation supplemented if necessary by the modifying ETS), which led to the TP;

Selection expression: selection criterion for the TP taking into account the exchange's role and the answers to the specified PICS questions. If the PICS questions refer to features of the basic call control procedures (see ETS 300 356-31 [19]) they are preceded by the identifier "BCall". All other PICS questions refer to supplementary services specific features (see ETS 300 356-34 [20]). If there is no selection expression specified, the TP is valid for all roles of exchanges;

Q.788 reference: if there is a test purpose defined in ITU-T Recommendation Q.788 [21] which covers the expected behaviour of the TP, then the reference to that test is given here. Because the TPs defined in ITU-T Recommendation Q.788 [21] describe end-to-end tests, it is possible that one single Q.788 test is referenced by several TPs within this ETS. Some TPs do not have any reference to ITU-T Recommendation Q.788 [21] and are marked by "None" in the Q.788 reference box.

The next row defines the TP itself, each having a *title* in *italics* and a text body.

ISUP **messages** and **parameter** names are highlighted **bold** to ease the readability.

In order to check the specified behaviour for some TPs a special prerequisite test condition has to be fulfilled. If such a condition is needed, it is presented after the TP under the heading "Pre-test conditions".

5.2.1 Calling Line Identification Presentation (CLIP)

TSS CLIP/	TP ISS_V_1_1	ISUP v2 reference 3.5.2.1.1; table 3.1/Q.731	Selection expression OLE	Q.788 reference 2.1.1

Test purpose

Calling party number (network provided)

To verify that the IUT can successfully originate a call having a **calling party number** with the screening indicator set to "network provided" and the presentation restricted indicator set to "presentation allowed".

TSS CLIP/	TP ISS_V_1_2	ISUP v2 reference 3.5.2.1.1; table 3.1/Q.731	Selection expression OLE AND PICS A.3/8 (SUB)	Q.788 reference 2.1.2

Test purpose

Calling party number (network provided) with calling subaddress

To verify that the IUT can successfully originate a call having a **calling party number** with the screening indicator set to "network provided" and an **access transport** parameter containing the calling subaddress.

Pre-test conditions
Arrange the data in the IUT so that the calling party has subscribed to the subaddressing supplementary service.

TSS CLIP/	TP ISS_V_1_3	ISUP v2 reference 3.5.2.1.1; table 3.1/Q.731	Selection expression OLE	Q.788 reference None

Test purpose

Calling party number (user provided, verified and passed)

To verify that the IUT can successfully originate a call having the **calling party number** with the screening indicator set to "user provided, verified and passed".

TSS CLIP/	TP ISS_V_1_4	ISUP v2 reference 3.5.2.1.1; table 3.1/Q.731	Selection expression OLE AND PICS A.3/8 (SUB)	Q.788 reference 2.1.3

Test purpose

Calling party number (user provided, verified and passed) with calling subaddress

To verify that the IUT can successfully originate a call having a **calling party number** with the screening indicator set to "user provided, verified and passed" and an **access transport** parameter containing the calling subaddress.

Pre-test conditions
Arrange the data in the IUT so that the calling party has subscribed to the subaddressing supplementary service.

TSS CLIP/	TP ISS_V_1_5	ISUP v2 reference 3.5.2.1.1; table 3.1/Q.731	Selection expression OLE	Q.788 reference None

Test purpose

Calling party number (user provided, not verified)

To verify that the IUT can successfully originate a call having a default **calling party number** with the screening indicator set to "network provided" and a **generic number** containing the additional calling party number with the screening indicator set to "user provided, not verified".

Pre-test conditions
Arrange the data in the IUT so that there is a special arrangement from the access signalling system regarding an additional calling party number.

TSS CLIP/	TP ISS_V_1_6	ISUP v2 reference 3.5.2.1.1; table 3.1/Q.731	Selection expression OLE AND PICS A.3/8 (SUB)	Q.788 reference 2.1.4

Test purpose

Calling party number (user provided, not verified) with calling subaddress

To verify that the IUT can successfully originate a call having a default **calling party number** with the screening indicator set to "network provided", a **generic number** containing the additional calling party number with the screening indicator set to "user provided, not verified" and an **access transport** parameter containing the calling subaddress.

Pre-test conditions
Arrange the data in IUT so that there is a special arrangement from the access signalling system regarding an additional calling party number and that the calling party has subscribed to the subaddressing supplementary service.

TSS CLIP/	TP ISS_V_1_7	ISUP v2 reference 3.4; 3.5.2.2.1/Q.731	Selection expression Transit	Q.788 reference None

Test purpose

Passing on the calling party number and the generic number

To verify that a **calling party number** and additional calling party number in the **generic number** can be successfully transferred to the succeeding exchange.

TSS CLIP/	TP ISS_V_1_8	ISUP v2 reference 3.5.2.3.1/Q.731	Selection expression OutIE AND PICS A.4/1	Q.788 reference None

Test purpose

Discarding the calling party number in case of bilateral agreements

To verify that the **calling party number** is discarded in case of bilateral agreements, if the address presentation restricted indicator is set to "presentation allowed".

NOTE: This bilateral agreement prohibits the transferral of the calling party number in any case. The test with the address presentation restricted indicator set to "presentation restricted" is a CLIR test.

Pre-test conditions
Arrange the data in IUT so that the calling party number is discarded.

TSS CLIP/	TP ISS_V_1_9	ISUP v2 reference 3.5.2.3.1/Q.731	Selection expression OutIE AND PICS A.4/2	Q.788 reference None

Test purpose

Discarding the additional calling party number in case of bilateral agreements

To verify that the additional calling party number in the **generic number** is discarded in case of bilateral agreements, if the address presentation restricted indicator is set to "presentation allowed".

NOTE: This bilateral agreement prohibits the transferral of the calling party number in any case. The test with the address presentation restricted indicator set to "presentation restricted" is a CLIR test.

Pre-test conditions
Arrange the data in IUT so that the additional calling party number in the generic number is discarded.

TSS CLIP/	TP ISS_V_1_10	ISUP v2 reference 3.5.2.3.1/Q.731	Selection expression OutIE	Q.788 reference None

Test purpose

Discarding the calling party number, if the address is marked not available

To verify that the **calling party number** is omitted, if the address presentation restricted indicator is set to "address not available".

TSS CLIP/	TP ISS_V_1_11	ISUP v2 reference 3.5.2.3.1/Q.731	Selection expression OutIE	Q.788 reference None

Test purpose

Discarding the additional calling party number, if no calling party number is received

To verify that if the **calling party number** is not sent, then an additional calling party number in a **generic number** will be omitted.

TSS CLIP/	TP ISS_V_1_12	ISUP v2 reference 3.5.2.3.1/Q.731	Selection expression OutIE	Q.788 reference None

Test purpose

Converting the calling party number to international format

To verify that the IUT can convert the **calling party number** into an international number, setting the nature of address indicator to "international number" and can pass on the address presentation restricted indicator and the screening indicator transparently.

TSS CLIP/	TP ISS_V_1_13	ISUP v2 reference 3.5.2.3.1/Q.731	Selection expression OutIE	Q.788 reference None
Test purpose				

Converting the additional calling party number to international format

To verify that the IUT can convert the additional calling party number in the **generic number** into an international number, if the numbering plan indicator is "ISDN Telephony", setting the nature of address indicator to "international number" and can pass on the address presentation restricted indicator and the screening indicator transparently.

TSS CLIP/	TP ISS_I_1_14	ISUP v2 reference 3.5.2.3.2/Q.731	Selection expression OutIE	Q.788 reference None
Test purpose				

Discarding an incomplete calling party number

To verify that the **calling party number** is discarded, if it is received with the calling party number incomplete indicator set to "incomplete".

TSS CLIP/	TP ISS_V_1_15	ISUP v2 reference 3.5.2.4.1/Q.731	Selection expression InclE	Q.788 reference None
Test purpose				

Converting the calling party number to national format, if necessary

To verify that the country code in the address signals of the **calling party number** is removed if it is the network's own country code. The nature of address indicator shall be set to "national (significant) number". The address presentation restricted indicator shall be transferred transparently.

TSS CLIP/	TP ISS_V_1_16	ISUP v2 reference 3.5.2.4.1/Q.731	Selection expression InclE	Q.788 reference None
Test purpose				

Converting the additional calling party number to national format, if necessary

To verify that the country code in the address signals of the **generic number** coded as an "additional calling party number", if the numbering plan indicator is "ISDN Telephony" is removed if it is the network's own country code. The nature of address indicator shall be set to "national (significant) number". The address presentation restricted indicator shall be transferred transparently.

TSS CLIP/	TP ISS_I_1_17	ISUP v2 reference 3.5.2.4.1/Q.731	Selection expression InclE AND PICS A.4/4	Q.788 reference None
Test purpose				

Adding a prefix to an international calling party number

To verify that a prefix is added to the **calling party number** and the nature of address indicator is set to "unknown".

NOTE: The coding "unknown" is a national option (@).

TSS CLIP/	TP ISS_I_1_18	ISUP v2 reference 3.5.2.4.2/Q.731	Selection expression InclE AND PICS A.4/5	Q.788 reference None
Test purpose				

Handling of address presentation restricted indicator set to "address not available"

To verify that the screening indicator shall be set to "network provided" if the address presentation restricted indicator in **calling party number** is set to "address not available".

NOTE: The coding "address not available" is a national option (@).

TSS CLIP/	TP ISS_V_1_19	ISUP v2 reference 3.6.10.1/Q.731	Selection expression DLE AND (PICS A.3/12 OR PICS A.3/13 OR PICS A.3/14 OR PICS A.3/15)	Q.788 reference None

Test purpose

CLIP - interaction with call diversions

To verify that a call diverting exchange shall also forward the **calling party number** and the **generic number** containing the additional calling party number.

Pre-test conditions
Arrange the data in the IUT such that the called user has subscribed to CLIP and has activated a call diversion service (CFB, CFNR, CFU or CD).

5.2.2 Calling Line Identification Restriction (CLIR)

TSS CLIR/	TP ISS_V_2_1	ISUP v2 reference 4.5.2.1.1/Q.731	Selection expression OLE	Q.788 reference 2.1.5

Test purpose

Restricted calling party number (network provided)

To verify that the IUT can successfully originate a call having a **calling party number** with the screening indicator set to "network provided" and the address presentation restricted indicator set to "presentation restricted".

Pre-test conditions
Arrange the data in the IUT so that the calling party has subscribed CLIR.

TSS CLIR/	TP ISS_V_2_2	ISUP v2 reference 4.5.2.1.1/Q.731	Selection expression OLE AND PICS A.3/8 (SUB)	Q.788 reference 2.1.6

Test purpose

Restricted calling party number (network provided) with calling subaddress

To verify that the IUT can successfully originate a call having a **calling party number** with the screening indicator set to "network provided", the address presentation restricted indicator set to "presentation restricted" and an **access transport** parameter containing the calling subaddress.

Pre-test conditions
Arrange the data in the IUT so that the calling party has subscribed to CLIR and SUB.

TSS CLIR/	TP ISS_V_2_3	ISUP v2 reference 4.5.2.1.1/Q.731	Selection expression OLE	Q.788 reference None

Test purpose

Restricted calling party number (user provided, verified and passed)

To verify that the IUT can successfully originate a call having the **calling party number** with the screening indicator set to "user provided, verified and passed" and the address presentation restricted indicator set to "presentation restricted".

Pre-test conditions
Arrange the data in the IUT so that the calling party has subscribed CLIR.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CLIR/	ISS_V_2_4	4.5.2.1.1/Q.731	OLE AND PICS A.3/8 (SUB)	2.1.7

Test purpose

Restricted calling party number (user provided, verified and passed) with calling subaddress

To verify that the IUT can successfully originate a call having a **calling party number** with the screening indicator set to "user provided, verified and passed", the address presentation restricted indicator set to "presentation restricted" and an **access transport** parameter containing the calling subaddress.

Pre-test conditions
Arrange the data in the IUT so that the calling party has subscribed to CLIR and SUB.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CLIR/	ISS_V_2_5	4.5.2.1.1/Q.731	OLE	None

Test purpose

Restricted calling party number (user provided, not verified)

To verify that the IUT can successfully originate a call having a default **calling party number** with the screening indicator set to "network provided" and a **generic number** containing the additional calling party number with the screening indicator set to "user provided, not verified", both having the address presentation restricted indicator set to "presentation restricted".

Pre-test conditions
Arrange the data in IUT so that there is a special arrangement from the access signalling system regarding an additional calling party number and that the calling party has subscribed to CLIR.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CLIR/	ISS_V_2_6	4.5.2.1.1/Q.731	OLE AND PICS A.3/8 (SUB)	2.1.8

Test purpose

Restricted calling party number (user provided, not verified) with calling subaddress

To verify that the IUT can successfully originate a call having a default **calling party number** with the screening indicator set to "network provided", a **generic number** containing the additional calling party number with the screening indicator set to "user provided, not verified", both having the address presentation restricted indicator set to "presentation restricted" and an **access transport** parameter containing the calling subaddress.

Pre-test conditions
Arrange the data in IUT so that there is a special arrangement from the access signalling system regarding an additional calling party number and that the calling party has subscribed to CLIR and SUB.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CLIR/	ISS_V_2_7	4.5.2.2.1/Q.731	Transit	None

Test purpose

Conveying the information relating to CLIR

To verify that the address presentation restricted indicator in the **calling party number** and in the **generic number** are transferred successfully to the succeeding exchange.

TSS CLIR/	TP ISS_V_2_8	ISUP v2 reference 3.5.2.3.1; 4.5.2.3.2; 4.6.5/Q.731	Selection expression OutIE AND PICS A.5/1	Q.788 reference None

Test purpose

Discarding the calling party number if the presentation is restricted

To verify that the **calling party number** is discarded in case of bilateral agreements, if the address presentation restricted indicator is set to "presentation restricted".

Pre-test conditions
Arrange the data in IUT so that the calling party number is discarded.

TSS CLIR/	TP ISS_V_2_9	ISUP v2 reference 3.5.2.3.1; 4.5.2.3.2; 4.6.5/Q.731	Selection expression OutIE AND PICS A.5/2	Q.788 reference None

Test purpose

Discarding the additional calling party number if the presentation is restricted

To verify that the additional calling party number in the **generic number** is discarded in case of bilateral agreements, if the address presentation restricted indicator is set to "presentation restricted".

Pre-test conditions
Arrange the data in IUT so that the additional calling party number is discarded.

TSS CLIR/	TP ISS_V_2_10	ISUP v2 reference 4.6.20/Q.731	Selection expression DLE AND PICS A.3/9 (MCID)	Q.788 reference None

Test purpose

Presentation of the address - interaction with MCID

To verify that the information conveyed in an incoming call (especially the **calling party number** and the additional calling party number in the **generic number**) is registered in the network regardless of whether the calling user has activated the CLIR service or not, if the called user has MCID activated.

Pre-test conditions
Arrange the data in the IUT such that the called user has activated the MCID supplementary service on a permanent basis.

TSS CLIR/	TP ISS_V_2_11	ISUP v2 reference 4.2.1/Q.731	Selection expression DLE	Q.788 reference None

Test purpose

Presentation of the address - called party has override category

To verify that the **calling party number** and the additional calling party number in the **generic number** are passed to the access regardless of whether the calling user has activated the CLIR service or not if the called user has the override category.

Pre-test conditions
Arrange the data in the IUT such that the called user has the override category.

5.2.3 Connected Line identification Presentation (COLP)

TSS COLP/	TP ISS_V_3_1	ISUP v2 reference 5.5.2.1.1/Q.731	Selection expression OLE	Q.788 reference 2.3.1

Test purpose

Initiate COLP request

To verify that the exchange can initiate successfully a call requesting the COLP service in the **optional forward call indicators**.

Pre-test conditions
Arrange the data in the IUT such that the calling party subscribes to COLP.

TSS COLP/	TP ISS_V_3_2	ISUP v2 reference 5.5.2.2.1/Q.731	Selection expression Transit	Q.788 reference None

Test purpose

Passing on information relating to COLP

To verify that the IUT passes on transparently the information related to the COLP supplementary service in the **optional forward call indicators** (forward direction) and the **connected number** (backward direction).

TSS COLP/	TP ISS_V_3_3	ISUP v2 reference 5.5.2.3.1/Q.731	Selection expression OutIE	Q.788 reference None

Test purpose

Converting the connected number to national format, if necessary

To verify that the country code in the address signals of the **connected number** is removed if it is the network's own country code. The nature of address indicator shall be set to "national (significant) number", the address presentation restricted indicator and the screening indicator shall be transferred transparently.

TSS COLP/	TP ISS_V_3_4	ISUP v2 reference 5.5.2.3.1/Q.731	Selection expression OutIE	Q.788 reference None

Test purpose

Converting the additional connected number to national format, if necessary

To verify that the country code in the address signals of the **generic number** coded as an "additional connected number", if the numbering plan indicator is "ISDN Telephony" is removed if it is the network's own country code. The nature of address indicator shall be set to "national (significant) number", the address presentation restricted indicator and the screening indicator shall be transferred transparently.

TSS COLP/	TP ISS_I_3_5	ISUP v2 reference 5.5.2.3.1/Q.731	Selection expression OutIE AND PICS A.6/1	Q.788 reference None

Test purpose

Adding a prefix to an international connected number

To verify that a prefix is added to the **connected number** and the nature of address indicator is set to "unknown".

NOTE: The coding "unknown" is a national option (@).

TSS COLP/	TP ISS_V_3_6	ISUP v2 reference 5.5.2.4.1/Q.731	Selection expression IncIE AND PICS A.6/2	Q.788 reference None

Test purpose

Discarding the connected number in case of bilateral agreements

To verify that the **connected number** is discarded in case of bilateral agreements, if the address presentation restricted indicator is set to "presentation allowed".

NOTE: This bilateral agreement prohibits the transferral of the connected number in any case. The test with the address presentation restricted indicator set to "presentation restricted" is a COLR test.

Pre-test conditions
Arrange the data in the IUT so that the connected number is discarded.

TSS COLP/	TP ISS_V_3_7	ISUP v2 reference 5.5.2.4.1/Q.731	Selection expression IncIE AND PICS A.6/3	Q.788 reference None

Test purpose

Discarding the additional connected number in case of bilateral agreements

To verify that the additional connected number in the **generic number** is discarded in case of bilateral agreements, if the address presentation restricted indicator is set to "presentation allowed".

NOTE: This bilateral agreement prohibits the transferral of the additional connected number in the generic number in any case. The test with the address presentation restricted indicator set to "presentation restricted" is a COLR test.

Pre-test conditions
Arrange the data in the IUT so that the additional connected number in the generic number is discarded.

TSS COLP/	TP ISS_V_3_8	ISUP v2 reference 5.5.2.4.1/Q.731	Selection expression IncIE AND PICS A.6/4	Q.788 reference 2.3.9

Test purpose

Resetting the address signals of the connected number, if they are not to be sent

To verify that for a **connected number** which is not to be released to the originating network the setting of the address presentation restricted indicator can be changed from "presentation allowed" to "address not available", and that the address signals are reset.

TSS COLP/	TP ISS_V_3_9	ISUP v2 reference 5.5.2.4.1/Q.731	Selection expression IncIE	Q.788 reference None

Test purpose

Converting the connected number to international format

To verify that the exchange can convert the **connected number** into an international number, setting the nature of address indicator to "international number" and can pass on the address presentation restricted indicator and the screening indicator transparently.

TSS COLP/	TP ISS_I_3_10	ISUP v2 reference 5.5.2.5.1/Q.731	Selection expression	Q.788 reference 2.3.8

Test purpose

Handling unrequested COL

To verify that the call can be successfully set up if the IUT receives an unsolicited COL.

TSS COLP/	TP ISS_V_3_11	ISUP v2 reference 5.5.2.5.1 i)/Q.731	Selection expression DLE	Q.788 reference None

Test purpose

Connected number (user provided, verified and passed)

To verify that the IUT can provide a **connected number** with the screening indicator set to "user provided, verified and passed", if the user provided COL is valid.

TSS COLP/	TP ISS_V_3_12	ISUP v2 reference 5.5.2.5.1 i)/Q.731	Selection expression DLE AND PICS A.3/8 (SUB)	Q.788 reference 2.3.3

Test purpose

Connected number (user provided, verified and passed) with connected subaddress

To verify that the IUT can provide a **connected number** with the screening indicator set to "user provided, verified and passed", if the user provided COL is valid and an **access transport** parameter containing the connected subaddress.

Pre-test conditions
Arrange the data in the IUT so that the connected party has subscribed to SUB.

TSS COLP/	TP ISS_V_3_13	ISUP v2 reference 5.5.2.5.1 ii)/Q.731	Selection expression DLE	Q.788 reference None

Test purpose

Connected number (network provided)

To verify that the IUT can provide a default **connected number** with the screening indicator set to "network provided", if the user provided COL is not valid.

TSS COLP/	TP ISS_V_3_14	ISUP v2 reference 5.5.2.5.1 ii)/Q.731	Selection expression DLE AND PICS A.3/8 (SUB)	Q.788 reference 2.3.2

Test purpose

Connected number (network provided) with connected subaddress

To verify that the IUT can provide a default **connected number** with the screening indicator set to "network provided", if the user provided COL is not valid and an **access transport** parameter containing the connected subaddress.

Pre-test conditions
Arrange the data in the IUT so that the connected party has subscribed to SUB.

TSS COLP/	TP ISS_V_3_15	ISUP v2 reference 5.5.2.5.1 iii)/Q.731	Selection expression DLE	Q.788 reference None

Test purpose

Connected number (user provided, not verified)

To verify that the IUT can provide a default **connected number** with the screening indicator set to "network provided" and a **generic number** containing the additional connected number with the screening indicator set to "user provided, not verified".

Pre-test conditions
Arrange the data in the IUT so that there is a special arrangement from the access signalling system regarding an additional connected number.

TSS COLP/	TP ISS_V_3_16	ISUP v2 reference 5.5.2.5.1 iii)/Q.731	Selection expression DLE AND PICS A.3/8 (SUB)	Q.788 reference 2.3.4

Test purpose

Connected number (user provided, not verified) with connected subaddress

To verify that the IUT can provide a default **connected number** with the screening indicator set to "network provided", a **generic number** containing the additional connected number with the screening indicator set to "user provided, not verified" and an **access transport** parameter containing the connected subaddress.

Pre-test conditions
Arrange the data in the IUT so that there is a special arrangement from the access signalling system regarding an additional connected number and that the connected party has subscribed to the subaddressing supplementary service.

TSS COLP/	TP ISS_V_3_17	ISUP v2 reference 5.5.2.5.1/Q.731	Selection expression DLE AND NOT PICS A.6/5	Q.788 reference None

Test purpose

COL cannot be transferred

To verify that the address presentation restricted indicator in the **connected number** in **ANM** or in **CON** is set to "presentation restricted" or "address not available" and that the screening indicator shall be set to "network provided" if the COL cannot be transferred.

Pre-test conditions
Arrange the data in the IUT so that no COL can be transferred.

TSS COLP/	TP ISS_V_3_18	ISUP v2 reference 5.6.14/Q.731	Selection expression DLE	Q.788 reference None

Test purpose

COLP - interaction with MSN

To verify that an exchange with MSN can provide the connected party multiple subscriber number or full ISDN number as the **connected number** on call answer.

Pre-test conditions
Arrange the data in the IUT such that the called user has activated the Multiple Subscriber Number (MSN) supplementary service.

5.2.4   Connected Line identification Restriction (COLR)

TSS COLR/	TP ISS_V_4_1	ISUP v2 reference 6.5.2.1.1/Q.731	Selection expression OLE	Q.788 reference None

Test purpose

Presentation of restricted COL

To verify that a local exchange will not pass the information on to the access signalling system when a **connected number** is received in the ANM or CON and its address presentation restricted indicator is set to "presentation restricted" , i.e. that presentation is denied on the user-network interface (UNI).

Pre-test conditions
Arrange the data in the IUT such that the calling user subscribes to COLP.

TSS COLR/	TP ISS_I_4_2	ISUP v2 reference 6.5.2.1.2/Q.731	Selection expression OLE	Q.788 reference None

Test purpose

Presentation of restricted COL to "override category" calling user

To verify that the received **connected number** and optionally the additional connected number in the **generic number** can be conveyed successfully to an "override category" calling user, if the called user has activated the Connected Line Presentation Restriction (COLR) supplementary service.

Pre-test conditions
Arrange the data in the IUT such that the calling user has an "override category".

TSS COLR/	TP ISS_V_4_3	ISUP v2 reference 6.5.2.2.1/Q.731	Selection expression Transit	Q.788 reference None

Test purpose

Passing on information relating to COLR

To verify that the IUT shall pass transparently all information related to the COLR supplementary service in the address presentation restricted indicator of the **connected number** and optionally the additional connect number in the **generic number**.

TSS COLR/	TP ISS_V_4_4	ISUP v2 reference 6.5.2.4.1/Q.731	Selection expression IncIE AND PICS A.7/1	Q.788 reference None

Test purpose

Discarding the connected number if the presentation is restricted

To verify that the **connected number** is discarded in case of bilateral agreements, if the address presentation restricted indicator is set to "presentation restricted".

Pre-test conditions
Arrange the data in IUT so that the connected number is discarded.

TSS COLR/	TP ISS_V_4_5	ISUP v2 reference 6.5.2.4.1/Q.731	Selection expression IncIE AND PICS A.7/2	Q.788 reference None

Test purpose

Discarding the additional connected number in the generic number if the presentation is restricted

To verify that the additional connected number in the **generic number** is discarded in case of bilateral agreements, if the address presentation restricted indicator is set to "presentation restricted".

Pre-test conditions
Arrange the data in IUT so that the additional connected number in the generic number is discarded.

TSS COLR/	TP ISS_I_4_6	ISUP v2 reference 6.5.2.4.1/Q.731	Selection expression IncIE AND PICS A.7/3	Q.788 reference None

Test purpose

Resetting the address signals of the connected number, whose release is forbidden

To verify that for a **connected number** which is not to be released to the originating network the setting of the address presentation restricted indicator can be changed from "presentation restricted" to "address not available" and that the address signals are reset.

TSS COLR/	TP ISS_V_4_7	ISUP v2 reference 6.5.2.5.1/Q.731	Selection expression DLE	Q.788 reference None

Test purpose

Restricted connected number (user provided, verified and passed)

To verify that the IUT can provide a **connected number** with the screening indicator set to "user provided, verified and passed" and with the address presentation restricted indicator set to "presentation restricted", if the user provided COL is valid.

Pre-test conditions
Arrange the data in the IUT so that the connected party has subscribed to COLR.

TSS COLR/	TP ISS_V_4_8	ISUP v2 reference 6.5.2.5.1/Q.731	Selection expression DLE AND PICS A.3/8 (SUB)	Q.788 reference 2.3.6

Test purpose

Restricted connected number (user provided, verified and passed) with connected subaddress

To verify that the IUT can provide a **connected number** with the screening indicator set to "user provided, verified and passed" and with the address presentation restricted indicator set to "presentation restricted", if the user provided COL is valid. Additionally, an **access transport** parameter containing the connected subaddress shall also be provided.

Pre-test conditions
Arrange the data in the IUT so that the connected party has subscribed to COLR and SUB.

TSS COLR/	TP ISS_V_4_9	ISUP v2 reference 6.5.2.5.1/Q.731	Selection expression DLE	Q.788 reference None

Test purpose

 Restricted connected number (network provided)

To verify that the IUT can provide a default **connected number** with the screening indicator set to "network provided" and with the address presentation restricted indicator set to "presentation restricted", if the user provided COL is not valid.

Pre-test conditions
Arrange the data in the IUT so that the connected party has subscribed to the COLR.

TSS COLR/	TP ISS_V_4_10	ISUP v2 reference 6.5.2.5.1/Q.731	Selection expression DLE AND PICS A.3/8 (SUB)	Q.788 reference 2.3.5

Test purpose

 Restricted connected number (network provided) with connected subaddress

To verify that the IUT can provide a default **connected number** with the screening indicator set to "network provided" and with the address presentation restricted indicator set to "presentation restricted", if the user provided COL is not valid. Additionally, an **access transport** parameter containing the connected subaddress shall also be provided.

Pre-test conditions
Arrange the data in the IUT so that the connected party has subscribed COLR and SUB.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
COLR/	ISS_V_4_11	6.5.2.5.1/Q.731	DLE	None

Test purpose

Restricted connected number (user provided, not verified)

To verify that the IUT can provide a default **connected number** with the screening indicator set to "network provided" and a **generic number** containing the additional connected number with the screening indicator set to "user provided, not verified" - both having the address presentation restricted indicator set to "presentation restricted".

Pre-test conditions
Arrange the data in IUT so that there is a special arrangement from the access signalling system regarding an additional connected number and that the connected party has subscribed to COLR.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
COLR/	ISS_V_4_12	6.5.2.5.1/Q.731	DLE AND PICS A.3/8 (SUB)	2.3.5

Test purpose

Restricted connected number (user provided, not verified) with connected subaddress

To verify that the IUT can provide a default **calling party number** with the screening indicator set to "network provided", a **generic number** containing the additional connected number with the screening indicator set to "user provided, not verified" - both having the address presentation restricted indicator set to "presentation restricted" and additionally an **access transport** parameter containing the connected subaddress.

Pre-test conditions
Arrange the data in IUT so that there is a special arrangement from the access signalling system regarding an additional connected number and that the connected party has subscribed to COLR and SUB.

5.2.5 Terminal Portability (TP)

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
TP/	ISS_V_5_1	4.5.2.1.1 a)/Q.733	OLE	2.12.1

Test purpose

Terminal portability, requested by the calling party

To verify that the calling party can suspend and resume an outgoing call and that user initiated **SUS** and **RES** messages are sent to the succeeding exchange.

Pre-test conditions
Arrange the data in the IUT so that the calling party subscribes to the Terminal portability service.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
TP/	ISS_V_5_2	4.5.2.1.1 b)/Q.733	OLE	2.12.1

Test purpose

Terminal portability, requested by the called party

To verify that IUT informs the calling party that a suspend and a resume have been requested by the called party upon receipt of user initiated **SUS** and **RES** messages.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
TP/	ISS_I_5_3	4.5.2.1.2/Q.733	Local	2.12.2

Test purpose

Terminal portability, requested by local served user, no Resume after Suspend

To verify that the call is released with cause #102 (recovery on timer expiry) by the IUT if timer T2 expires because the local served user does not resume the call.

Pre-test conditions
Arrange the data in the IUT so that the local user subscribes to the Terminal portability service.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
TP/	ISS_V_5_4	4.5.2.1.1/Q.733	Local	None

Test purpose

Terminal portability, release suspended call

To verify that a suspended call can be released by the IUT, if the local user or the remote user releases the call.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
TP/	ISS_V_5_5	4.5.2.2.1 a); 4.5.2.3.1; 4.5.2.4.1/Q.733	IntermE	None

Test purpose

Terminal portability, requested by the calling party (transit call)

To verify that the **SUS** and **RES** messages are passed on transparently by the IUT, if the calling party requests the service.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
TP/	ISS_V_5_6	4.5.2.2.1 b); 4.5.2.3.1; 4.5.2.4.1/Q.733	IntermE	None

Test purpose

Terminal portability, requested by the called party (transit call)

To verify that the **SUS** and **RES** messages are passed on transparently by the IUT, if the called party requests the service.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
TP/	ISS_V_5_7	4.5.2.5.1 a)/Q.733	DLE	2.12.1

Test purpose

Terminal portability, requested by the calling party

To verify that the IUT informs the called party that suspend and resume have been requested by the calling party upon receipt of user initiated **SUS** and **RES** messages.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
TP/	ISS_V_5_8	4.5.2.5.1 b)/Q.733	DLE	2.12.1

Test purpose

Terminal portability, requested by the called party

To verify that the called party can suspend and resume an incoming call and that user initiated **SUS** and **RES** messages are sent to the preceding exchange.

Pre-test conditions
Arrange the data in the IUT so that the called party subscribes to the Terminal portability service.

TSS NO_TP/	TP ISS_I_5_9	ISUP v2 reference 4.5.2.3.2; 4.5.2.4.2/Q.733	Selection expression Gateway AND NOT PICS A.3/5 AND PICS A.8/1	Q.788 reference None
Test purpose				
Terminal portability, national network does not support the service				
To verify that the **SUS** and **RES** messages are discarded by the IUT without notification if the served user requests suspend and resume, but the national network does not support the Terminal portability service.				

TSS TP/	TP ISS_V_5_10	ISUP v2 reference 4.6.13.3/Q.733	Selection expression Local AND PICS A.9/8	Q.788 reference None
Test purpose				
Terminal portability, request for UUS3 while call is suspended				
To verify that a request for User-to-user signalling service 3 is rejected by the IUT if the call is currently suspended and if the IUT is the suspend controlling exchange.				
Pre-test conditions Arrange the data in the IUT so that the local user subscribes both to the Terminal portability service and to the User-to-user signalling service 3.				

TSS TP/	TP ISS_V_5_11	ISUP v2 reference 4.4/ ETS 300 356-7 [7]	Selection expression Local	Q.788 reference None
Test purpose				
Terminal portability, notification from a private to a public network				
To verify that the suspend/resume notification from the private network is transported in the **CPG** message with the **event indicator** set to "progress" and that the SUS/RES messages are not used in this case.				
Pre-test conditions Arrange the data in the IUT so that the local user belongs to a private network.				

5.2.6 User-to-User Signalling (UUS)

TSS UUS/UUS1_I/	TP ISS_V_6_1_1	ISUP v2 reference 1.1.2.1/Q.737	Selection expression OLE AND PICS A.9/1	Q.788 reference None
Test purpose				
32 octets user-to-user information				
To verify that the IUT can successfully initiate a call having 32 octets of **user-to-user information** in the messages related to the set up or the release of the call.				
Pre-test conditions Arrange the data in the IUT so that the user has subscribed to the UUS1 supplementary service.				

TSS UUS/UUS1_I/	TP ISS_V_6_1_2	ISUP v2 reference 1.1.5.2.1.1.1; 1.1.5.2.1.1.3; 1.1.5.2.2-4.1/Q.737	Selection expression OLE OR IntermE	Q.788 reference 2.15.1

Test purpose

UUS1 implicit - request

To verify that the IUT can successfully initiate/transit a call with an UUS 1 implicit request, having the **user-to-user information** parameter in the **IAM**, without the **user-to-user indicators** parameter.

Pre-test conditions (in case of OLE)
Arrange the data in the IUT so that the user has subscribed to the UUS1 supplementary service.

TSS UUS/UUS1_I/	TP ISS_I_6_1_3	ISUP v2 reference 1.1.5.2.5.2.3; 1.1.5.2.2-4.2/Q.737	Selection expression OLE OR IntermE	Q.788 reference 2.15.2

Test purpose

UUS1 implicit - discarded with indication received

To verify that the IUT can, after successfully initiating/transiting a call with an UUS1 implicit request, continue normal call set up if the first backward message is received with the **user-to-user indicators** set to "user-to-user information discarded by the network".

NOTE: The user-to-user information is discarded because the following network does not support it.

Pre-test conditions (in case of OLE)
Arrange the data in the IUT so that the user has subscribed to the UUS1 supplementary service.

TSS UUS/UUS1_I/	TP ISS_I_6_1_4	ISUP v2 reference 1.1.5.2.5.2.3; 1.1.5.2.3-5.2/Q.737	Selection expression OLE OR IntermE	Q.788 reference None

Test purpose

UUS1 implicit - discarded but no indication received

To verify that the IUT can successfully initiate/transit a call with an UUS1 implicit request, and complete the call if no indication is provided in the backward direction.

NOTE: The user-to-user information is discarded because:
             1)   the remote network is unable to pass the service 1 in any message;
             2)   the remote user may not be able to interpret incoming UUS information.

Pre-test conditions (in case of OLE)
Arrange the data in the IUT so that the user has subscribed to the UUS1 supplementary service.

TSS UUS/UUS1_I/	TP ISS_V_6_1_5	ISUP v2 reference 1.1.5.2.1.1.1; 1.1.5.2.1.1.3; 1.1.5.2.3-5.1/Q.737	Selection expression IntermE OR DLE	Q.788 reference 2.15.1

Test purpose

UUS1 implicit - acceptance

To verify that the IUT can successfully transit/accept a call with an UUS1 implicit request, and transfer/include the **user-to-user information** parameter in the **ACM**, **CPG**, **ANM**, **CON**, **SGM** or **REL** as implicit acceptance (no **user-to-user indicators**).

Pre-test conditions (in case of DLE)
Arrange the data in the IUT so that the user has subscribed to the UUS1 supplementary service.

TSS UUS/NO_UUS1_I/	TP ISS_I_6_1_6	ISUP v2 reference 1.1.5.2.5.2.3; 1.1.5.2.3-5.2/Q.737	Selection expression IntermE OR DLE	Q.788 reference 2.15.2

Test purpose

UUS1 implicit - discard with indication generated

To verify that the IUT can successfully transit/accept a call with an UUS1 implicit request and set the **user-to-user indicators** to "user-to-user information discarded by the network" in the first backward message, if the network is unable to support it.

NOTE: The user-to-user information is discarded because the network does not support it.

Pre-test conditions
Arrange the data in the IUT such that the network does not support the UUS1 service.

TSS UUS/UUS1_E/	TP ISS_V_6_1_7	ISUP v2 reference 1.1.5.2.1.1.2; 1.1.5.2.2-4.1/Q.737	Selection expression OLE OR IntermE	Q.788 reference 2.15.3

Test purpose

UUS1 explicit non-essential - request

To verify that the IUT can successfully initiate/transit a call with an UUS1 explicit non-essential request, by including/transferring the **user-to-user information** parameter and the **user-to-user indicators** in the **IAM** set to "request, not essential".

Pre-test conditions (in case of OLE)
Arrange the data in the IUT so that the user has subscribed to the UUS1 supplementary service.

TSS UUS/UUS1_E/	TP ISS_I_6_1_8	ISUP v2 reference 1.1.5.2.5.2.3; 1.1.5.2.2-4.2/Q.737	Selection expression OLE OR IntermE	Q.788 reference 2.15.5

Test purpose

UUS1 explicit non-essential - explicit rejection received

To verify that the IUT can successfully initiate/transit a call with an UUS1 explicit non-essential request, and continue normal call set up if the UUS1 service is explicitly rejected (the **user-to-user indicators** parameter is received as "service not provided" in the **ACM** or **CPG** or **ANM** or **CON** or **REL**).

NOTE: The user-to-user information is discarded because:
                1)   the network is unable to pass the explicit service 1 in any message;
                2)   the remote user may not be able to interpret incoming UUS information.

Pre-test conditions (in case of OLE)
Arrange the data in the IUT so that the user has subscribed to the UUS1 supplementary service.

TSS UUS/UUS1_E/	TP ISS_I_6_1_9	ISUP v2 reference 1.1.5.2.5.2.3; 1.1.5.2.2-4.2/Q.737	Selection expression OLE OR IntermE	Q.788 reference 2.15.4

Test purpose

UUS1 explicit non-essential - implicit (no explicit) rejection received

To verify that the IUT can successfully initiate/transit a call with an UUS1 explicit non-essential request, and continue normal call set up if no indication is provided in the backward direction.

NOTE: The user-to-user information is discarded because:
                1)   the network is unable to pass the explicit service 1 in any message;
                2)   the remote user may not be able to interpret incoming UUS information.

Pre-test conditions (in case of OLE)
Arrange the data in the IUT so that the user has subscribed to the UUS1 supplementary service.

TSS UUS/UUS1_E/	TP ISS_I_6_1_10	ISUP v2 reference 1.1.5.2.2.2; table 1-1/Q.737	Selection expression Gateway AND PICS A.9/5	Q.788 reference 2.15.5

Test purpose

UUS1 explicit non-essential rejection in Gateway

To verify that the UUS1 explicit non-essential service can be rejected and the **user-to-user indicators** are in the **ACM** or **CON** set to "service 1 not provided".

NOTE: The user-to-user service is rejected because:
1)   the Gateway received a **CFN** from the succeeding network (note 3 table 1-1).
2)   the Gateway has received **user-to-user information** in the **SGM** (Basic call PICS A.13/7) and the succeeding network does not support the segmentation procedure (see note 2 in table 1-1/Q.737).

TSS UUS/UUS1_E/	TP ISS_V_6_1_11	ISUP v2 reference 1.1.5.2.1.1.2; 1.1.5.2.3-5.1/Q.737	Selection expression IntermE OR DLE	Q.788 reference 2.15.3

Test purpose

UUS1 explicit non-essential - acceptance

To verify that the IUT can successfully transit/accept a call with an UUS1 explicit non-essential request, by transferring/including the **user-to-user indicators** parameter in the **ACM, CPG, ANM**, **CON** or **REL** set to "service provided"**.**

Pre-test conditions (in case of DLE)
Arrange the data in the IUT so that the user has subscribed to the UUS1 supplementary service.

TSS UUS/NO_UUS1_E/	TP ISS_I_6_1_12	ISUP v2 reference 1.1.5.2.5.2.2; 1.1.5.2.2-5.2 /Q.737	Selection expression IntermE OR DLE	Q.788 reference 2.15.4

Test purpose

UUS1 explicit non-essential - implicit (no explicit) rejection sent

To verify that the IUT can transfer/accept a call with an UUS1 explicit non-essential request, and reject the service by not providing any **user-to-user indicators** parameter in the **ACM**, **CPG**, **ANM**, **CON** or **REL**.

NOTE: The network or the user cannot support UUS1.

Pre-test conditions (in case of DLE)
Arrange the data in the IUT so that the network cannot support UUS1.

TSS UUS/UUS1_E/	TP ISS_V_6_1_13	ISUP v2 reference 1.1.5.2.1.1.2; 1.1.5.2.2-5.1/Q.737	Selection expression OLE OR IntermE	Q.788 reference 2.15.3

Test purpose

UUS1 explicit essential - request

To verify that the IUT can successfully originate/transit a call having an UUS1 explicit essential request, by including/transferring in the **IAM** the **user-to-user information** parameter, the **user-to-user indicators** set to "request, essential" and the ISDN user part preference indicator in the **forward call indicators** set to "ISUP required all the way".

Pre-test conditions (in case of OLE)
Arrange the data in the IUT so that the user has subscribed to the UUS1 supplementary service.

TSS UUS/UUS1_E/	TP ISS_I_6_1_14	ISUP v2 reference 1.1.5.2.5.2.2; 1.1.5.2.2-5.2/Q.737	Selection expression OLE OR Gateway	Q.788 reference None

Test purpose

UUS1 explicit essential - implicit rejection (no explicit acceptance received)

To verify that the service can be rejected if no indication (no **user-to-user indicators** parameter or the service 1 field in the **user-to-user indicators** set to "no information" or "not provided") is received in the first backward message (implicit rejection of service 1).

NOTE: The network does not understand the service 1 request. In this case the call should be released.

Pre-test conditions (in case of OLE)
Arrange the data in the IUT so that the user has subscribed to the UUS1 supplementary service.

TSS UUS/UUS1_E/	TP ISS_V_6_1_15	ISUP v2 reference 1.1.5.2.1.1.2; 1.1.5.2.2-5.1/Q.737	Selection expression DLE OR IntermE	Q.788 reference 2.15.3

Test purpose

UUS1 explicit essential - acceptance

To verify that the IUT can successfully complete a call with an UUS1 explicit essential request having the **user-to-user indicators** parameter in the **ACM**, **CPG**, **ANM**, **CON** or **REL** set to "service provided"**.**

Pre-test conditions (in case of DLE)
Arrange the data in the IUT so that the user has subscribed to the UUS1 supplementary service.

TSS UUS/NO_UUS1_E/	TP ISS_I_6_1_16	ISUP v2 reference 1.1.5.2.5.2.2; 1.1.5.2.2-5.2/Q.737	Selection expression DLE OR IntermE	Q.788 reference 2.15.6; 2.15.7

Test purpose

UUS1 explicit essential - rejection

To verify that the service can be rejected with a **REL** having the **Cause value** 29 "facility rejected" or 69 "requested facility not implemented", either with diagnostics (specifying the name of the user-to-user indicator parameter).

NOTE: The network or the called user cannot support the service

TSS UUS/UUS1_E/	TP ISS_V_6_1_17	ISUP v2 reference 1.1.6.13.2; 1.1.6.13.3 /Q.737	Selection expression Local AND (PICS A.9/6 OR PICS A.9/8)	Q.788 reference None

Test purpose

UUS1 interaction with UUS2 (or UUS3) - successful request

To verify that more than one supplementary services may be requested at call set up.

Pre-test conditions
Arrange the data in the IUT so that the user has subscribed to the UUS1 and UUS2 (or UUS3) supplementary services.

TSS UUS/UUS1_E/	TP ISS_V_6_1_18	ISUP v2 reference 1.1.6.13.2; 1.1.6.13.3/Q.737	Selection expression DLE AND (PICS A.9/6 OR PICS A.9/8)	Q.788 reference None

Test purpose

UUS1 interaction with UUS2 (or UUS3) - unsuccessful request

To verify that the services can be rejected with a **REL** having the **Cause value** # 29 "facility rejected" or # 69 "requested facility not implemented", either with diagnostics (**user-to-user indicators** name), if more services are requested, one of them is essential and it cannot be provided.

Pre-test conditions
Arrange the data in the IUT so that the user has subscribed to the UUS1 and UUS2 (or UUS3) supplementary services.

TSS UUS/UUS1_E/	TP ISS_V_6_1_19	ISUP v2 reference 1.1.6.13.2; 1.1.6.13.3/Q.737	Selection expression Local AND (PICS A.9/6 OR PICS A.9/8)	Q.788 reference None

Test purpose

UUS1 interaction with UUS2 (or UUS3) - independent acceptance or rejection of the services

To verify that the IUT can successfully complete a call with an UUS1 explicit non-essential request, having the **user-to-user indicators** parameter in the **ACM, CPG, ANM, CON** or **REL** set to "service provided". At the same time the UUS2 (or UUS3) service can be rejected and the **user-to-user indicators** in the **ACM**, **CPG**, **ANM**, **CON** or **REL** are set to "service 2 (or 3) not provided".

Pre-test conditions
Arrange the data in the IUT so that the user has subscribed to the UUS1 and UUS2 (or UUS3) supplementary services.

TSS UUS/UUS1_E/	TP ISS_V_6_1_20	ISUP v2 reference 1.1.6.13.3; 1.1.6.13.1/Q.737	Selection expression Local AND PICS A.9/8	Q.788 reference None

Test purpose

UUS1 interaction with UUS3 requested after call set up

To verify that the IUT can successfully originate/complete a call with UUS1, having requested UUS3 after call set up. The Service 1 feld in the **user-to-user indicators** in the **FAR, FAA** or **FRJ** for UUS1 is then set to "no information".

Pre-test conditions
Arrange the data in the IUT so that the user has subscribed to the UUS1 and UUS3 supplementary services.

TSS UUS/UUS1_E/	TP ISS_V_6_1_21	ISUP v2 reference 1.1.6.15/Q.737	Selection expression Local AND PICS A.3/16 (HOLD)	Q.788 reference None

Test purpose

UUS1 interaction with HOLD - to a held party

To verify that the IUT can successfully complete a call including an **user-to-user information** (service 1) to a held party during the clearing phase of a call.

Pre-test conditions
Arrange the data in the IUT so that the user has subscribed to the UUS1 and HOLD supplementary services.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
UUS/UUS1_E/	ISS_V_6_1_22	1.1.6.15/Q.737	Local AND PICS A.3/16 (HOLD)	None

Test purpose

UUS1 interaction with HOLD - from a held party

To verify that the IUT can successfully complete a call including an **user-to-user information** (service 1) from a held party during the clearing phase of a call.

Pre-test conditions
Arrange the data in the IUT so that the remote user has subscribed to the UUS1 and HOLD supplementary services.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
UUS/UUS1_E/	ISS_V_6_1_23	11.17/ ETS 300 356-18 [17]	OLE AND PICS A.3/18	None

Test purpose

New UUS1 requested in CCBS recall

To verify that the IUT does not store any user-to-user information contained in the original call. The CCBS call (IAM) sent by the IUT should not contain any user-to-user information if no new user-to-user information is provided from the served user in response to the CCBS recall.

Pre-test conditions
Arrange the data in the IUT so that the user has subscribed to the UUS1 and CCBS supplementary services.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
UUS/UUS1_E/	ISS_V_6_1_24	11.17/ ETS 300 356-18 [17]	OLE AND PICS A.3/18	None

Test purpose

UUS1 interaction with CCBS

To verify that the IUT is able to include user-to-user information in the CCBS call (IAM) if the served user includes user-to-user information in response to the CCBS recall.

Pre-test conditions
Arrange the data in the IUT so that the user has subscribed to the UUS1 and CCBS supplementary services.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
UUS/UUS2/	ISS_V_6_2_1	1.2.2.1/Q.737	OLE AND PICS A.9/1	None

Test purpose

32 octets user-to-user information

To verify that the IUT can successfully initiate a call having 32 octets of **user-to-user information** in the USR messages during call set up.

Pre-test conditions
Arrange the data in the IUT so that the user has subscribed to the UUS2 supplementary service.

TSS UUS/UUS2/	TP ISS_V_6_2_2	ISUP v2 reference 1.2.5.2.1.1.2; 1.2.5.2.2-5.1/Q.737	Selection expression OLE OR IntermE	Q.788 reference 2.16.1

Test purpose

UUS2 explicit non-essential - request

To verify that the IUT can successfully originate/transit a call with an UUS2 explicit non-essential request, having the **user-to-user indicators** in the **IAM** set to "request, not essential".

Pre-test conditions (in case of OLE)
Arrange the data in the IUT so that the user has subscribed to the UUS2 supplementary service.

TSS UUS/UUS2/	TP ISS_V_6_2_3	ISUP v2 reference 1.2.5.2.1.1.2; 1.2.5.2.2-5.1/Q.737	Selection expression DLE OR IntermE	Q.788 reference 2.16.1

Test purpose

UUS2 explicit non-essential - acceptance

To verify that the IUT can successfully complete a call with an UUS2 explicit non-essential request, having the **user-to-user indicators** parameter in the **ACM** or **CPG** set to "service provided".

Pre-test conditions (in case of DLE)
Arrange the data in the IUT so that the user has subscribed to the UUS2 supplementary service.

TSS UUS/NO_UUS2/	TP ISS_I_6_2_4	ISUP v2 reference 1.2.5.2.5.2.2; 1.2.5.2.2-5.2/Q.737	Selection expression DLE or IntermE	Q.788 reference 2.16.3

Test purpose

UUS2 explicit non-essential - explicit rejection (service not provided)

To verify that the UUS2 service can be rejected and the **user-to-user indicators** in the **ACM** or **CPG** are set to "service 2 not provided".

NOTE: The network or the user cannot support UUS2.

TSS UUS/NO_UUS2/	TP ISS_I_6_2_5	ISUP v2 reference 1.2.5.2.5.2.3; 1.2.5.2.2-5.2/Q.737	Selection expression DLE or IntermE	Q.788 reference 2.16.2

Test purpose

UUS2 explicit non-essential - implicit rejection (no indication)

To verify that the IUT can successfully complete a call with an UUS2 explicit non-essential request, if no indication is provided in the backward direction.

NOTE: The network or the user cannot support UUS2

TSS UUS/UUS2/	TP ISS_V_6_2_6	ISUP v2 reference 1.2.5.2.1.1.2; 1.2.5.2.2-5.1/Q.737	Selection expression OLE OR IntermE	Q.788 reference 2.16.1

Test purpose

UUS2 explicit essential - request

To verify that the IUT can successfully originate/transit a call having an UUS2 explicit essential request, having the **user-to-user indicators** set to "request, essential" and the ISDN user part preference indicator of the **forward call indicators** in the **IAM** set to "ISUP required".

Pre-test conditions (in case of OLE)
Arrange the data in the IUT so that the user has subscribed to the UUS2 supplementary service.

TSS UUS/UUS2/	TP ISS_V_6_2_7	ISUP v2 reference 1.2.5.2.1.1.2; 1.2.5.2.2-5.1/Q.737	Selection expression DLE OR IntermE	Q.788 reference 2.16.1

Test purpose

UUS2 explicit essential - acceptance

To verify that the IUT can successfully complete a call having an UUS2 explicit essential request having the **user-to-user indicators** parameter in the **ACM** or **CPG** set to "service provided".

Pre-test conditions (in case of DLE)
Arrange the data in the IUT so that the user has subscribed to the UUS2 supplementary service.

TSS UUS/NO_UUS2/	TP ISS_I_6_2_8	ISUP v2 reference 1.2.5.2.5.2.1; 1.2.5.2.2-5.2/Q.737	Selection expression DLE OR IntermE	Q.788 reference 2.16.4; 2.16.5

Test purpose

UUS2 explicit essential - rejection

To verify that the service can be rejected with a **REL** with the **Cause value** 29 "facility rejected" or 69 "requested facility not implemented" or value 88 "incompatible destination", all with diagnostics (**user-to-user indicators** name).

TSS UUS/UUS2/	TP ISS_I_6_2_9	ISUP v2 reference 1.2 5.2.5.2.1; 1.2.5.2.2-5.2/Q.737	Selection expression OLE OR IntermE	Q.788 reference None

Test purpose

UUS2 explicit essential - implicit rejection

To verify that the service can be rejected if no indication is received (no **user-to-user indicators** parameter) in the first backward message (implicit rejection of service 2).

NOTE: The remote network does not understand the service 2 request or the remote user cannot support UUS2.

Pre-test conditions (in case of OLE)
Arrange the data in the IUT so that the user has subscribed to the UUS2 supplementary service.

TSS UUS/UUS2/	TP ISS_V_6_2_10	ISUP v2 reference 1.2.5.2.1.1.2/Q.737	Selection expression OLE	Q.788 reference None

Test purpose

Discard the user-to-user information if more than two messages received during a call set up

To verify that the IUT discards the **user-to-user service information** in the additional message if more than two messages are received during the call set up (in each direction).

Pre-test conditions
Arrange the data in the IUT so that the user has subscribed to the UUS2 supplementary service.

TSS UUS/UUS2/	TP ISS_I_6_2_11	ISUP v2 reference 1.2.5.2.1.1.2/Q.737	Selection expression OLE	Q.788 reference None

Test purpose

Pass on one of the USR received just after ANM

To verify that the IUT can successfully pass on one of the **USR** messages received just after the answer state has been reached.

Pre-test conditions
Arrange the data in the IUT so that the user has subscribed to the UUS2 supplementary service.

TSS UUS/NO_UUS2/	TP ISS_I_6_2_12	ISUP v2 reference 1.2.5.2.2.2; table 1-2; 1.2.7/Q.737	Selection expression Gateway AND PICS A.9/5	Q.788 reference 2.16.3

Test purpose

Explicit rejection in Gateway

To verify that the UUS2 explicit non-essential service can be rejected and the **user-to-user indicators** in the **ACM** or **CON** are set to "service 2 not provided".

NOTE: The user-to-user service is rejected because the Gateway received a **CFN** from the succeeding network (see note 2 in table 1-2/Q.737).

TSS UUS/UUS2/	TP ISS_I_6_2_13	ISUP v2 reference 1.2.2.1/Q.737	Selection expression DLE AND PICS A.9/7	Q.788 reference None

Test purpose

Deliver user-to-user informationin USR after ANM

To verify that the IUT can successfully deliver the **user-to-user information** in the **USR** message to the called user after the answer state has been reached.

Pre-test conditions
Arrange the data in the IUT so that the user has subscribed to the UUS2 supplementary service.

TSS UUS/UUS2/	TP ISS_V_6_2_14	ISUP v2 reference 1.2.6.13.1; 1.2.6.13.3/Q.737	Selection expression Local AND (PICS A.9/4 OR PICS A.9/8)	Q.788 reference None

Test purpose

UUS2 interaction with UUS1 (or UUS3) - unsuccessful request

To verify that the services can be rejected with a **REL** with **Cause value** # 29 "facility rejected" or # 69 "requested facility not implemented", either with diagnostics (**user-to-user indicators** name), if more services are requested, one of them is essential and it cannot be provided.

Pre-test conditions
Arrange the data in the IUT so that the user has subscribed to the UUS1 and UUS2 (or UUS3) supplementary services.

TSS UUS/UUS2/	TP ISS_V_6_2_15	ISUP v2 reference 1.2.6.13.1; 1.2.6.13.3/Q.737	Selection expression Local AND (PICS A.9/4 OR PICS A.9/8)	Q.788 reference None

Test purpose

UUS2 interaction with UUS1 (or UUS3) - independent acceptance or rejection of the services

To verify that the IUT can successfully complete a call with an UUS2 explicit non-essential request, having the **user-to-user indicators** parameter set to "service provided" in the **ACM** or **CPG**. At the same time the UUS1 (or UUS3) service can be rejected and the **user-to-user indicators** in the **ACM**, **CPG**, **ANM**, **CON** or **REL** are set to "service 1 (or 3) not provided".

Pre-test conditions
Arrange the data in the IUT so that the user has subscribed to the UUS1 and UUS2 (or UUS3) supplementary services.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
UUS/UUS2/	ISS_V_6_2_16	1.2.6.13.3; 1.2.6.13.1/Q.737	Local AND PICS A.9/8	None

Test purpose

UUS2 interaction with UUS3 requested after call set up

To verify that the IUT can successfully originate/complete a call with UUS2 and UUS3 service requested after call set up. The Service 2 field of the **user-to-user indicators** in the **FAR**, **FAA** or **FRJ** is then set to "no information".

Pre-test conditions
Arrange the data in the IUT so that the user has subscribed to the UUS2 and UUS3 supplementary services.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
UUS/UUS3/	ISS_V_6_3_1	1.3.2.1/Q.737	OLE AND PICS A.9/1	None

Test purpose

32 octets user-to-user information

To verify that the IUT can successfully initiate a call having 32 octets of **user-to-user information** in each message.

Pre-test conditions
Arrange the data in the IUT so that the user has subscribed to the UUS3 supplementary service.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
UUS/UUS3/	ISS_V_6_3_2	1.3.2.1/Q.737	OLE	None

Test purpose

Rejection of UUS3 after call set up, if rejected at call set up

To verify that the IUT can reject an UUS3 request after call set up, if it has been rejected at the call set up.

Pre-test conditions
Arrange the data in the IUT so that the user has subscribed to the UUS3 supplementary service.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
UUS/UUS3/	ISS_V_6_3_3	1.3.5.2.1.1.2; 1.3.5.2.2-5.1/Q.737	OLE OR IntermE	2.17.1

Test purpose

UUS3 explicit non-essential - request

To verify that the IUT can successfully originate/transit a call with an UUS3 explicit non-essential request, having the **user-to-user indicators** in the **IAM** set to "request, not essential".

Pre-test conditions (in case of OLE)
Arrange the data in the IUT so that the user has subscribed to the UUS3 supplementary service.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
UUS/UUS3/	ISS_V_6_3_4	1.3.5.2.1.1.2; 1.3.5.2.2-5.1/Q.737	DLE OR IntermE	2.17.1

Test purpose

UUS3 explicit non-essential - acceptance

To verify that the IUT can successfully complete a call with an UUS3 explicit non-essential request, having the Service 3 field in the **user-to-user indicators** parameter in the **ANM** or **CON** set to "service provided".

Pre-test conditions (in case of DLE)
Arrange the data in the IUT so that the user has subscribed to the UUS3 supplementary service.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
UUS/NO_UUS3/	ISS_I_6_3_5	1.3.5.2.5.2.3; 1.3.5.2.2-5.2/Q.737	DLE OR IntermE	2.17.2

Test purpose

UUS3 explicit non-essential - implicit rejection (no indication)

To verify that the IUT can successfully complete a call with an UUS3 explicit non-essential request, if no indication is provided in the backward direction.

NOTE: The network or the user cannot support UUS3.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
UUS/NO_UUS3/	ISS_I_6_3_6	1.3.5.2.5.2.2; 1.3.5.2.2-5.2/Q.737	DLE OR IntermE	2.17.3

Test purpose

UUS3 explicit non-essential - explicit rejection (service not provided)

To verify that the UUS3 service can be rejected and the Service 3 field in the **user-to-user indicators** in the **ANM** or **CON** are set to "service 3 not provided".

NOTE: The network or the called user cannot support UUS3.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
UUS/UUS3/	ISS_V_6_3_7	1.3.5.2.1.1.2; 1.3.5.2.2-5.1/Q.737	OLE OR IntermE	2.17.1

Test purpose

UUS3 explicit essential - request

To verify that the IUT can successfully originate/transit a call with an UUS3 explicit essential request, having in the **IAM** the **user-to-user indicators** set to "request, essential" and the ISDN user part preference indicator in the **forward call indicators** set to "ISUP required all the way".

Pre-test conditions (in case of OLE/DLE)
Arrange the data in the IUT so that the user has subscribed to the UUS3 supplementary service.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
UUS/UUS3/	ISS_V_6_3_8	1.3.5.2.1.1.2; 1.3.5.2.2-5.1/Q.737	DLE OR IntermE	2.17.1

Test purpose

UUS3 explicit essential - acceptance

To verify that the IUT can successfully complete a call with an UUS3 explicit essential request having in the **ANM** or **CON** the Service 3 field of the **user-to-user indicators** parameter set to "service provided".

Pre-test conditions (in case of OLE/DLE)
Arrange the data in the IUT so that the user has subscribed to the UUS3 supplementary service.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
UUS/NO_UUS3/	ISS_I_6_3_9	1.3.5.2.5.2.2; 1.3.5.2.2-5.2/Q.737	DLE OR IntermE	2.17.4

Test purpose

UUS3 explicit essential - explicit rejection

To verify that the service can be rejected with a **REL** having the **Cause value** # 29 "facility rejected", # 69 "requested facility not implemented", either with diagnostics (**user-to-user indicators** name).

NOTE: The network or the called user cannot support the service

TSS UUS/UUS3/	TP ISS_V_6_3_10	ISUP v2 reference 1.3.5.2.1.1.2; 1.3.5.2.2-5.1/Q.737	Selection expression OLE OR IntermE	Q.788 reference 2.17.6

Test purpose

UUS3 explicit non-essential - request during the active phase of the call

To verify that the IUT can successfully generate/transit an UUS3 explicit non-essential request, with a **FAR** having the **facility indicator** parameter set to "user-to-user service" and the Service 3 field in the **user-to-user indicators** set to "request, not essential".

Pre-test conditions (in case of OLE)
Arrange the data in the IUT so that the user has subscribed to the UUS3 supplementary service.

TSS UUS/UUS3/	TP ISS_V_6_3_11	ISUP v2 reference 1.3.5.2.1.1.2; 1.3.5.2.2-5.1/Q.737	Selection expression DLE OR IntermE	Q.788 reference 2.17.5

Test purpose

UUS3 explicit non-essential - acceptance during call

To verify that the IUT can successfully reply to an UUS3 explicit non-essential request with a **FAA** having the **facility indicator** parameter set to "user-to-user service" and the Service 3 field in the **user-to-user indicators** parameter set to "service provided".

Pre-test conditions (in case of DLE)
Arrange the data in the IUT so that the user has subscribed to the UUS3 supplementary service.

TSS UUS/UUS3/	TP ISS_I_6_3_12	ISUP v2 reference table 1-3 ; 1.3.7.1/Q.737	Selection expression Gateway AND PICS A.9/5	Q.788 reference 2.17.3

Test purpose

UUS3 explicit non-essential - explicit rejection in the Gateway

To verify that the UUS3 explicit non-essential service can be rejected and the Service 3 field in the **user-to-user indicators** in the **ACM** or **CON** are set to "service 3 not provided".

NOTE: The user-to-user service is rejected because the Gateway received e.g. a **CFN** from the succeeding network (note 2 in table 1-3/Q.737).

TSS UUS/UUS3/	TP ISS_I_6_3_13	ISUP v2 reference 1.3.5.2.5.2.2/Q.737	Selection expression IntermE	Q.788 reference None

Test purpose

UUS3 explicit non-essential - implicit rejection during call (no indication - discard FAA or FRJ)

To verify that the IUT can successfully complete a call with an UUS3 request in the **FAR**, if the **FAA** or **FRJ** are discarded.

NOTE: The FAA or FRJ are discarded because the FAR contains unrecognized or inconsistent information.

TSS UUS/UUS3/	TP ISS_I_6_3_14	ISUP '97 reference 1.3.5.2.5.2.2 /Q.737	Selection expression IntermE	Q.788 reference None

Test purpose

UUS3 explicit non-essential - explicit rejection during call (service not provided - in FRJ)

To verify that the UUS3 explicit non-essential service can be rejected during the active phase of the call and the Service 3 field in the **user-to-user indicators** in the **FRJ** are set to "service 3 not provided".

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
UUS/UUS3/	ISS_V_6_3_15	1.3.6.13.1; 1.3.6.13.2/Q.737	Local AND (PICS A.9/4 OR PICS A.9/6)	None

Test purpose

UUS3 interaction with UUS1 (or UUS2) - unsuccessful request

To verify that the services can be rejected with a **REL** having the **Cause value** # 29 "facility rejected" or # 69 "requested facility not implemented", either with diagnostics (**user-to-user indicators** name),. if more services are requested one of them essential which cannot be provided.

Pre-test conditions
Arrange the data in the IUT so that the user has subscribed to the UUS3 and UUS1 or (UUS2) supplementary services.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
UUS/UUS3/	ISS_V_6_3_16	1.3.6.13.1; 1.3.6.13.2/Q.737	Local AND (PICS A.9/4 OR PICS A.9/6)	None

Test purpose

UUS3 interaction with UUS1 (or UUS2) - Independent acceptance or rejection of the services

To verify that the IUT can successfully complete a call with an UUS3 explicit non-essential request, having the Service 3 field in the **user-to-user indicators** parameter set to "service provided" in **ANM** or **CON**. At the same time the UUS1 (or UUS2) service can be rejected and the **user-to-user indicators** in the **ACM** or **CPG** or **ANM** or **CON** or **REL** are set to "service 1 (or 2) not provided".

Pre-test conditions
Arrange the data in the IUT so that the user has subscribed to the UUS3 and UUS1 (or UUS2) supplementary services.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
UUS/UUS3/	ISS_V_6_3_17	1.3.6.18/Q.737	OLE	None

Test purpose

UUS3 interaction with TP - FAR sent while call is suspended

To verify that if the **FAR** is received while a call is suspended, the IUT returns a **FRJ** with the Service 3 field in the **user-to-user indicators** set to "Service 3 not provided".

Pre-test conditions
Arrange the data in the IUT so that the user has subscribed to the UUS3 and TP supplementary services.

5.2.7 Closed User Group (CUG)

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CUG/	ISS_V_7_1	1.5.2.1.1 i) a)/Q.735	OLE	2.4.4; 2.4.5

Test purpose

CUG without outgoing access in IAM

To verify that the IUT can successfully establish a CUG call by including the **CUG interlock code** together with an indication of "CUG call, outgoing access not allowed" in the **optional forward call indicators** in the **IAM**. The ISUP preference indicator of the **forward call indicators** in the **IAM** should be set to "ISUP required all the way".

Pre-test conditions
Arrange the data in the IUT such that the calling party subscribes to the CUG without outgoing access supplementary service.

TSS CUG/	TP ISS_V_7_2	ISUP v2 reference 1.5.2.2.1; 1.5.2.3.1; 1.5.2.4.1/Q.735	Selection expression IntermE	Q.788 reference 2.4.4; 2.4.5

Test purpose

Transfer of information related to CUG

To verify that the IUT can successfully transfer all information related to a CUG call, i.e. **CUG interlock code** together with an indication of "CUG call, outgoing access not allowed" in the **optional forward call indicators** in the **IAM**.

TSS CUG/	TP ISS_V_7_3	ISUP v2 reference 1.5.2.3.1; 1.5.2.4.1/Q.735	Selection expression Gateway AND PICS A.10/3	Q.788 reference None

Test purpose

Conversion of the interlock code

To verify that the IUT can successfully convert a national into an international **CUG interlock code** (or vice versa) and that the indication "CUG call, outgoing access not allowed" in the **optional forward call indicators** in the **IAM** is passed on transparently.

TSS NO_CUG/	TP ISS_I_7_4	ISUP v2 reference 1.5.2.4.2/Q.735, table 1-1/Q.735	Selection expression IncIE AND NOT PICS A.3/7 AND PICS A.8/2	Q.788 reference 2.4.9

Test purpose

CUG call without outgoing access, action at the gateway with network without CUG capability

To verify that the IUT rejects a CUG call if the contents of the CUG call indicator is set to "CUG call, outgoing access not allowed" in **optional forward call indicators** in **IAM** and the succeeding national network does not support CUG. The IUT should respond with a **REL** with cause #29 "Facility rejected" and include the parameter name in the diagnostics field.

Pre-test conditions
A route to a network without CUG capability must be available in the IUT.

TSS NO_CUG/	TP ISS_I_7_5	ISUP v2 reference 1.5.2.4.2/Q.735, table 1-1/Q.735	Selection expression IncIE AND NOT PICS A.3/7 AND PICS A.8/2	Q.788 reference 2.4.3

Test purpose

CUG call with outgoing access, action at the gateway interworking with network without CUG capability

To verify that the IUT proceeds with normal call setup if the contents of the CUG call indicator is received as "CUG call, outgoing access allowed" in **optional forward call indicators** in **IAM** and the succeeding national network does not support CUG.

Pre-test conditions
A route to a network without CUG capability must be available in the IUT

TSS CUG/	TP ISS_V_7_6	ISUP v2 reference 1.5.2.5.1; table 1-2/Q.735	Selection expression DLE	Q.788 reference 2.4.4

Test purpose

CUG call without outgoing access; class of called user: CUG without IA, no ICB activated

To verify that the IUT can successfully establish a CUG call.

Pre-test conditions
Arrange the data in the IUT such that the called party subscribes to CUG and no incoming calls are barred.

TSS CUG/	TP ISS_V_7_7	ISUP v2 reference 1.5.2.5.1; table 1-2/Q.735	Selection expression DLE	Q.788 reference 2.4.1

Test purpose

CUG call with outgoing access; class of called user: CUG without IA, no ICB activated

To verify that the IUT can successfully establish a CUG call.

Pre-test conditions
Arrange the data in the IUT such that the called party subscribes to CUG and no incoming calls are barred.

TSS CUG/	TP ISS_V_7_8	ISUP v2 reference 1.5.2.5.1; table 1-2/Q.735	Selection expression DLE	Q.788 reference 2.4.8

Test purpose

CUG call without outgoing access; class of called user: CUG without IA, ICB activated

To verify that the IUT rejects the CUG call with cause # 55 "Incoming calls barred within CUG" in the **REL**.

Pre-test conditions
Arrange the data in the IUT such that the called party subscribes to CUG and the incoming calls are barred (ICB).

TSS CUG/	TP ISS_V_7_9	ISUP v2 reference 1.5.2.5.1; table 1-2/Q.735	Selection expression DLE	Q.788 reference None

Test purpose

CUG call with outgoing access; class of called user: CUG without IA, ICB activated

To verify that the IUT rejects the CUG call with cause # 55 "Incoming calls barred within CUG" in the **REL**.

Pre-test conditions
Arrange the data in the IUT such that the called party subscribes to CUG and the incoming calls are barred (ICB).

TSS CUG/	TP ISS_V_7_10	ISUP v2 reference 1.5.2.5.1; table 1-2/Q.735	Selection expression DLE	Q.788 reference None

Test purpose

CUG call without outgoing access; class of called user: CUG with IA and no ICB activated

To verify that the IUT can successfully establish a CUG call.

Pre-test conditions
Arrange the data in the IUT such that the called party subscribes to the CUG with Incoming Access (IA) and no incoming calls are barred.

TSS CUG/	TP ISS_V_7_11	ISUP v2 reference 1.5.2.5.1; table 1-2/Q.735	Selection expression DLE	Q.788 reference None

Test purpose

CUG call with outgoing access; class of called user: CUG with IA and no ICB activated

To verify that the IUT can successfully establish a CUG call with outgoing access.

Pre-test conditions
Arrange the data in the IUT such that the called party subscribes to the CUG with Incoming Access (IA) and no incoming calls are barred.

TSS CUG/	TP ISS_V_7_12	ISUP v2 reference 1.5.2.5.1; table 1-2/Q.735	Selection expression DLE	Q.788 reference None

Test purpose

CUG call without outgoing access; class of called user: CUG with IA and ICB activated

To verify that the IUT rejects the CUG call with cause # 55 "Incoming calls barred within CUG" in the **REL**.

Pre-test conditions
Arrange the data in the IUT such that the called party subscribes to the CUG with Incoming access (IA) and the incoming calls are barred (ICB).

TSS CUG/	TP ISS_V_7_13	ISUP v2 reference 1.5.2.5.1; table 1-2/Q.735	Selection expression DLE	Q.788 reference None

Test purpose

CUG call with outgoing access; class of called user: CUG with IA and ICB activated

To verify that the IUT can successfully establish a non-CUG call.

Pre-test conditions
Arrange the data in the IUT such that the called party subscribes to the CUG with Incoming access (IA) and the incoming calls are barred (ICB).

TSS CUG/	TP ISS_V_7_14	ISUP v2 reference 1.5.2.5.1; table 1-2/Q.735	Selection expression DLE	Q.788 reference 2.4.5

Test purpose

CUG call without outgoing access; class of called user: non-CUG

To verify that the IUT rejects the CUG call with cause # 87 "User not member of CUG" in the **REL**.

Pre-test conditions
Called user is not member of CUG.

TSS CUG/	TP ISS_V_7_15	ISUP v2 reference 1.5.2.5.1; table 1-2/Q.735	Selection expression DLE	Q.788 reference 2.4.2

Test purpose

CUG call with outgoing access; class of called user: non-CUG

To verify that the IUT can successfully establish a non-CUG call

Pre-test conditions
Called user is not member of CUG.

TSS CUG/	TP ISS_V_7_16	ISUP v2 reference 1.5.2.5.1; table 1-2/Q.735	Selection expression DLE	Q.788 reference None

Test purpose

Non-CUG call; class of called user: CUG without IA

To verify that the IUT rejects the CUG call with cause # 87 " User not member of CUG " in the **REL**.

Pre-test conditions
Arrange the data in the IUT such that the called party subscribes to CUG.

TSS CUG/	TP ISS_V_7_17	ISUP v2 reference 1.5.2.5.1; table 1-2/Q.735	Selection expression DLE	Q.788 reference None

Test purpose

Non-CUG call; class of called user: CUG with IA

To verify that the IUT can successfully establish a non-CUG call.

Pre-test conditions
Arrange the data in the IUT such that the called party subscribes to CUG with Incoming Access (IA).

TSS CUG/	TP ISS_V_7_18	ISUP v2 reference 1.5.2.5.1; table 1-2/Q.735	Selection expression DLE	Q.788 reference None

Test purpose

CUG call without outgoing access; class of called user: other CUG without IA

To verify that the IUT rejects the CUG call with cause # 87 " User not member of CUG " in the **REL**.

Pre-test conditions
Arrange the data in the IUT such that the called party subscribes to another CUG than that of calling user.

TSS CUG/	TP ISS_V_7_19	ISUP v2 reference 1.5.2.5.1; table 1-2/Q.735	Selection expression DLE	Q.788 reference 2.4.6

Test purpose

CUG call with outgoing access; class of called user: other CUG without IA

To verify that the IUT rejects the CUG call with cause # 87 " User not member of CUG " in the **REL**.

Pre-test conditions
Arrange the data in the IUT such that the called party subscribes to another CUG than that of calling user.

TSS CUG/	TP ISS_V_7_20	ISUP v2 reference 1.5.2.5.1; table 1-2/Q.735	Selection expression DLE	Q.788 reference None

Test purpose

CUG call without outgoing access; class of called user: other CUG with IA

To verify that the IUT rejects the CUG call with cause # 87 "User not member of CUG" in the **REL**.

Pre-test conditions
Arrange the data in the IUT such that the called party subscribes to another CUG than that of calling user, and that incoming access (IA) is allowed.

TSS CUG/	TP ISS_V_7_21	ISUP v2 reference 1.5.2.5.1; table 1-2/Q.735	Selection expression DLE	Q.788 reference 2.4.7

Test purpose

CUG call with outgoing access; class of called user: other CUG with IA

To verify that the IUT can successfully establish a non-CUG call

Pre-test conditions
Arrange the data in the IUT such that the called party subscribes to another CUG than that of calling user, and that incoming access (IA) is allowed.

TSS CUG/	TP ISS_I_7_22	ISUP v2 reference 1.5.2.5.2/Q.735	Selection expression DLE	Q.788 reference None

Test purpose
Non-CUG call with CUG interlock code in IAM
To verify that the IUT rejects the call with cause # 111 "Protocol error, unspecified" in the **REL**, if a non-CUG call has a **CUG interlock code** in the **IAM**.

TSS CUG/	TP ISS_I_7_23	ISUP v2 reference 1.5.2.5.2/Q.735	Selection expression DLE	Q.788 reference None

Test purpose
CUG call without interlock code in IAM
To verify that the IUT rejects the CUG call with cause # 111 "Protocol error, unspecified" in the **REL**, if there is no **CUG interlock code** in the **IAM**.

5.2.8 Subaddressing (SUB)

TSS SUB/	TP ISS_V_8_1	ISUP v2 reference 8.5.2.1.1/Q.731	Selection expression OLE	Q.788 reference 2.2.1
Test purpose				

Test purpose
Sending the called subaddress in the access transport parameter
To verify that the IUT can include the called subaddress in the **access transport** parameter in the IAM.

TSS SUB/	TP ISS_V_8_2	ISUP v2 reference 8.5.2.2.1; 8.5.2.3.1; 8.5.2.4.1/Q.731	Selection expression IntermE	Q.788 reference 2.2.1
Test purpose				

Test purpose
Transit support of access transport parameter
To verify that the contents of the **access transport** parameter is passed on transparently in the IAM.

TSS SUB/	TP ISS_V_8_3	ISUP v2 reference 8.5.2.5.1/Q.731	Selection expression DLE	Q.788 reference 2.2.1
Test purpose				

Test purpose
Receiving the called subaddress in the access transport parameter
To verify that a call may be successfully established if the IAM contains the subaddress in the **access transport** parameter and that the called subaddress is passed on to the user network interface.
Pre-test conditions Arrange the data in the IUT such that the called party subscribes to the SUB supplementary service.

TSS SUB/	TP ISS_I_8_4	ISUP v2 reference 8.5.2.5.2/Q.731; 2.1.1.6/Q.764	Selection expression DLE	Q.788 reference None

Test purpose

Receiving the called subaddress if it is not supported at the destination

To verify that a call may be successfully established if the IAM contains the subaddress in the **access transport** parameter and the destination address does not subscribe to the SUB supplementary service.

Pre-test conditions
Arrange the data in the IUT such that the called party does not subscribe to the SUB supplementary service.

TSS SUB/	TP ISS_V_8_5	ISUP v2 reference 8.7/Q.731	Selection expression IntermE	Q.788 reference None

Test purpose

Interaction with other networks; no notification is sent back to the OLE

To verify that the IUT can successfully establish a call by discarding the subaddress if the succeeding network does not support the subaddress or the supplied length is not supported.

5.2.9 Malicious Call Identification (MCID)

TSS MCID/	TP ISS_V_9_1	ISUP v2 reference 9.2.1/ ETS 300 356-11 [11]	Selection expression OLE	Q.788 reference 2.5.1

Test purpose

Successful MCID request

To verify that the IUT can successfully reply to an **IDR** having the **MCID request indicator** set to "MCID request" by sending an **IRS** with **MCID response indicator** set to "MCID included" and the **calling party number** included.

TSS MCID/	TP ISS_V_9_2	ISUP v2 reference 9.2.1/ ETS 300 356-11 [11]	Selection expression OLE	Q.788 reference None

Test purpose

Successful MCID request - after ACM

To verify that the IUT will accept and reply correctly to an MCID request after ACM has been received. The IUT should reply to an **IDR** having the **MCID request indicator** set to "MCID request" by sending an **IRS** with **MCID response indicator** set to "MCID included" and the **calling party number** included.

NOTE: This situation may occur e.g. if the call has been forwarded before reaching the destination.

TSS MCID/	TP ISS_V_9_3	ISUP v2 reference 9.2.1/ ETS 300 356-11 [11]	Selection expression OLE AND PICS A.12/1	Q.788 reference 2.5.1

Test purpose

Successful MCID request with calling subaddress

To verify that the IUT can successfully reply to an **IDR** having the **MCID request indicator** set to "MCID request" by sending an **IRS** with **MCID response indicator** set to "MCID included", the **calling party number** and a calling subaddress in the **access transport** parameter.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
NO_MCID/	ISS_I_9_4	9.2.2/ ETS 300 356-11 [11]	OLE AND NOT PICS A.3/9	2.5.2

Test purpose				

MCID request - MCID not supported by the OLE

To verify that the IUT rejects a MCID request by sending a **IRS** with the **MCID response indicator** set to "MCID not included".

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
MCID/	ISS_V_9_5	9.3.1/ ETS 300 356-11 [11]	Transit	None

Test purpose				

MCID information passed transparently

To verify that a received **IDR** is transferred transparently to the preceding exchange and the subsequent **IRS** is transferred transparently to the succeeding exchange.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
MCID/	ISS_V_9_6	9.4.1/ ETS 300 356-11 [11]	OutIE AND NOT PICS A.12/4	None

Test purpose				

MCID information passed and set correctly - outgoing

To verify that a received **IDR** is transferred transparently into the national network (NOT PICS A.4/1), the subsequent **IRS** being transferred into the international network so that the country code in the address signals of the **calling party number** is added and the nature of address indicator is set to "international number".

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
NO_MCID/	ISS_I_9_7	9.4.2/ ETS 300 356-11 [11]	OutIE AND NOT PICS A.3/9 AND PICS A.8/3	2.5.2

Test purpose				

MCID request - MCID not supported by the calling party's national network

To verify that the outgoing international exchange rejects a MCID request by sending an **IRS** with the **MCID response indicator** set to "MCID not included".

NOTE: This test case checks the behaviour of the IUT if the national network does not support MCID.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
MCID/	ISS_V_9_8	9.5.1/ ETS 300 356-11 [11]	InclE	None

Test purpose				

MCID information passed and set correctly - incoming

To verify that a received **IDR** is transferred transparently into the international network and the subsequent **IRS** is transferred into the national network so that the country code in the address signals of the **calling party number** is removed if it is the network's own country code and the nature of address indicator is set in this case to "national (significant) number".

TSS MCID/	TP ISS_I_9_9	ISUP v2 reference 9.5.2/ ETS 300 356-11 [11]	Selection expression IncIE AND PICS A.12/5	Q.788 reference None

Test purpose

MCID request - MCID not supported by the calling party's national network - adding information

To verify that the international incoming gateway can modify the **MCID response indicator** set to "MCID not included" into "MCID included" and can include the available information in the **calling party number**.

NOTE: The known part of the **calling party number** is sent with the address incomplete indicator set to "incomplete".

TSS MCID/	TP ISS_V_9_10	ISUP v2 reference 9.6.1 a)/ ETS 300 356-11 [11]	Selection expression DLE	Q.788 reference 2.5.1

Test purpose

DLE records call details

To verify that the DLE can successfully record the **calling party number** and optionally the calling subaddress if received in the **IAM** or in the **IRS**.

Pre-test conditions
Arrange the data in the IUT so that the called user has subscribed to MCID service.

TSS MCID/	TP ISS_V_9_11	ISUP v2 reference 9.6.1b)/ ETS 300 356-11 [11]	Selection expression DLE	Q.788 reference 2.5.1

Test purpose

DLE requests call details

To verify that the DLE can successfully request the **calling party number** and optionally the calling subaddress by sending an **IDR**, if there is no calling party number included in the **IAM**.

Pre-test conditions
Arrange the data in the IUT so that the called user has subscribed to MCID service.

TSS MCID/	TP ISS_I_9_12	ISUP v2 reference 9.6.2/ ETS 300 356-11 [11]	Selection expression DLE	Q.788 reference 2.5.2

Test purpose

No MCID information after MCID request

To verify that the call setup is continued (user is alerted) if an **IRS** is received without the expected MCID information within timer T39 expiry, after having sent the **IDR** with **MCID request indicator** set to "MCID requested".

Pre-test conditions
Arrange the data in the IUT so that the user has subscribed to MCID service.

TSS MCID/	TP ISS_I_9_13	ISUP v2 reference 9.6.2/ ETS 300 356-11 [11]	Selection expression DLE	Q.788 reference 2.5.3

Test purpose

MCID timer (T39) expiry

To verify that call setup is continued (user is alerted) if no **IRS** is received within timer T39 expiry, after having sent the **IDR** with **MCID request indicator** set to "MCID requested".

Pre-test conditions
Arrange the data in the IUT so that the called user has subscribed to MCID service.

TSS MCID/	TP ISS_V_9_14	ISUP v2 reference 10/ ETS 300 356-11 [11]	Selection expression OLE AND PICS A.2/4	Q.788 reference 2.5.1

Test purpose

Successful MCID request with additional calling party number

To verify that the OLE can successfully reply to an **IDR** having the **MCID request indicator** set to "MCID request" by sending an **IRS** with **MCID response indicator** set to "MCID included", the **calling party number** and an additional calling party number in the **generic number** parameter.

NOTE: This implies that a special arrangement exists with the calling user.

Pre-test conditions
Arrange the data in the IUT so that the additional calling party number information is available

TSS MCID/	TP ISS_V_9_15	ISUP v2 reference 11.9; 11.13/ ETS 300 356-11 [11]	Selection expression DLE	Q.788 reference None

Test purpose

MCID interaction with DDI and/or MSN

To verify that the **calling party number**, the **called party number** with DDI and/or MSN are registered if provided.

Pre-test conditions
Arrange the data in the IUT so that the called user has subscribed to the MCID, DDI and/or MSN services

TSS MCID/	TP ISS_V_9_16	ISUP v2 reference 11.10/ ETS 300 356-11 [11]	Selection expression DLE AND PICS A.12/3	Q.788 reference None

Test purpose

MCID interaction with diversion services

To verify that besides the **calling party number**, the **original called number** and the **redirecting number** are registered if provided.

NOTE: A call diversion service has been activated for this call.

Pre-test conditions
Arrange the data in the IUT so that the user has subscribed to MCID

TSS MCID/	TP ISS_V_9_17	ISUP v2 reference annex A/ ETS 300 356-11 [11]	Selection expression OLE	Q.788 reference None

Test purpose

Generation of compatibility information

To verify that the IUT includes the correct **message compatibility information** and **parameter compatibility information** in the IRS.

TSS MCID/	TP ISS_V_9_18	ISUP v2 reference annex A/ ETS 300 356-11 [11]	Selection expression DLE	Q.788 reference None

Test purpose

Generation of compatibility information

To verify that the IUT includes the correct **message compatibility information** and **parameter compatibility information** in the **IDR**.

Pre-test conditions
Arrange the data in the IUT so that the called user has subscribed to the MCID service.

5.2.10 Conference call, add-on (CONF)

TSS CONF/	TP ISS_V_10_1	ISUP v2 reference 1.5.2.1.1.1/Q.734	Selection expression Local AND BCall PICS A.13/13	Q.788 reference None

Test purpose

Requirement related to echo control

To verify that the IUT is able to initiate echo control procedures for the necessary legs when a new call is added to the conference.

NOTE: The used PICS is defined for the basic call (BCall).

Pre-test conditions
Arrange the data in the IUT such that the served user subscribes to CONF supplementary service.

TSS CONF/	TP ISS_V_10_2	ISUP v2 reference 1.5.2.1.1.2/Q.734	Selection expression Local AND PICS A.13/1	Q.788 reference 2.13.1

Test purpose

Establishing a conference from an active call

To verify that the IUT can successfully begin the conference from an active call and notify the implied parties correctly.

NOTE: The **generic notification indicator** set to "conference established" should be sent by the IUT in the **CPG.** The event indicator should be set to "progress".

Pre-test conditions
Arrange the data in the IUT such that the served user subscribes to CONF supplementary service.

TSS CONF/	TP ISS_V_10_3	ISUP v2 reference 1.5.2.1.1.2/Q.734	Selection expression Local AND PICS A.13/1	Q.788 reference 2.13.1

Test purpose

Adding calls (conferees) to an established conference

To verify that the IUT is able to add a conferee to a conference and notify the implied parties correctly.

NOTE: The **generic notification indicator** set to "conference established" should be sent by the IUT to the new affected conferee and the **generic notification indicator** set to "other party added" to the non-affected conferees. The event indicator in the **CPG** should be set to "progress".

Pre-test conditions
Arrange the data in the IUT such that the served user subscribes to CONF supplementary service.

TSS CONF/	TP ISS_V_10_4	ISUP v2 reference 1.5.2.1.1.2/Q.734	Selection expression Local AND PICS A.13/2	Q.788 reference None

Test purpose

Joining the maximum number of conferees in a conference

To verify that the IUT is able to join the maximum allowed number of conferees to a conference and notify the implied parties correctly.

NOTE: The **generic notification indicator** set to "conference established" should be sent by the IUT to the new affected conferee and the **generic notification indicator** set to "other party added" to the non-affected conferees. The event indicator in the **CPG** should be set to "progress".

Pre-test conditions
Arrange the data in the IUT such that the served user subscribes to CONF supplementary service.

TSS CONF/	TP ISS_V_10_5	ISUP v2 reference 1.5.2.1.1.3/Q.734	Selection expression Local AND PICS A.13/1	Q.788 reference 2.13.2

Test purpose

Isolation of party

To verify that the IUT can successfully isolate a conferee from the conference and notify the implied parties correctly.

NOTE: The **generic notification indicator** set to "isolated" within **call progress** should be sent by the IUT to the affected conferee and the **generic notification indicator** set to "other party isolated" should be sent to the non-affected conferees. The event indicator in the **CPG** should be set to "progress". The isolated conferee should not be able to communicate with the rest of the conference.

Pre-test conditions
Arrange the data in the IUT such that the served user subscribes to CONF supplementary service.

TSS CONF/	TP ISS_V_10_6	ISUP v2 reference 1.5.2.1.1.4/Q.734	Selection expression Local AND PICS A.13/1	Q.788 reference 2.13.2

Test purpose

Reattachment of party

To verify that the IUT can successfully reattach the isolated conferee to the conference and notify the implied parties correctly.

NOTE: The **generic notification indicator** set to "reattached" should be sent by the IUT   to the affected conferee and the **generic notification indicator** set to "other party reattached" should be sent to non-affected conferees. The event indicator in the **CPG** should be set to "progress".

Pre-test conditions
Arrange the data in the IUT such that the served user subscribes to CONF supplementary service.

TSS CONF/	TP ISS_V_10_7	ISUP v2 reference 1.5.2.1.1.5/Q.734	Selection expression Local AND PICS A.13/1	Q.788 reference 2.13.2

Test purpose

Splitting of a party

To verify that the IUT can create a private communication between the served user and one of the conferees and notify the implied parties correctly.

NOTE 1:   The **generic notification indicator** set to "conference disconnected" should be sent by the IUT to the affected conferee and the **generic notification indicator** set to "other party split" should be sent to the non-affected conferees. The event indicator in the **CPG** should be set to "progress". The non-affected conferees should not be able to participate in the communication of the private communication.
NOTE 2:   See also figure 1-5/Q.734.

Pre-test conditions
Arrange the data in the IUT such that the served user subscribes to CONF supplementary service.

TSS CONF/	TP ISS_V_10_8	ISUP v2 reference 1.5.2.1.1.6/Q.734	Selection expression Local AND PICS A.13/1	Q.788 reference 2.13.3

Test purpose

Disconnection of conferee

To verify that IUT can successfully disconnect a conferee from the conference, if requested by the served user, and notify the implied parties correctly.

NOTE: The IUT should release the leg towards the conferee according to normal call release procedures, i.e. send a **REL** to a conferee connected to the conference. The **generic notification indicator** set to "other party disconnected" should be sent to the non-affected conferees. The event indicator in the **CPG** should be set to "progress".

Pre-test conditions
Arrange the data in the IUT such that the served user subscribes to CONF supplementary service.

TSS CONF/	TP ISS_V_10_9	ISUP v2 reference 1.5.2.1.1.7/Q.734	Selection expression Local AND PICS A.13/1	Q.788 reference 2.13.3

Test purpose

Disconnection by a conferee

To verify that IUT can successfully disconnect a conferee from the conference, if requested by the conferee, and notify the implied parties correctly.

NOTE: The IUT should release the leg towards the conferee according to normal call release procedures, i.e. send a **RLC** in response to the **REL** to a conferee connected to the conference through ISUP. The **generic notification indicator** set to "other party disconnected" should be sent to the non-affected conferees. The event indicator in the **CPG** should be set to "progress".

Pre-test conditions
Arrange the data in the IUT such that the served user subscribes to CONF supplementary service.

TSS CONF/	TP ISS_V_10_10	ISUP v2 reference 1.5.2.1.1.8/Q.734	Selection expression Local AND PICS A.13/1	Q.788 reference 2.13.2

Test purpose

Termination of conference

To verify that IUT can successfully disconnect all conferees from the conference, if requested by the served user, and initiate the normal call release procedure towards each conferee.

NOTE: The IUT should send **REL** to all conferees connected to the conference.

Pre-test conditions
Arrange the data in the IUT such that the served user subscribes to CONF supplementary service.

TSS CONF/	TP ISS_I_10_11	ISUP v2 reference 1.5.2.1.2/Q.734	Selection expression Local AND PICS A.13/1	Q.788 reference None

Test purpose

Adding of conferees fails (unsuccessful)

To verify that if the procedure of adding conferees fails the concerned call remains in the previous state and notifications never be sent to the affected nor to the non-affected remote parties.

NOTE: The procedure of adding fails, e.g. because the maximum conference participants is exceeded.

Pre-test conditions
Arrange the data in the IUT such that the served user has subscribed to CONF supplementary service.

TSS CONF/	TP ISS_I_10_12	ISUP v2 reference 1.5.2.1.2/Q.734	Selection expression Local AND PICS A.13/1	Q.788 reference None

Test purpose

Isolation, reattachment, splitting, disconnection of a party, conference termination (unsuccessful)

To verify that if the procedures to isolate a party, reattach a party, split a party, disconnect a party, terminate conference fail, then the concerned call remains in the previous state and notifications are not sent to the affected nor to the non-affected remote parties.

NOTE: The procedure of reattachment fails, e.g. because the party was not formerly isolated.

Pre-test conditions
Arrange the data in the IUT such that the served user has subscribed to CONF supplementary service.

TSS CONF/	TP ISS_V_10_13	ISUP v2 reference 1.5.2.2.1, 1.5.2.3.1, 1.5.2.4.1/Q.734	Selection expression (IntermE OR DLE) AND PICS A.13/1	Q.788 reference None

Test purpose

Notification procedure supported

To verify that the IUT can successfully transfer/deliver the required notifications in/from the CPG message.

TSS CONF/	TP ISS_V_10_14	ISUP v2 reference 1.6.15/Q.734	Selection expression Local AND PICS A.13/1	Q.788 reference None

Test purpose

Interaction with HOLD - held user added to conference

To verify that no retrieve notification is sent to a user put on hold and subsequently added to a conference call, but that the IUT sends the "conference established" notification to the held user.

NOTE: The IUT should send the **CPG** with the **generic notification indicator** set to "conference established" to the held user.

Pre-test conditions
Arrange the data in the IUT such that the served user has subscribed to CONF and HOLD supplementary services.

TSS CONF/	TP ISS_V_10_15	ISUP v2 reference 1.6.15/Q.734	Selection expression Local	Q.788 reference None

Test purpose

Interaction with HOLD - conference put on hold by conference controller

To verify that no hold and no retrieve notification is sent to the conferees when the conference controller puts the conference on hold.

Pre-test conditions
Arrange the data in the IUT such that the served user has subscribed to CONF and HOLD supplementary services.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CONF/	ISS_V_10_16	1.6.15/Q.734	Local	None

Test purpose

Interaction with HOLD - conference put on hold by conferee

To verify that when the IUT receives notification from a conferee that a call has been put on hold and subsequently retrieved, the IUT passes on this notification to the served user, but does not send any information to the other non-affected conferees.

Pre-test conditions
Arrange the data in the IUT such that the served user has subscribed to CONF and HOLD supplementary services.

5.2.11   Explicit Call Transfer (ECT)

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
ECT/	ISS_V_11_1	9.2.1.1 a)/ ETS 300 356-14 [13]	Local AND PICS A.14/1	None

Test purpose

Capability of storing and sending the additional calling party number in the call transfer number.

To verify that the IUT is able to store the additional calling party number in the **generic number** when the **calling party number** and the **generic number** have been received from the remote user. This information is sent by the IUT to the other remote user in the **call transfer number** in either the **FAC** or **CPG** when the call transfer is activated.

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to HOLD, CW and ECT.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
ECT/	ISS_V_11_2	9.2.1.1 a)/ ETS 300 356-14 [13]	Local AND PICS A.14/1	None

Test purpose

Capability of storing and sending the calling party number in the call transfer number.

To verify that the IUT is able to store the **calling party number** when only this CLI has been received from the remote user. This information is sent by the IUT to the other remote user in the **call transfer number** in either the **FAC** or **CPG** when the call transfer is activated.

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to HOLD, CW and ECT.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
ECT/	ISS_V_11_3	9.2.1.1 b)/ ETS 300 356-14 [13]	Local AND PICS A.14/1	None

Test purpose

Capability of storing and sending the additional connected number in the call transfer number.

To verify that the IUT is able to store the additional connected number in the **generic number** when the **connected number** and the **generic number** have been received from the remote user. This information is sent by the IUT to the other remote user in the **call transfer number** in either the **FAC** or **CPG** when the call transfer is activated.

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to HOLD and ECT.

TSS ECT/	TP ISS_V_11_4	ISUP v2 reference 9.2.1.1 b)/ ETS 300 356-14 [13]	Selection expression Local AND PICS A.14/1	Q.788 reference None
Test purpose *Capability of storing and sending the connected number in call transfer number.* To verify that the IUT is able to store **connected number** when only this COL has been received from the remote user. This information is sent by the IUT to the other remote user in the **call transfer number** in either the **FAC** or **CPG** when the call transfer is activated. Pre-test conditions Arrange the data in the IUT so that the served user subscribes to HOLD and ECT.				

TSS ECT/	TP ISS_V_11_5	ISUP v2 reference 9.2.1.2.1/ ETS 300 356-14 [13]	Selection expression Local AND PICS A.14/2	Q.788 reference None
Test purpose *Loop prevention procedure - initiation* To verify that the local exchange controlling the ECT can successfully initiate the loop prevention procedure by sending **LOP** with **loop prevention indicator** set to "request" and with **call transfer reference** for both calls. Pre-test conditions Arrange the data in the IUT so that the served user subscribes to HOLD and ECT.				

TSS ECT/	TP ISS_V_11_6	ISUP v2 reference 9.2.1.2.1/ ETS 300 356-14 [13]	Selection expression Local AND PICS A.14/2	Q.788 reference None
Test purpose *Loop prevention procedure - successful response* To verify that the local exchange controlling the ECT can successfully perform a call transfer if a **LOP** with **loop prevention indicator** set to "response" is received and "no loop exists", and the call identity matches the one used by the IUT. Pre-test conditions Arrange the data in the IUT so that the served user subscribes to HOLD and ECT.				

TSS ECT/	TP ISS_I_11_7	ISUP v2 reference 9.2.1.2.1/ ETS 300 356-14 [13]	Selection expression Local AND PICS A.14/2	Q.788 reference None
Test purpose *Loop prevention procedure - wrong call transfer identity ignored* To verify that the local exchange controlling the ECT disregards the **LOP** with **loop prevention indicator** set to "response" and "no loop exists", if the call transfer identity does not match the one used by the IUT. Pre-test conditions Arrange the data in the IUT so that the served user subscribes to HOLD and ECT.				

TSS ECT/	TP ISS_I_11_8	ISUP v2 reference 9.2.1.2.1/ ETS 300 356-14 [13]	Selection expression Local AND PICS A.14/2	Q.788 reference None

Test purpose

Loop prevention procedure - unsuccessful (loop exists)

To verify that the local exchange controlling the ECT rejects the call transfer if the **LOP** is received with **loop prevention indicator** set to "request" and the **call transfer reference** matches the one used by the IUT.

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to HOLD and ECT.

TSS ECT/	TP ISS_V_11_9	ISUP v2 reference 9.2.1.2.1; 11.4.1/ ETS 300 356-14 [13]	Selection expression Local AND PICS A.14/2	Q.788 reference None

Test purpose

Loop prevention procedure - unsuccessful (interaction with ECT)

To verify that the local exchange controlling the ECT rejects the call transfer if the **LOP** is received with **loop prevention indicator** set to "response" and "simultaneous transfer" in case of interaction with ECT.

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to HOLD and ECT.

TSS ECT/	TP ISS_V_11_10	ISUP v2 reference 9.2.1.2.1/ ETS 300 356-14 [13]	Selection expression Local AND PICS A.14/2 AND PICS A.14/8	Q.788 reference None

Test purpose

Loop prevention procedure - unsuccessful (interworking situation)

To verify that the local exchange controlling the ECT rejects the call transfer if the **LOP** is received with **loop prevention indicator** set to "response" and "insufficient information" from e.g. interworking situations.

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to HOLD and ECT.

TSS ECT/	TP ISS_V_11_11	ISUP v2 reference 9.2.1.2.1/ ETS 300 356-14 [13]	Selection expression Local AND PICS A.14/2 AND PICS A.14/9	Q.788 reference None

Test purpose

Loop prevention procedure - successful (interworking situation)

To verify that the local exchange controlling the ECT completes the call transfer if the **LOP** is received with **loop prevention indicator** set to "response" and "insufficient information" from e.g. interworking situations.

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to HOLD and ECT.

TSS ECT/	TP ISS_V_11_12	ISUP v2 reference 9.2.1.2.1/ ETS 300 356-14 [13]	Selection expression Local AND PICS A.14/2 AND PICS A.14/4	Q.788 reference None

Test purpose

Loop prevention procedure - unsuccessful on timer expiry

To verify that the local exchange controlling the ECT rejects the call transfer if no **LOP** is received within **T$_{ECT}$** expiry

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to HOLD and ECT.

TSS ECT/	TP ISS_V_11_13	ISUP v2 reference 9.2.1.2.1/ ETS 300 356-14 [13]	Selection expression Local AND PICS A.14/2 AND PICS A.14/5	Q.788 reference None

Test purpose

Loop prevention procedure - successful on timer expiry

To verify that the local exchange controlling the ECT completes the call transfer if no **LOP** is received within **T$_{ECT}$** expiry

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to HOLD and ECT.

TSS ECT/	TP ISS_V_11_14	ISUP v2 reference 9.2.1.2.2 a)/ ETS 300 356-14 [13]	Selection expression Local	Q.788 reference None

Test purpose

Facility message with generic notification sent to the remote user

To verify that the local exchange controlling the ECT can successfully initiate a call transfer by sending **FAC** with the **generic notification** set to "call transfer, active" or "call transfer, alerting" and the **service activation** parameter set to "call transfer".

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to HOLD and ECT.

TSS ECT/	TP ISS_V_11_15	ISUP v2 reference 9.2.1.2.2 a)/ ETS 300 356-14 [13]	Selection expression Local	Q.788 reference None

Test purpose

Call progress message with generic notification sent to the remote user

To verify that the local exchange (controlling the ECT) can successfully initiate a call transfer by sending **CPG** with the **generic notification** set to "call transfer, active" and the **service activation** parameter set to "call transfer".

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to HOLD and ECT.

TSS ECT/	TP ISS_V_11_16	ISUP v2 reference 9.2.1.2.2 b)/ ETS 300 356-14 [13]	Selection expression Local	Q.788 reference None

Test purpose

Facility message send upon receipt of the ANM when the ECT is invoked while one call is alerting

To verify that, in case the ECT is invoked while one call is alerting, as soon as the local exchange (controlling the ECT) receives the **ANM**, it can successfully send to the other remote user the **FAC** with **service activation** set to "call transfer" and the **generic notification** set to "call transfer, active".

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to HOLD and ECT.

TSS ECT/	TP ISS_V_11_17	ISUP v2 reference 9.2.1.2.2 b)/ ETS 300 356-14 [13]	Selection expression Local AND PICS A.14/1	Q.788 reference None

Test purpose

Capability of sending the additional connected number in the call transfer number parameter when the ECT is invoked while one call is alerting

To verify that, in case the ECT is invoked while one call is alerting, the **FAC** sent to the other remote user upon receipt of the **ANM** conveys the **call transfer number** parameter with the information received in the **generic number** parameter if both the **connected number** and an additional connected number in the **generic number** are received in the **ANM**.

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to HOLD and ECT.

TSS ECT/	TP ISS_V_11_18	ISUP v2 reference 9.2.1.2.2 b)/ ETS 300 356-14 [13]	Selection expression Local AND PICS A.14/1	Q.788 reference None

Test purpose

Capability of sending the connected number in the call transfer number parameter when the ECT is invoked while one call is alerting

To verify that, in case the ECT is invoked while one call is alerting, the **FAC** sent to the other remote user upon receipt of the **ANM** conveys the **call transfer number** parameter with the information received in the **connected number** parameter if only the **connected number** is received in the **ANM**.

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to HOLD and ECT.

TSS ECT/	TP ISS_V_11_19	ISUP v2 reference 7; 9.3.1; 9.4.1; 9.5.1/ ETS 300 356-14 [13]	Selection expression IntermE AND PICS A14/2	Q.788 reference None

Test purpose

Transparent transfer of information of the loop prevention procedure message

To verify that the exchange can successfully pass on the **loop prevention indicator** and the **call transfer reference** in the **LOP** related to the call transfer service.

TSS ECT/	TP ISS_V_11_20	ISUP v2 reference 7; 9.3.1; 9.4.1; 9.5.1/ ETS 300 356-14 [13]	Selection expression IntermE	Q.788 reference None

Test purpose

Transparent transfer of information in the FAC or CPG

To verify that the exchange can successfully pass on the **access transport** and the **generic notification indicator** in the **FAC** or **CPG** related to the call transfer service.

TSS ECT/	TP ISS_V_11_21	ISUP v2 reference 7; 9.4.1; 9.5.1/ ETS 300 356-14 [13]	Selection expression Gateway AND PICS A.14/6	Q.788 reference None

Test purpose

Call transfer number - removal of number

To verify that the exchange removes the **call transfer number** in the **FAC** or **CPG** before sending it to the next exchange**,** if its indicator is set to "presentation restricted" and there is no bilateral agreement.

TSS ECT/	TP ISS_V_11_22	ISUP v2 reference 7; 9.4.1/ ETS 300 356-14 [13]	Selection expression OutIE	Q.788 reference None

Test purpose

Call transfer number - conversion to international number

To verify that the IUT converts the **call transfer number** to international format. The nature of address indicator shall be set to "international number".

TSS ECT/	TP ISS_V_11_23	ISUP v2 reference 7; 9.5.1/ ETS 300 356-14 [13]	Selection expression InclE	Q.788 reference None

Test purpose

Call transfer number - removal of own country code

To verify that the IUT removes the country code in the address signals of the **call transfer number** if it is the network's own country code. The nature of address indicator shall be set to "national (significant) number".

TSS ECT/	TP ISS_V_11_24	ISUP v2 reference 9.7.1/ ETS 300 356-14 [13]	Selection expression Local AND BCall PICS A.13/11 AND BCall PICS A.13/13	Q.788 reference None

Test purpose

ECT - interaction with echo control

To verify that the local exchange (controlling the ECT) can successfully initiate echo control procedures, when the total propagation delay for the two legs of the call to be transferred requires usage of echo control devices. The information to be summed is received in the **propagation delay counter** of the **IAM** for incoming calls and in the **call history information** of the **ANM/CON** for outgoing calls.

NOTE: The used PICS are defined for the basic call (BCall).

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to ECT.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
ECT/	ISS_V_11_25	10/ ETS 300 356-14 [13]	IWorkE AND PICS A.14/7	None

Test purpose

Loop prevention procedure - Interworking with protocols not supporting loop prevention

To verify that the IUT is able to support call control interworking between ISUP v2 and protocols not supporting the loop prevention procedure, and return a **LOP** (response) message with the indication "insufficient information" in response to a **LOP** (request) message.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
ECT/	ISS_V_11_26	10/ ETS 300 356-14 [13]	IWorkE	None

Test purpose

Notification - Interworking with protocols not supporting the notification mechanism or the simple service activation procedure

To verify that the exchange discards the **FAC** (always) and the **CPG** (if received during alerting) and successfully completes the call transfer.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
ECT/	ISS_V_11_27	11.17.1/ ETS 300 356-14 [13]	Local	None

Test purpose

ECT - Interaction with UUS1

To verify that if the ECT is invoked while a remote user is alerted, the originating exchange discards the **user-to-user information** received in the **ANM** or in the **REL** from that remote user.

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to ECT and UUS1.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
ECT/	ISS_V_11_28	11.17.2/ ETS 300 356-14 [13]	Local	None

Test purpose

ECT - Interaction with UUS2

To verify that if the ECT is invoked while a remote user is alerted, the exchange discards the **USR** messages received after the call transfer invocation until the **ANM** from that remote user is received.

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to ECT and UUS2.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
ECT/	ISS_V_11_29	11.17.3/ ETS 300 356-14 [13]	Local	None

Test purpose

ECT - Interaction with UUS3

To verify that the exchange discards the **USR** messages if received after the call transfer invocation until the call transfer is completed, i.e. either **FAC** is sent to the remote users when both calls are already answered or **ANM** is received from a remote user when one of the calls is alerting.

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to ECT and UUS3.

TSS ECT/	TP ISS_V_11_30	ISUP v2 reference figure A.4/ ETS 300 356-14 [13]	Selection expression Local AND PICS A.2/7	Q.788 reference None

Test purpose

ECT - Interaction with SUB

To verify that if the IUT is able to receive and re-send the subaddress in the **access transport** parameter in the **FAC** message in either direction after activating the call transfer service. These are the calling subaddress for incoming calls and the connected subaddress for outgoing calls.

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to ECT.

TSS ECT/	TP ISS_V_11_31	ISUP v2 reference annex B/ ETS 300 356-14 [13]	Selection expression Local	Q.788 reference None

Test purpose

Parameter compatibility information - call transfer number

To verify that the IUT generates the correct **parameter compatibility information** for the **call transfer number** in the **FAC** or **CPG**.

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to ECT.

TSS ECT/	TP ISS_V_11_32	ISUP v2 reference annex B/ ETS 300 356-14 [13]	Selection expression Local AND PICS A.14/2	Q.788 reference None

Test purpose

Parameter compatibility information - call transfer reference

To verify that the IUT generates the correct **parameter compatibility information** for the **call transfer reference** in the **LOP**.

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to ECT.

TSS ECT/	TP ISS_V_11_33	ISUP v2 reference annex B/ ETS 300 356-14 [13]	Selection expression Local	Q.788 reference None

Test purpose

Parameter compatibility information - generic notification parameter

To verify that the IUT generates the correct **parameter compatibility information** for the **generic notification** parameter in the **FAC** or **CPG**.

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to ECT.

TSS ECT/	TP ISS_V_11_34	ISUP v2 reference annex B/ ETS 300 356-14 [13]	Selection expression Local AND PICS A.14/2	Q.788 reference None

Test purpose

Parameter compatibility information - loop prevention indicators

To verify that the IUT generates the correct **parameter compatibility information** for the **loop prevention indicators** in the **LOP**.

Pre-test conditions
Arrange the data in the IUT so that the served user subscribes to ECT.

TSS ECT/	TP ISS_V_11_35	ISUP v2 reference annex B/ ETS 300 356-14 [13]	Selection expression Local AND PICS A.14/2	Q.788 reference None
Test purpose				
Parameter compatibility information - service activation To verify that the IUT generates the correct **parameter compatibility information** for the **service activation** in the **FAC**.				
Pre-test conditions Arrange the data in the IUT so that the served user subscribes to ECT.				

TSS ECT/	TP ISS_V_11_36	ISUP v2 reference annex B/ ETS 300 356-14 [13]	Selection expression Local	Q.788 reference None
Test purpose				
Message compatibility information - loop prevention message To verify that the IUT generates the correct **message compatibility information** for the **LOP** message.				
Pre-test conditions Arrange the data in the IUT so that the served user subscribes to ECT.				

TSS ECT/	TP ISS_V_11_37	ISUP v2 reference annex B/ ETS 300 356-14 [13]	Selection expression Local	Q.788 reference None
Test purpose				
Message compatibility information - facility message To verify that the IUT generates the correct **message compatibility information** for the **FAC** message.				
Pre-test conditions Arrange the data in the IUT so that the served user subscribes to ECT.				

5.2.12   Call diversion (CFB, CFNR, CFU, CD)

CFNR		Call forwarding on no reply	
	CFNR(A)	CFNR - option A - late release	
	CFNR(B)	CFNR - option B - immediate release	
CD(a)		CD during alerting	call diversion
	CD(a,A)	CD during alerting - option A - late release	may occur
	CD(a,B)	CD during alerting - option B - immediate release	
CFB(u,e)		CFB user determined with early ACM	
CD(i,e)		CD immediate response with early ACM	
CFU		Call forwarding unconditional	
CFB(n)		CFB network determined	call is
CFB(u,l)		CFB user determined with late ACM	diverting
CD(i,l)		CD immediate response with late ACM	
CD(i)		CD immediate response	

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CDIV/	ISS_V_12_1	2.5.2.1.1/Q.732	OLE	2.6.1

Test purpose

"Call is diverting" indication received in ACM

To verify that a call can be successfully established, if diversion occurs. The **ACM** contains the **generic notification indicator** set to "call is diverting", the **call diversion information** and the **redirection number**. Applicable redirection reason in the **call diversion information**:
"busy"   CFB(n); CFB(u,l)
"unconditional"   CFU
"deflection immediate response"   CD(i,l)

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CDIV/	ISS_V_12_2	2.5.2.1.1/Q.732	OLE	2.6.3; 2.7.1

Test purpose

"Call diversion may occur" received in ACM

To verify that a call can be successfully established, if diversion may occur. The **ACM** indicates that "call diversion may occur" in the **optional backward call indicators**. The following **CPG** contains the **generic notification indicator** set to "call is diverting", the **call diversion information** and the **redirection number**, if diversion occurs.
Applicable redirection reason in the **call diversion information**:
"busy"   CFB(u,e)
"no reply"   CFNR
"deflection during alerting "   CD(a)
"deflection immediate response"   CD(i,e)

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CDIV/	ISS_V_12_3	2.4.2; table 2-1/Q.732	OLE	None

Test purpose

Redirection number - presentation allowed - according to the notification subscription option

To verify that the originating exchange makes the **redirection number** available to the calling access signalling system, if the notification subscription option of the **call diversion information** is coded "010 presentation allowed with redirection number".

The **redirection number restriction** parameter is set to "00 presentation allowed".

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CDIV/	ISS_V_12_4	2.4.2; table 2-1/Q.732	OLE	None

Test purpose

Redirection number - presentation restricted - according to the notification subscription option

To verify that the originating exchange does not make the **redirection number** available to the calling access signalling system, if the notification subscription option of the **call diversion information** is coded "001 presentation not allowed", "011 presentation allowed without redirection number" or "000 unknown".

The **redirection number restriction** parameter is set to "00 presentation allowed".

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CDIV/	ISS_V_12_5	2.4.2; table 2-1/Q.732	OLE	None

Test purpose

Redirection number - presentation restricted - according to redirection number restriction parameter

To verify that the originating exchange does not make the **redirection number** available to the calling access signalling system, if the **redirection number restriction** parameter indicates "01 Presentation restricted".

The notification subscription option of the **call diversion information** is coded "010 Presentation allowed with redirection number".

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CDIV/	ISS_I_12_6	2.4.2; table 2-1/Q.732	OLE	None

Test purpose

Redirection number - presentation restricted - no redirection number restriction parameter received

To verify that the originating exchange does not make the **redirection number** available to the calling access signalling system, if no **redirection number restriction** parameter is received.

The notification subscription option of the **call diversion information** is coded "010 Presentation allowed with redirection number".

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CDIV/	ISS_I_12_7	2.4.2/Q.732; figure 6/ ETS 300 204	OLE	None

Test purpose

Multiple diversions - redirection number not send by the last diversion

To verify that the originating exchange does not make any **redirection number** available to the calling access signalling system, if the last diverting exchange does not send one.

NOTE: The first diverting exchange sends the **redirection number** and allows for its presentation. The second (last) diversion allows for the presentation of the **redirection number**, but does not send it, i.e. only **call diversion information** is present in the message and the redirection number is missing. The **redirection number restriction** parameter is also received as "presentation allowed".

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CDIV/	ISS_I_12_8	2.4.2/Q.732	OLE	None

Test purpose

Multiple diversions - redirection number - presentation according to the most restrictive notification subscription option

To verify that the originating exchange handles the presentation of the **redirection number** according to the contents of the most restrictive notification subscription option of the **call diversion information**, if the forwarded-to user allows presentation of the number ("presentation allowed" in the **redirection number restriction** parameter).

NOTE: Several messages each containing the **call diversion information** are received, as if multiple forwardings have occurred (from option B - immediate release - diverting exchanges, so no collecting of information takes place).

TSS CDIV/	TP ISS_V_12_9	ISUP v2 reference 2.5.2.2.1; 2.5.2.5.1.2 d)/Q.732	Selection expression IntermE	Q.788 reference None

Test purpose

Notification procedures for a diverting call - before the diverting exchange

To verify that the IUT can successfully pass on in the backward direction (on the leg before the diversion) all the diversion information from the diverting exchange.

It has to be checked that the following signalling information is passed on:
  optional backward call indicators with setting "call diversion may occur" for CFNR, CD(a), CFB(u,e) and CD(i,e)
  generic notification indicator
  call diversion information
  redirection number (altered in gateways)
  redirection number restriction parameter

NOTE: The following messages can be tested for CFNR, CD(a), CFB(u,e) and CD(i,e):
  ACM with **optional backward call indicators** with "call diversion may occur";
  CPG with **generic notification indicator**, **call diversion information** and **redirection number**;
  CPG alerting (or **ANM** or **CON**) with **redirection number restriction** parameter.

The following messages can be tested for CFU, CFB(n), CFB(u,l), CD(i,l):
  ACM with **generic notification indicator**, **call diversion information** and **redirection number**;
  CPG alerting (or **ANM** or **CON**) with **redirection number restriction** parameter.

TSS CDIV/	TP ISS_V_12_10	ISUP v2 reference 2.5.2.2.1/Q.732	Selection expression IntermE	Q.788 reference None

Test purpose

Notification procedures for a diverting call - after the diverting exchange

To verify that the IUT can successfully pass on in both directions (on the leg after the diversion) all the diversion information from the diverting exchange.

It has to be checked that the following signalling information is passed on in the forward direction:
  redirecting number (altered in Gateways)
  original called number (altered in Gateways)
  redirection information

It has to be checked that the following signalling information is passed on in the backward direction:
  redirection number restriction parameter (in ACM/CPG/ANM/CON)

TSS CDIV/	TP ISS_I_12_11	ISUP v2 reference 2.5.2.3/Q.732; 3.5.2.3/Q.731	Selection expression OutIE	Q.788 reference None

Test purpose

Original called number in the outgoing international gateway

To verify that the outgoing international gateway checks and manipulates the **original called number** according to the procedures as defined for CLIP.
Applicable tests:
  Discarding the **original called number** if case of bilateral agreements (PICS A.15/11)
  Discarding the **original called number**, if the address is marked not available
  Converting the **original called number** to international format with transparent transferral of screening indicator and address presentation restricted indicator
  Discarding an incomplete **original called number**

TSS CDIV/	TP ISS_V_12_12	ISUP v2 reference 2.5.2.3/Q.732; 3.5.2.3/Q.731	Selection expression OutIE	Q.788 reference None

Test purpose

Redirecting number in the outgoing international gateway

To verify that the outgoing international gateway checks and manipulates the **redirecting numbe**r according to the procedures as defined for CLIP.
Applicable tests:
  Discarding the **redirecting number** if case of bilateral agreements (PICS A.15/12)
  Discarding the **redirecting number**, if the address is marked not available
  Converting the **redirecting number** to international format with transparent transferral of screening indicator and address presentation restricted indicator
  Discarding an incomplete **redirecting number**

TSS CDIV/	TP ISS_V_12_13	ISUP v2 reference 2.5.2.3/Q.732; ETS 300 356-15 [14]	Selection expression OutIE	Q.788 reference None

Test purpose

Redirection number in the outgoing international gateway.

To verify that the outgoing international gateway checks and manipulates the **redirection numbe**r according to the procedures defined for COLP.

Tests applicable:
  Converting the **redirection number** to national format, if necessary (own country code)
  Adding a prefix to an international **redirection number** (PICS A.15/14 - national option @)

TSS CDIV/	TP ISS_V_12_14	ISUP v2 reference 2.5.2.4/Q.732; 3.5.2.4/Q.731	Selection expression IncIE	Q.788 reference None

Test purpose

Original called number in the incoming international gateway

To verify that the incoming international gateway checks and manipulates the **original called numbe**r according to the procedures as defined for CLIP.
Applicable tests:
  Converting the **original called number** to national format, if necessary (own country code)
  Adding a prefix to an international **original called number** (PICS A.15/15 - national option @)

TSS CDIV/	TP ISS_V_12_15	ISUP v2 reference 2.5.2.4/Q.732; 3.5.2.4/Q.731	Selection expression IncIE	Q.788 reference None

Test purpose

Redirecting number in the incoming international gateway.

To verify that the incoming international gateway checks and manipulates the **redirecting numbe**r according to the procedures as defined for CLIP.
Applicable tests:
  Converting the **redirecting number** to national format, if necessary (own country code)
  Adding a prefix to an international **redirecting number** (PICS A.15/16 - national option @)

TSS CDIV/	TP ISS_V_12_16	ISUP v2 reference 2.5.2.4/Q.732; ETS 300 356-15 [14]	Selection expression InclE	Q.788 reference None

Test purpose

Redirection number in the incoming international gateway.

To verify that the incoming international gateway checks and manipulates the **redirection number** according to the procedures defined for COLP.
Tests applicable:
      Discarding the **redirection number** in case of bilateral agreements (PICS A.15/13)
      Converting the **redirection number** to international format

TSS CDIV/	TP ISS_V_12_17	ISUP v2 reference 2.5.2.4/Q.732; 3.5.2.4/Q.731; ETS 300 356-15 [14]	Selection expression InclE AND PICS A.15/13	Q.788 reference None

Test purpose

Redirection number restriction parameter in the incoming international gateway.

To verify that the incoming international gateway removes the **redirection number restriction** parameter if the redirection number has been previously discarded in case of bilateral agreements.

TSS CDIV/	TP ISS_V_12_18	ISUP v2 reference 2.5.2.5.1.1/Q.732	Selection expression DLE	Q.788 reference None

Test purpose

Completion of diverted call by the diverted-to exchange

To verify that the IUT accepts and can successfully establish a diverted call.

TSS CDIV/	TP ISS_V_12_19	ISUP v2 reference 2.5.2.5.1.1/Q.732	Selection expression DLE	Q.788 reference None

Test purpose

Setting of redirection number restriction parameter at the diverted-to exchange (pres. allowed)

To verify that the IUT includes the **redirection number restriction** indicator in the **ACM**, **CPG**, **ANM** or **CON** set to "presentation allowed" (COLR not activated).

TSS CDIV/	TP ISS_V_12_20	ISUP v2 reference 2.5.2.5.1.1/Q.732	Selection expression DLE	Q.788 reference None

Test purpose

Setting the redirection number restriction indicator at the diverted-to exchange (pres. restricted)

To verify that the IUT includes the **redirection number restriction** indicator in the **ACM**, **CPG**, **ANM** or **CON** set to "presentation restricted" (COLR activated).

Pre-test conditions
Arrange the data in the IUT so that the diverted-to user subscribes to the COLR supplementary service.

TSS CDIV/	TP ISS_V_12_21	ISUP v2 reference 2.5.2.5.1.2 b) 1)/ Q.732	Selection expression DLE AND PICS A.15/2	Q.788 reference None

Test purpose

Setting the redirection counter in the diverting exchange - first diversion

To verify that the IUT can successfully divert a call which has not been diverted before and set the redirection counter to the correct value.

The call is diverted directly to another exchange; the redirection counter should be set to 1.

Pre-test conditions
Arrange the data in the IUT so that called user has activated diversion to an external exchange.

TSS CDIV/	TP ISS_V_12_22	ISUP v2 reference 2.5.2.5.1.2 b) 1)/ Q.732	Selection expression DLE AND PICS A.15/2	Q.788 reference None

Test purpose

Setting of redirection counter in the diverting exchange - multiple local diversions

To verify that the IUT can successfully divert a call which has not been diverted before and set the redirection counter to the correct value.

The call is diverted N<=5 times; the redirection counter should be set to N. (e.g. for the pre-test condition the call is diverted twice: once to the same exchange and then to an external exchange, N=2)

Pre-test conditions
For N=2 arrange the data in the IUT so that called user has activated diversion to another user on the same exchange, and this user at his turn has activated diversion to an external exchange.

TSS CDIV/	TP ISS_V_12_23	ISUP v2 reference 2.5.2.5.1.2 b) 1)/ Q.732	Selection expression DLE AND PICS A.15/2	Q.788 reference None

Test purpose

Updating of redirection counter in the diverting exchange

To verify that the IUT can successfully divert a call which has already been diverted and increment the redirection counter.

NOTE: The call has been diverted 1 to 4 times.

Pre-test conditions
Arrange the data in the IUT so that called user has activated diversion to an external exchange

TSS CDIV/	TP ISS_V_12_24	ISUP v2 reference 2.5.2.5.1.2 b) 2)/ Q.732; 2.5.2.5.1.2 b) 6)/ ETS 300 356-15 [14]	Selection expression DLE	Q.788 reference None

Test purpose

Original called number generated by the diverting exchange

Verify that the IUT sets the address presentation restricted indicator of the **original called number** according to the "served user releases his/her number to the diverted-to user" option.

The redirecting indicator in the **redirection information** shall be set to "011 Call diverted".

Pre-test conditions
Arrange the data in the IUT so that called user has activated diversion to an external exchange.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CDIV/	ISS_V_12_25	2.5.2.5.1.2 b) 4)/ Q.732; 2.5.2.5.1.2 b) 6)/ ETS 300 356-15 [14]	DLE	None

Test purpose

Redirecting number generated by the diverting exchange

Verify that the IUT sets the address presentation restricted indicator of the **redirecting number** according to the "served user releases his/her number to the diverted-to user" option.

The redirecting indicator in the **redirection information** shall be set to "011 Call diverted".

Pre-test conditions
Arrange the data in the IUT so that called user has activated diversion to an external exchange.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CDIV/	ISS_V_12_26	2.5.2.5.1.2 b) 5)/ Q.732	DLE	None

Test purpose

ISDN user part preference indicator in the diverting exchange

To verify that the IUT can successfully divert a call and that ISDN user part preference indicator received in the **forward call indicators** with the value "ISDN user part...
...not required all the way" shall be changed to "ISDN user part preferred all the way"
...preferred all the way" shall be left unchanged
...required all the way" shall be left unchanged.

Pre-test conditions
Arrange the data in the IUT so that called user has activated diversion.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CDIV/	ISS_V_12_27	2.5.2.5.1.2 c) ii); iii)/ Q.732	DLE	None

Test purpose

Call diversion may occur in the diverting exchange -

To verify that the IUT includes an **optional backward call indicator** with the indication "call diversion may occur" in the **ACM** in case of CFNR, CD(a), CFB(u,e) and CD(i,e)

Pre-test conditions
Arrange the data in the IUT so that called user has activated the appropriate diversion service to an external exchange.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CDIV/	ISS_V_12_28	2.5.2.5.1.2 c) ii); table 2-2/Q.732	DLE AND PICS A.16/5	None

Test purpose

Served user answers the call before T_{CFNR} expiry

To verify that a call may be answered by the served user and that no signalling occurs on the diverted-to user leg if the call is answered before timeout of Timer T_{CFNR}, in case of CFNR

Pre-test conditions
Arrange the data in the IUT so that called user has activated the CFNR service.

TSS CDIV/	TP ISS_V_12_29	ISUP v2 reference 2.5.2.5.1.2 c) i); ii); iii)/Q.732	Selection expression DLE AND NOT PICS A.16/1	Q.788 reference None

Test purpose

Immediate through-connection in the diverting exchange

To verify that the IUT can successfully divert a call and that the incoming circuit is connected to the chosen outgoing circuit immediately, in case of CFU, CFB, CD(i), CFNR(B) and CD(a,B).

Pre-test conditions
Arrange the data in the IUT so that called user has activated the appropriate diversion service to an external exchange.

TSS CDIV/	TP ISS_V_12_30	ISUP v2 reference 2.5.2.5.1.2 c) ii)/ Q.732	Selection expression DLE AND PICS A.16/1 (option A)	Q.788 reference None

Test purpose

Through-connection backwards upon alerting and forwards upon answer in the diverting exchange

To verify that the IUT through-connects in the backward direction (incoming circuit) after receiving the alerting indication and in the forward direction (outgoing circuit) after receiving the answer (connect) indication, in case of CFNR(A) and CD(a,A).

NOTE: The IUT can through-connect in both directions after receiving the alerting indication.

Pre-test conditions
Arrange the data in the IUT so that called user has activated the appropriate diversion service to an external exchange.

TSS CDIV/	TP ISS_V_12_31	ISUP v2 reference 2.5.2.5.1.2 c) ii)/ Q.732	Selection expression DLE AND PICS A.16/1 (option A)	Q.788 reference None

Test purpose

Served user answers before receipt of alerting indication from diverted-to exchange

To verify that the IUT allows the served user to answer the call after the IAM has been sent to the diverted-to exchange, in case of CFNR(A) and CD(a,A). The served user shall be allowed to answer the call after **ACM** (no indication) has been received and the connection towards the diverted-to exchange shall be released.

Pre-test conditions
Arrange the data in the IUT so that called user has activated CFNR(A) or CD(a,A) to an external exchange.

TSS CDIV/	TP ISS_V_12_32	ISUP v2 reference 2.5.2.5.1.2 c) ii)/ Q.732	Selection expression DLE AND PICS A.16/1 (option A)	Q.788 reference 2.7.4; 2.9.7

Test purpose

Unsuccessful call setup to the diverted-to user, ringing tone applied by the diverting exchange

To verify that, if the IUT receives a release indication with cause "user busy" from the diverted-to exchange, it continues to provide ringing tone to the calling user until he releases the connection (or timer T9 in the controlling exchange expires), in case of CFNR(A) and CD(a,A).

Pre-test conditions
Arrange the data in the IUT so that called user has activated CFNR(A) or CD(a,A) to an external exchange.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CDIV/	ISS_V_12_33	2.5.2.5.2.1 c) iii)/ Q.732	DLE AND NOT PICS A.16/1	2.6.4 2.7.5 2.8.3 2.9.5 2.9.6

Test purpose

Unsuccessful call setup to the diverted-to user, call released by the diverting exchange

To verify that, if the IUT receives a release indication with cause "user busy" from the diverted-to exchange, it releases the call (incoming circuit) and the resources, in case of CFU, CFB, CD(i), CFNR(B) and CD(a,B).

Pre-test conditions
Arrange the data in the IUT so that called user has activated CFU, CFB, CD(i), CFNR(B) or CD(a,B) to an external exchange.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CDIV/	ISS_V_12_34	2.5.2.5.1.2 e) i) 2)/ Q.732	DLE AND PICS A.16/1 (option A)	2.7.1 2.9.4

Test purpose

Notification procedures in the diverting exchange- collecting information for the backward direction

To verify that the IUT can successfully divert a call and store the diversion information parameters in the backward direction until an alerting indication is received from the diverted-to exchanges, in case of CFNR(A) and CD(a,A). The IUT receives several **CPG** messages with **call diversion information** and shall retain the most recent redirection reason and the most severe notification subscription option.

Pre-test conditions
Arrange the data in the IUT so that called user has activated CFNR(A) or CD(a,A) to an external exchange.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CDIV/	ISS_V_12_35	2.5.2.5.1.2 e) i) 1)/ Q.732	DLE AND NOT PICS A.16/1	None

Test purpose

Notification procedures in the diverting exchange - passing on information in the backward direction

To verify that the IUT can successfully divert a call and pass on in the backward direction the diversion information parameters received from the diverted-to exchanges, in case of CFU, CFB, CD(i), CFNR(B) and CD(a,B).

Pre-test conditions
Arrange the data in the IUT so that called user has activated CFU, CFB, CD(i), CFNR(B) or CD(a,B) to an external exchange.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CDIV/	ISS_V_12_36	2.5.2.5.1.2 e i)/Q.732	DLE AND PICS A.16/1 (option A)	2.7.1 case C 2.9.4 case C

Test purpose

Mapping of CON to ANM in the diverting exchange - option A

To verify that the IUT can successfully divert a call and map a received **CON** from the forwarding leg to a **CPG** (alerting), followed by an **ANM** on the preceding leg in case of CFNR(A) or CD(a,A).

Pre-test conditions
Arrange the data in the IUT so that called user has activated CFNR(A) or CD(a,A). to an external exchange.

TSS CDIV/	TP ISS_V_12_37	ISUP v2 reference 2.5.2.5.1.2 e i)/Q.732	Selection expression DLE AND NOT PICS A.16/1	Q.788 reference 2.6.1 case C 2.8.1 case C 2.9.1 case C

Test purpose

Mapping of CON to ANM in the diverting exchange - option B

To verify that the IUT can successfully divert a call and map a received **CON** from the forwarding leg to an **ANM** on the preceding leg, in case of CFU, CFB, CD(i), CFNR(B) or CD(a,B).

Pre-test conditions
Arrange the data in the IUT so that called user has activated CFU, CFB, CD(i), CFNR(B) or CD(a,B) to an external exchange.

TSS CDIV/	TP ISS_V_12_38	ISUP v2 reference 2.1.1.1 e); table A.1/Q.764	Selection expression DLE	Q.788 reference None

Test purpose

Timer T7 expiry in the diverting exchange

To verify that the IUT can divert a call and release the resources upon T7 timer expiry, if no **ACM** is received from the forwarded-to exchange.

Pre-test conditions
Arrange the data in the IUT so that called user has activated diversion to an external exchange.

TSS CDIV/	TP ISS_V_12_39	ISUP v2 reference 2.1.4.6 b); table A.1/Q.764	Selection expression DLE	Q.788 reference None

Test purpose

Timer T9 expiry in the diverting exchange

To verify that the IUT can divert a call and release the resources upon T9 timer expiry, if no **ANM** is received from the forwarded-to exchange

Pre-test conditions
Arrange the data in the IUT so that called user has activated diversion to an external exchange.

TSS CDIV/	TP ISS_V_12_40	ISUP v2 reference 2.5.2.5.2.2/Q.732	Selection expression DLE AND PICS A.15/2 AND NOT PICS A.16/1	Q.788 reference None

Test purpose

Call clearing in the diverting exchange - redirection counter set to maximum value

To verify that the IUT will refuse any further external diversions and clear the call, if it is received with the redirection counter in the **redirection information** set to the maximum value, in case of CFU, CFB, CD(i), CFNR(B) and CD(a,B).
The cause values shall be in case of:
CFU   "call rejected" (21)
CFB   "user busy" (17)
CFNR(B)   "no answer from user (user alerted)" (19)
CD(i), CD(a,B)   "no user responding" (18)

Pre-test conditions
Arrange the data in the IUT so that called user has activated diversion to an external exchange.

TSS CDIV/	TP ISS_V_12_41	ISUP v2 reference 2.5.2.5.2.2/Q.732	Selection expression DLE AND PICS A.15/2 AND PICS A.16/1	Q.788 reference None

Test purpose

Continue providing ringing tone in the diverting exchange - redirection counter set to maximum value

To verify that the IUT will refuse any further (external or internal) diversions and continue providing ringing tone until the calling user clears the call (or timer T9 in OLE expires), if it is received with the redirection counter in the **redirection information** set to the maximum value, in case of CFNR(A) and CD(a,A).

Pre-test conditions
Arrange the data in the IUT so that called user has activated diversion to an exchange.

TSS CDIV/	TP ISS_V_12_42	ISUP v2 reference 2.5.2.5.1.2 c)/Q.732; 2.6/Q.764	Selection expression DLE AND BCall PICS A.13/11	Q.788 reference None

Test purpose

Interactions with the propagation delay determination procedure

To verify that the IUT can successfully divert a call and set the required propagation delay value on the outgoing circuit correctly. The value should be set to the received value plus the propagation delay for the outgoing route, as if the IUT was an intermediate exchange.

Pre-test conditions
Arrange the data in the IUT so that called user has activated diversion to an external exchange

TSS CDIV/	TP ISS_V_12_43	ISUP v2 reference 2.6.3/Q.732	Selection expression DLE AND PICS A.3/3	Q.788 reference None

Test purpose

Call diversion - interaction with COLP

To verify that the **connected number** and the additional connected number in the **generic number** received in an **ANM** or **CON** message are passed on unmodified at a diverting exchange.

NOTE: The CON will be mapped to an ANM.

Pre-test conditions
Arrange the data in the IUT so that called user has activated diversion to an external exchange.

TSS CDIV/	TP ISS_V_12_44	ISUP v2 reference 2.6.5/Q.732	Selection expression DLE AND PICS A.3/1	Q.788 reference None

Test purpose

Call diversion - interaction with CLIP

To verify that the diverting exchange diverts the **calling party number** and the additional calling number in the **generic number**.

Pre-test conditions
Arrange the data in the IUT so that called user has activated diversion to an external exchange.

TSS CDIV/	TP ISS_V_12_45	ISUP v2 reference 2.6.7/Q.732	Selection expression DLE AND PICS A.3/7	Q.788 reference None

Test purpose

Call diversion - interaction with CUG - CUG call not diverted

To verify that a CUG call with outgoing access not allowed to a non-CUG user who has activated diversion is not forwarded.

TSS CDIV/	TP ISS_V_12_46	ISUP v2 reference 2.6.7/Q.732	Selection expression DLE AND PICS A.3/7	Q.788 reference None

Test purpose

Call diversion - interaction with CUG - CUG call diverted

To verify that a CUG call with outgoing access not allowed to a CUG member who has activated diversion is successful and that the CUG restrictions are forwarded.

Pre-test conditions
Arrange the data in the IUT so that called user has activated diversion to an external exchange and has subscribed to CUG.

TSS CDIV/	TP ISS_V_12_47	ISUP v2 reference 2.6.17/Q.732	Selection expression DLE AND PICS A.3/8	Q.788 reference None

Test purpose

Call diversion - interaction with SUB - old called party subaddress not diverted

To verify that the IUT does not divert the called party subaddress.

Pre-test conditions
Arrange the data in the IUT so that called user has activated diversion to an external exchange.

TSS CDIV/	TP ISS_V_12_48	ISUP v2 reference 2.6.17/Q.732	Selection expression DLE AND PICS A.3/8	Q.788 reference None

Test purpose

Call diversion - interaction with SUB - new called party subaddress included

To verify that a new called party subaddress corresponding to the diverted-to user shall be provided by the served user at call diversion activation and shall be included in the **access transport** parameter in the **IAM** sent on the diverted leg.

Pre-test conditions
Arrange the data in the IUT so that called user has activated diversion to an external exchange and has subscribed to SUB.

TSS CDIV/	TP ISS_V_12_49	ISUP v2 reference 2.7/Q.732; 2.1.1.1/Q.764	Selection expression DLE AND IWorkE	Q.788 reference None

Test purpose

Call diversion - interworking with other networks

To verify that the IUT is able to handle the call to other signalling systems according to the basic call procedures. If the ISDN user part preference indicator in the **forward call indicators** is set to "ISDN user part...:

...not required all the way"	(01) then the call should be diverted
...preferred all the way"	(00) then the call should be diverted
...required all the way"	(10) then the call should be rejected/released.

Pre-test conditions
Arrange the data in the IUT so that the called user has activated diversion with a diverted-to number which is to be routed to another signalling system.

5.2.13 Call Hold (HOLD)

TSS HOLD/	TP ISS_V_13_1	ISUP v2 reference 2.5.2.1.1.1; 2.5.2.1.1.2/Q.733	Selection expression Local	Q.788 reference 2.11.3

Test purpose

Call hold after answer, requested by the local user

To verify that a call can be placed on hold and can be retrieved again by the local user and that notifications are sent with **CPG** messages having the **event indicator** set to "progress".

Pre-test conditions
Arrange the data in the IUT so that the local user subscribes to the Call hold service.

TSS HOLD/	TP ISS_V_13_2	ISUP v2 reference 2.5.2.1.1.1; 2.5.2.1.1.2/Q.733	Selection expression Local	Q.788 reference 2.11.3

Test purpose

Call hold after answer, requested by the remote user

To verify that a call can be placed on hold and can be retrieved again by the remote user and that notifications are sent with **CPG** messages.

TSS HOLD/	TP ISS_V_13_3	ISUP v2 reference 2.2.1; 2.5.2.1.1.1; 2.5.2.1.1.2/Q.733	Selection expression OLE and PICS A.17/2	Q.788 reference 2.11.1

Test purpose

Call hold after alerting, requested by the local user

To verify that an outgoing call can be placed on HOLD after alerting has commenced and can be retrieved afterwards by the local user and that notifications are sent with **CPG** messages.

Pre-test conditions
Arrange the data in the IUT so that the local user subscribes to the Call hold service.

TSS HOLD/	TP ISS_V_13_4	ISUP v2 reference 2.2.1; 2.9/Q.733	Selection expression OLE and PICS A.17/2	Q.788 reference None

Test purpose

Call hold after alerting, expiry of T9 while the call is on hold

To verify that a held call is released if it is not answered before expiry of T9 (waiting for **ANM**).

Pre-test conditions
Arrange the data in the IUT so that the local user subscribes to the Call hold service.

TSS HOLD/	TP ISS_V_13_5	ISUP v2 reference 2.2.1; 2.5.2.1.1.1; 2.5.2.1.1.2/Q.733	Selection expression OLE and PICS A.17/1	Q.788 reference 2.11.1

Test purpose

Call hold after IAM, local user requests HOLD for outgoing call

To verify that an outgoing call can be placed on hold and can be retrieved afterwards by the local user and that notifications are sent with **CPG** messages.

Pre-test conditions
Arrange the data in the IUT so that the local user subscribes to the Call hold service.

TSS HOLD/	TP ISS_V_13_6	ISUP v2 reference 2.5.2.2.1; 2.5.2.3.1; 2.5.2.4.1/Q.733	Selection expression IntermE	Q.788 reference 2.11.3

Test purpose

Call hold after answer (transit call)

To verify that a transit call can be placed on hold and can be retrieved again by the served user (called or calling party) and that the indications are passed on transparently.

TSS HOLD/	TP ISS_V_13_7	ISUP v2 reference 2.2.2; 2.5.2.2.1; 2.5.2.3.1; 2.5.2.4.1/Q.733	Selection expression IntermE	Q.788 reference 2.11.1

Test purpose

Call hold after alerting (transit call)

To verify that a transit call can be placed on hold after alerting has commenced at the called party and can be retrieved afterwards and that the indications are passed on transparently by the IUT.

TSS HOLD/	TP ISS_V_13_8	ISUP v2 reference 2.7/Q.733	Selection expression IWorkE and PICS A.17/3	Q.788 reference None

Test purpose

Call hold after answer, interworking with PSTN

To verify that an in-band indication is sent to the PSTN subscriber if a call is placed on hold by the ISDN subscriber.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
HOLD/	ISS_V_13_9	2.3/Q.764	Local	2.11.4

Test purpose
Call hold after answer, release of the call by the local served user
To verify that a call in the held state can be released by the user who activated the Call hold service.
Pre-test conditions
Arrange the data in the IUT so that the local user subscribes to the Call hold service.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
HOLD/	ISS_V_13_10	2.3/Q.764	Local	2.11.5

Test purpose
Call hold after answer, release of the call by the non-served user
To verify that a call in the held state can be released by the user who did not activate the Call hold service.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
HOLD/	ISS_V_13_11	2.3/Q.764	Local	2.11.2

Test purpose
Call hold after alerting, release of the call by the local served user
To verify that a held call can be released by the user who activated the Call hold service without retrieving the call.
Pre-test conditions
Arrange the data in the IUT so that the local user subscribes to the Call hold service.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
HOLD/	ISS_V_13_12	2.2.1; 2.5.2.5.1/Q.733	DLE	2.11.1

Test purpose
Call hold after alerting, requested by the remote user
To verify that an incoming call can be placed on hold and can be retrieved afterwards by the remote user.

5.2.14   Call Waiting (CW)

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CW/	ISS_V_14_1	1.5.2.1.1/Q.733	OLE	2.10.1

Test purpose
Call waiting indication in ACM
To verify that a call can be successfully established if the **ACM** indicates that it is a waiting call.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CW/	ISS_V_14_2	1.5.2.1.1/Q.733	OLE	2.10.1

Test purpose
Call waiting indication in CPG
To verify that a call can be successfully established if the **CPG** indicates that it is a waiting call.

TSS CW/	TP ISS_V_14_3	ISUP v2 reference 1.5.2.2.1; 1.5.2.3.1; 1.5.2.4.1/Q.733	Selection expression IntermE	Q.788 reference 2.10.1
Test purpose *Call waiting indication in ACM (transit)* To verify that a call can be successfully established if the **ACM** indicates that it is a waiting call.				

TSS CW/	TP ISS_V_14_4	ISUP v2 reference 1.5.2.2.1; 1.5.2.3.1; 1.5.2.4.1/Q.733	Selection expression IntermE	Q.788 reference 2.10.1
Test purpose *Call Waiting indication in CPG (transit)* To verify that a call can be successfully established if the **CPG** indicates that it is a waiting call.				

TSS CW/	TP ISS_V_14_5	ISUP v2 reference 1.5.2.5.1/Q.733	Selection expression DLE	Q.788 reference 2.10.1
Test purpose *Call waiting indication in ACM or CPG* To verify that a call can be successfully established if the user has subscribed to the call waiting service (with notification) and if he is currently busy, but answers the waiting call. The indication shall be sent either in an **ACM** or a **CPG**. Pre-test conditions Arrange the data in the IUT so that the called user subscribes to the call waiting service with the notification option.				

TSS CW/	TP ISS_V_14_6	ISUP v2 reference 1.5.2.5.1/Q.733	Selection expression DLE	Q.788 reference 2.10.1
Test purpose *Call waiting without notification* To verify that a call can be successfully established if the user has subscribed to the call waiting service (without notification) and if he is currently busy, but answers the waiting call. No indication shall be sent to the calling user. Pre-test conditions Arrange the data in the IUT so that the called user subscribes to the call waiting service without the notification option.				

TSS CW/	TP ISS_V_14_7	ISUP v2 reference 1.5.2.5.2/Q.733	Selection expression DLE	Q.788 reference 2.10.2
Test purpose *Call waiting rejected* To verify that the IUT sends a **REL** with cause #21 (call rejected) if a busy user rejects the waiting call. Pre-test conditions Arrange the data in the IUT so that the called user subscribes to the call waiting service with the notification option.				

TSS CW/	TP ISS_V_14_8	ISUP v2 reference 1.5.2.5.2/Q.733	Selection expression DLE	Q.788 reference 2.10.3
Test purpose				
Call waiting ignored (expiry of call waiting supervision timer) To verify that the IUT sends a **REL** with cause #19 (no answer from user, user alerted) if a busy user does not answer the waiting call.				
Pre-test conditions Arrange the data in the IUT so that the called user subscribes to the call waiting service with the notification option.				

5.2.15 Completion of Calls to Busy Subscriber (CCBS)

TSS CCBS-ISUP/	TP ISS_V_15_1	ISUP v2 reference 7.1.1; 9.2.1/ ETS 300 356-18 [17]	Selection expression OLE	Q.788 reference None
Test purpose				
ISUP Preference Indicator in the CCBS call To verify that for the CCBS call, the IUT sets the ISUP preference indicator in the **forward call indicator** parameter in the **IAM** to "ISDN User Part required all the way".				
Pre-test conditions Arrange the data in the IUT such that the calling user subscribes to the CCBS supplementary service.				

TSS CCBS-ISUP/	TP ISS_V_15_2	ISUP v2 reference 7.1.3/ ETS 300 356-18 [17]	Selection expression OLE	Q.788 reference None
Test purpose				
CCBS parameter in the CCBS call To verify that for the CCBS call, the IUT includes in the **IAM** the CCBS call indicator in the **CCBS parameter** coded as "CCBS call".				
Pre-test conditions Arrange the data in the IUT such that the calling user subscribes to the CCBS supplementary service.				

TSS CCBS-ISUP/	TP ISS_V_15_3	ISUP v2 reference 9.1.1.1.1/ ETS 300 356-18 [17]	Selection expression OLE	Q.788 reference None
Test purpose				
CCBS call with retained basic call information To verify that for the CCBS call, the IUT includes the retained call information in the **IAM**: **User service information;** **User service information prime;** **Access transport** (e.g. called party subaddress); **Called party number.**				
Pre-test conditions Arrange the data in the IUT such that the calling user subscribes to the CCBS and such that the relevant call information that is to be tested may be provided by the calling user.				

TSS CCBS-ISUP/	TP ISS_V_15_4	ISUP v2 reference 9.1.1.1.1; 11.17/ ETS 300 356-18 [17]	Selection expression OLE AND PICS A.18/3	Q.788 reference None

Test purpose

CCBS call with retained call information & interactions with other supplementary services

To verify that for the CCBS call, the IUT includes the retained call information in the IAM:
Calling party number (if supported);
Access transport (e.g. calling party subaddress if supported);
UUS1,2,3 (retained request if supported);
UUS1 (information given by user in response to CCBS recall, if supported);
Optional forward call indicator (with COLP request).

Pre-test conditions
Arrange the data in the IUT such that the calling user subscribes to the CCBS and such that the relevant call information for the applicable supplementary services may be provided by the calling user (e.g. SUB, COLP).

TSS CCBS-ISUP/	TP ISS_V_15_5	ISUP v2 reference 9.3.1; 9.4.1; 9.5.1/ ETS 300 356-18 [17]	Selection expression IntermE	Q.788 reference None

Test purpose

Transit support of diagnostics field in REL

To verify that the IUT is able to pass the diagnostics field including the CCBS indicator transparently to the preceding exchange.

TSS CCBS-ISUP/	TP ISS_V_15_6	ISUP v2 reference 9.3.1; 9.4.1; 9.5.1/ ETS 300 356-18 [17]	Selection expression IntermE	Q.788 reference None

Test purpose

Transit support of CCBS parameter in IAM

To verify that the IUT is able to pass CCBS parameter transparently to the succeeding exchange.

TSS CCBS-ISUP/	TP ISS_V_15_7	ISUP v2 reference 7.1.2/ ETS 300 356-18 [17]	Selection expression DLE	Q.788 reference None

Test purpose

CCBS possible to destination B

To verify that the IUT is able to generate in a **REL** message with cause # 17 "User busy" or # 34 "No circuit available" the diagnostics field containing a CCBS indicator with a "CCBS possible" indication.

TSS CCBS-ISUP/	TP ISS_V_15_8	ISUP v2 reference 7.1.3/ ETS 300 356-18 [17]	Selection expression DLE	Q.788 reference None

Test purpose

CCBS parameter in the CCBS call

To verify that the IUT is able to terminate the CCBS call, with the CCBS call indicator in the **CCBS parameter** in the **IAM** coded as "CCBS call".

TSS CCBS-ISUP/	TP ISS_V_15_9	ISUP v2 reference 9/ ETS 300 356-18 [17]	Selection expression DLE	Q.788 reference None

Test purpose

CCBS not possible to destination B

To verify that the IUT is able to generate in a **REL** message with cause #17 "User busy" or cause #34 "No circuit available" the diagnostics field containing a CCBS indicator with a "CCBS not possible" indication.

NOTE: CCBS is not possible because e.g. the queue is set to zero or filled up or due to maintenance reasons.

Pre-test conditions
Arrange the data in the IUT such that CCBS for destination B is not possible

TSS CCBS-ISUP/	TP ISS_V_15_10	ISUP v2 reference annex B/ ETS 300 356-18 [17]	Selection expression Local	Q.788 reference None

Test purpose

Parameter compatibility information - CCBS

To verify that the IUT generates the correct **parameter compatibility information** for the **CCBS** in the **IAM**.

Pre-test conditions for OLE
Arrange the data in the IUT so that the calling user subscribes to CCBS.

TSS CCBS-ISUP/	TP ISS_V_15_11	ISUP v2 reference 11.10.2.2.c; 9.6.2.c/ ETS 300 356-18 [17]	Selection expression DLE and PICS A.18/1	Q.788 reference None

Test purpose

Destination busy upon arrival of CCBS call -Interaction with CFB and retention option supported

To verify that the IUT sends a **REL** with cause #17 or #34 and diagnostics "CCBS possible".

The DLE should retain the original request in the queue.

TSS CCBS-ISUP/	TP ISS_V_15_12	ISUP v2 reference 11.10.2.2.c; 9.6.2.c/ ETS 300 356-18 [17]	Selection expression DLE AND NOT PICS A.18/1	Q.788 reference None

Test purpose

Destination busy upon arrival of CCBS call - Interaction with CFB and no retention option supported

To verify that the IUT sends a **REL** with cause #17 or #34 with diagnostics "CCBS possible" when the terminals are compatible.

The DLE releases all its resources for the original request and waits for new CCBS request.

TSS CCBS-ISUP/	TP ISS_V_15_13	ISUP v2 reference 11.10.2.2.c/ ETS 300 356-18 [17]	Selection expression DLE AND PICS A.18/9	Q.788 reference None

Test purpose

CCBS call as a normal call - Interaction with CFB

To verify that the IUT deletes the CCBS parameter in the **IAM** if the CCBS call is forwarded by the initially busy user.

Pre-test conditions
User at destination B must subscribe to and activate CFB to an external user while the recall timer is running (CCBS-T9).

TSS CCBS-ISUP/	TP ISS_V_15_14	ISUP v2 reference 9.6.1/ ETS 300 356-18 [17]	Selection expression DLE AND PICS A.18/6	Q.788 reference None

Test purpose

Maximum number of CCBS request queue entries of destination B

To verify that the IUT supports the maximum number of up to 5 queue entries.

TSS CCBS-ISUP/	TP ISS_V_15_15	ISUP v2 reference 9.6.1/ ETS 300 356-18 [17]	Selection expression DLE	Q.788 reference None

Test purpose

Incoming non-CCBS call with identical service requirements released

To verify that the IUT, having an entry in the CCBS queue, releases a second incoming call if the service requirements of the second call are identical to the entry being processed and resources are available.

NOTE: The original request remains in the queue.

Pre-test conditions
Arrange the data in the IUT so that there are free resources in addition to the resource reserved for the first CCBS request.

TSS CCBS-ISUP/	TP ISS_V_15_16	ISUP v2 reference 9.6.1/ ETS 300 356-18 [17]	Selection expression DLE	Q.788 reference None

Test purpose

Incoming non-CCBS call with not identical service requirements accepted

To verify that the IUT, having a queue entry in the CCBS queue, accepts a second incoming call if the service requirements of the second call are not identical to the entry being processed and resources are available.

NOTE: The original request remains in the queue.

Pre-test conditions
Arrange the data in the IUT so that there are free resources in addition to the resource reserved for the first CCBS request.

CCBS Application Service Element (ASE)

TSS CCBS-ASE/	TP ISS_TC_V_15_1	ISUP v2 reference 9.1.1.1.1/ ETS 300 356-18 [17]	Selection expression OLE	Q.788 reference None

Test purpose

Ability to perform a CCBS REQUEST class 1 operation - successful

To verify that the IUT can successfully perform a CCBS REQUEST operation if required by the calling user:

NOTE 1:   Send a **CcbsRequest invoke** to the DLE by using the TCAP primitive **TC-BEGIN request**(TC-INVOKE request).

NOTE 2:   Receive a **CcbsRequest return result** from the DLE in a **TC-CONTINUE indication**(TC-INVOKE indication).

Pre-test conditions
Arrange the data in the IUT such that the calling user subscribes to the CCBS supplementary service.

TSS CCBS-ASE/	TP ISS_TC_I_15_2	ISUP v2 reference 9.1.1.1.2/ ETS 300 356-18 [17]	Selection expression OLE	Q.788 reference None

Test purpose

Ability to perform a CCBS REQUEST class 1 operation - unsuccessful

To verify that if a failure occurs (short or long term denial) while invoking a CCBS REQUEST operation, the IUT is able to indicate the result to the calling user.

NOTE 1: Send a **CcbsRequest invoke** to the DLE by using the TCAP primitive **TC-BEGIN request**(TC-INVOKE request).

NOTE 2: Receive a **CcbsRequest return error** from the DLE in a **TC-END indication**(TC-U-ERROR indication).

Pre-test conditions
Arrange the data in the IUT such that the calling user subscribes to the CCBS supplementary service.

TSS CCBS-ASE/	TP ISS_TC_V_15_3	ISUP v2 reference 9.1.2.1.1/ ETS 300 356-18 [17]	Selection expression OLE	Q.788 reference None

Test purpose

Ability to perform a CCBS CANCEL class 4 operation

To verify that the IUT can successfully perform a deactivation request if required by the calling user.

NOTE: Send a **CcbsCancel invoke** without cancelCause to the DLE by using the TCAP primitive **TC-END request**(TC-INVOKE request).

Pre-test conditions
Arrange the data in the IUT such that the calling user subscribes to the CCBS supplementary service.

TSS CCBS-ASE/	TP ISS_TC_V_15_4	ISUP v2 reference 9.2.1/ ETS 300 356-18 [17]	Selection expression OLE	Q.788 reference None

Test purpose

Ability to indicate a CCBS recall to the calling user

To verify that the IUT can successfully initiate a CCBS recall to the calling user:

NOTE: Receive a **RemoteUserFree invoke** from the DLE in a **TC-CONTINUE indication**(TC-INVOKE indication).

Pre-test conditions
Arrange the data in the IUT such that the calling user subscribes to the CCBS supplementary service.

TSS CCBS-ASE/	TP ISS_TC_I_15_5	ISUP v2 reference 9.2.1/ ETS 300 356-18 [17]	Selection expression OLE	Q.788 reference None

Test purpose

Calling user busy when destination B becomes free

To verify that the IUT can act correctly after receipt of the indication that destination B is free but calling user A is still busy:

NOTE 1:   Receive a **RemoteUserFree invoke** from the DLE in a **TC-CONTINUE indication**(TC-INVOKE indication)
NOTE 2:   Notify the calling user A
NOTE 3:   Send **CcbsSuspend invoke** in a **TC-CONTINUE request**(TC-INVOKE request) to the DLE
NOTE 4:   Eventually send **CcbsResume invoke** in **TC-CONTINUE request**(TC-INVOKE request) to the DLE if the calling user becomes free.

Pre-test conditions
Arrange the data in the IUT such that the calling user subscribes to the CCBS supplementary service.

TSS CCBS-ASE/	TP ISS_TC_V_15_6	ISUP v2 reference 3/ ETS 300 356-18 [17]	Selection expression Local AND PICS A.18/1	Q.788 reference None

Test purpose

Support of the retain option

To verify that the IUT performs the retain option by setting the **retainSupported** parameter to TRUE or FALSE in the **CcbsRequest** or in the **CcbsRequest return result**.

Pre-test conditions for OLE
Arrange the data in the IUT such that the calling user subscribes to the CCBS supplementary service.

TSS CCBS-ASE/	TP ISS_TC_V_15_7	ISUP v2 reference 9.1.1.1.1/ ETS 300 356-18 [17]	Selection expression OLE AND PICS A.18/2	Q.788 reference None

Test purpose

Maximum number of outstanding CCBS requests of a user

To verify that the IUT does not send any **CcbsRequest** to the DLE if the maximum number of outstanding requests is reached.

Pre-test conditions
Arrange the data in the IUT such that the calling user subscribes to the CCBS supplementary service.

TSS CCBS-ASE/	TP ISS_TC_I_15_8	ISUP v2 reference 9.1.1.2.2; 9.6.1; 9.9.4/ ETS 300 356-18 [17]	Selection expression DLE AND PICS A.18/6	Q.788 reference None

Test purpose

Maximum number of queue entries CCBS requests

To verify that the IUT sends a **CcbsRequest return error** to the OLE if the maximum number of queue entries is reached.

NOTE: Send **CcbsRequest return error** in **TC-END request**(TC-INVOKE request).

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CCBS-ASE/	ISS_TC_V_15_9	9.9.4/	Local	None
		ETS 300 356-18 [17]		

Test purpose

Ability to end a dialogue

To verify that the IUT can end a TC dialogue after a successful CCBS call.

NOTE: Send a **TC-END request** without component primitive upon sending of the **ACM**, **CPG** or **CON.**

Pre-test conditions for OLE
Arrange the data in the IUT such that the calling user subscribes to the CCBS supplementary service.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CCBS-ASE/	ISS_TC_V_15_10	10.1/	OLE AND PICS	None
		ETS 300 356-18 [17]	A.18/7	

Test purpose

Initiate the CCBS supplementary service even if no diagnostics is received in the release message

To verify that the IUT sends a **CcbsRequest invoke** if the calling user activates the CCBS.

Pre-test conditions
Arrange the data in the IUT such that the calling user subscribes to the CCBS supplementary service.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CCBS-ASE/	ISS_TC_V_15_11	12.1/	OLE	None
		ETS 300 356-18 [17]		

Test purpose

Support of the retention timer CCBS-T1

To verify that the retention timer CCBS-T1 can be started after receive of a **release message** with cause value # 17 or # 34 from the DLE and stopped normally after activation of the CCBS supplementary service by the calling user.

Pre-test conditions
Arrange the data in the IUT such that the calling user subscribes to the CCBS supplementary service.

TSS	TP	ISUP v2 reference	Selection expression	Q.788 reference
CCBS-ASE/	ISS_TC_V_15_12	9.9.4 c); 12.1/	OLE	None
		ETS 300 356-18 [17]		

Test purpose

Support of the CCBS request operation timer CCBS-T2

To verify that the timer CCBS-T2 can be started after sending of a **CcbsRequest** to the DLE and stopped normally after receipt of **CcbsRequest return result** from the DLE.

NOTE: If the timer expires a **TC-END** with **TC-L-CANCEL** indication primitive is received from the DLE and the service request is rejected.

Pre-test conditions
Arrange the data in the IUT such that the calling user subscribes to the CCBS supplementary service.

TSS CCBS-ASE/	TP ISS_TC_I_15_13	ISUP v2 reference 9.1.2.1.2/ ETS 300 356-18 [17]	Selection expression OLE	Q.788 reference None

Test purpose

Support of the CCBS service duration timer CCBS-T3

To verify that the IUT can successfully deactivate a CCBS request if the CCBS service duration timer CCBS-T3 expires.

NOTE: Send a **CcbsCancel invoke** with cancelCause to the DLE by using the TCAP primitive **TC-END request**(TC-INVOKE request) with cancelCause "CCBS-T3 Timeout".

Pre-test conditions
Arrange the data in the IUT such that the calling user subscribes to the CCBS supplementary service.

TSS CCBS-ASE/	TP ISS_TC_I_15_14	ISUP v2 reference 9.1.2.1.2 b); 12.1/ ETS 300 356-18 [17]	Selection expression OLE	Q.788 reference None

Test purpose

Support of the CCBS recall timer CCBS-T4

To verify that the timer CCBS-T4 can be stopped after receiving an indication from the user for a CCBS recall.

NOTE: CCBS-T4 contains the maximum time the network will wait for the calling user A to respond to a CCBS recall. The OLE sends a **CcbsCancel invoke** in **TC-END request** to the DLE in case of CCBS-T4 expiry.

Pre-test conditions
Arrange the data in the IUT such that the calling user subscribes to the CCBS supplementary service.

TSS CCBS-ASE/	TP ISS_TC_I_15_15	ISUP v2 reference 9.2.2.c 1)/ ETS 300 356-18 [17]	Selection expression OLE AND PICS A.18/5	Q.788 reference None

Test purpose

Reject a second identical activation of CCBS

To verify that the IUT does not send any CcbsRequest to the DLE if a second identical activation of CCBS is done.

Pre-test conditions
Arrange the data in the IUT so that the calling user subscribes to CCBS supplementary service.

TSS CCBS-ASE/	TP ISS_TC_I_15_16	ISUP v2 reference 9.2.2.c 2)/ ETS 300 356-18 [17]	Selection expression OLE AND PICS A.18/4	Q.788 reference None

Test purpose

Treat a second identical activation of CCBS as a new request

To verify that the IUT treats a second identical activation of CCBS as a new request.

Pre-test conditions
Arrange the data in the IUT so that the calling user subscribes to CCBS supplementary service.

TSS CCBS-ASE/	TP ISS_TC_I_15_17	ISUP v2 reference 9.1.2.2.2/ ETS 300 356-18 [17]	Selection expression DLE	Q.788 reference None

Test purpose

Support of the CCBS service supervision timer CCBS-T7

To verify that the IUT deactivates the CCBS-request if CCBS-T7 expires.

NOTE 1:   CCBS-T7 is started after sending a **CcbsRequest return result** to the OLE
NOTE 2:   CCBS-T7 is stopped after the destination B becomes not busy, before sending **RemoteUserFree** to the OLE.
NOTE 3:   Send a **CcbsCancel invoke** in a **TC-END request**(TC-INVOKE request) with cancelCause "CCBS-T7 Timeout".

TSS CCBS-ASE/	TP ISS_TC_I_15_18	ISUP v2 reference 9.6.2 a); 12.1/ ETS 300 356-18 [17]	Selection expression DLE	Q.788 reference None

Test purpose

Support of the destination B idle guard timer CCBS-T8

To verify that no resources are available at the destination B side until timer CCBS-T8 expires.

TSS CCBS-ASE/	TP ISS_TC_V_15_19	ISUP v2 reference 9.6.2 d); 12.1/ ETS 300 356-18 [17]	Selection expression DLE	Q.788 reference None

Test purpose

Support of the DLE recall timer CCBS-T9

To verify that the timer CCBS-T9 can be started after sending of a **TC-CONTINUE** with **RemoteUserFree** from the DLE and stopped after CCBS call is received from the OLE.

NOTE: Send a **CcbsCancel invoke** in a **TC-END request**(TC-INVOKE request) with cancelCause "CCBS-T9 Timeout".

TSS CCBS-ASE/	TP ISS_TC_I_15_20	ISUP v2 reference 10.6.3.3.1; 10.6.3.3.2; 12.3/ ETS 300 356-18 [17]	Selection expression Local AND PICS A.18/19	Q.788 reference None

Test purpose

Support of the interworking supervision timer T_{SUP}

To verify that the timer T_{SUP} is used correctly in case of interworking with a private network.

NOTE 1:   The DLE sends a **CcbsCancel invoke** in **TC-END request** to the OLE without cancelCause in case of T_{SUP} timer expiry.
NOTE 2:   The OLE sends a **CcbsCancel invoke** in **TC-END request** to the DLE without cancelCause in case of T_{SUP} timer expiry.

Pre-test conditions for OLE
Arrange the data in the IUT such that the calling user subscribes to the CCBS supplementary service.

TSS CCBS-ASE/	TP ISS_TC_I_15_21	ISUP v2 reference 9.1.1.1.1/ ETS 300 356-18 [17]	Selection expression OLE	Q.788 reference None
Test purpose *CCBS REQUEST not invoked* To verify that if a call is released with a cause other than #17 or #34, then no CCBS REQUEST shall be sent from the OLE to the DLE Pre-test conditions Arrange the data in the IUT such that the calling user subscribes to the CCBS supplementary service.				

5.2.16   Three-Party (3PTY)

TSS THREE_PTY/	TP ISS_V_16_1	ISUP v2 reference 2.4; 2.2.1/Q.734.2	Selection expression Local	Q.788 reference 2.14.1
Test purpose *Served user initiates 3PTY* To verify that the IUT, where the served user with two active calls is located, can successfully join these calls to form a three-way conversation, and notify the implied remote parties accordingly. The IUT should send **CPG** messages with the **generic notification indicator** set to "conference established" to both implied parties. The **event indicator** in the **CPG** should be set to "progress". The notification should be independent of the call set up direction of the two calls; i.e. it should apply to all of the following scenarios: A -->B; A<-- B; A -->B; A<-- B A -->C; A -->C; A<--C; A<-- C Pre-test conditions Arrange the data in the IUT such that the served user subscribes to the 3PTY and HOLD supplementary services.				

TSS THREE_PTY/	TP ISS_V_16_2	ISUP v2 reference 2.5.2.1.1.3 a)/ Q.734.2	Selection expression Local	Q.788 reference 2.14.1
Test purpose *Served user creates a private communication with a remote user* To verify that the IUT (controlling the conference) on a 3PTY call can successfully create private communication with one of the remote users. The appropriate notification (depending on A-B active-held or A-C active-idle connection) is sent in **CPG** messages to the two users. Pre-test conditions Arrange the data in the IUT such that the served user subscribes to the 3PTY and HOLD supplementary services.				

TSS THREE_PTY/	TP ISS_V_16_3	ISUP v2 reference 2.5.2.1.1.3 b)/ ETS 300 356-19 [18] 9.2.4.1/ ETS 300 188-1	Selection expression Local	Q.788 reference 2.14.2

Test purpose

Served user disconnects one remote user and retains the other

To verify that the IUT (controlling the conference) on a 3PTY call can successfully disconnect one remote user and retain and notify the other user appropriately using **CPG** messages.

The IUT should send to the appropriate remote users **CPG** messages with **generic notification indicator** (depending on A-B active-held or A-C active-idle connection). The **event indicator** in the **CPG** should be set to "progress".

NOTE: The "remote hold" notification should be sent in a **CPG** to the remaining remote user, followed by the "conference disconnected" notification in a separate **CPG**.

Pre-test conditions
Arrange the data in the IUT such that the served user has activated 3PTY and HOLD supplementary services.

TSS THREE_PTY/	TP ISS_V_16_4	ISUP v2 reference 2.5.2.1.1.3/ ETS 300 356-19 [18]	Selection expression Local	Q.788 reference 2.14.4

Test purpose

Served user disconnects both remote users and terminates the call

To verify that the IUT (controlling the conference) can send the appropriate notification to the two remote users when disconnecting both remote users on the 3PTY call.

The IUT should send to the appropriate remote users a **CPG** with a **generic notification indicator** (depending on A-B active-held or A-C active-idle connection). The **event indicator** in the **CPG** is set to "progress".

Pre-test conditions
Arrange the data in the IUT such that the served user has activated 3PTY and HOLD supplementary services.

TSS THREE_PTY/	TP ISS_V_16_5	ISUP v2 reference 2.2.1/Q.734.2	Selection expression Local	Q.788 reference 2.14.3

Test purpose

Remote user disconnects 3PTY call

To verify that the IUT (controlling the conference) can successfully continue the 3PTY call after receiving disconnection by one of the remote users, and send the appropriate notification to the remaining party.

The IUT should send to the other remote user **CPG** with a **generic notification indicator** (depending on A-B active-held or A-C active-idle connection). The **event indicator** in the **CPG** is set to "progress".

NOTE: The "remote hold" notification should be sent in a **CPG** to the other remote user, followed by the "conference disconnected" notification in a separate **CPG.**

Pre-test conditions
Arrange the data in the IUT such that the served user has activated 3PTY and HOLD supplementary services.

TSS THREE_PTY/	TP ISS_V_16_6	ISUP v2 reference 2.5.2.2 to 2.5.4.1/ Q.734.2; table 2-1/ ETS 300 356-19 [18]	Selection expression IntermE	Q.788 reference 2.14.1

Test purpose

Transit support of 3PTY

To verify that the IUT can transparently transfer all information related to 3PTY.

The IUT should be able to transparently transfer the **CPG** message with the following notifications in the **generic notification indicator** in both the forward and the backward direction:
1)   "Conference established"
2)   "Conference disconnected"
3)   "Remote hold"

TSS THREE_PTY/	TP ISS_V_16_7	ISUP v2 reference 2.5.2.5.1/Q.734.2; table 2-1/ ETS 300 356-19 [18]	Selection expression DLE	Q.788 reference 2.14.1

Test purpose

Remote user included in 3PTY

To verify that the IUT can receive the notification information related to 3PTY, and pass it on to the access signalling system

The IUT should be able to transparently transfer the **CPG** message with the following notifications in the **generic notification indicator** in both the forward and the backward direction:
1)   "Conference established"
2)   "Conference disconnected"
3)   "Remote hold"

TSS THREE_PTY/	TP ISS_V_16_8	ISUP v2 reference 2.6.15/Q.734.2	Selection expression Local	Q.788 reference None

Test purpose

Served user initiates 3PTY; interaction with HOLD

To verify that the IUT does not send any notifications to the remote users by request of HOLD by the served user during the 3PTY conversation active phase.

Pre-test conditions
Arrange the data in the IUT such that the served user has activated 3PTY and HOLD supplementary services.

TSS THREE_PTY/	TP ISS_V_16_9	ISUP v2 reference 2.7/Q.734.2	Selection expression IWorkE	Q.788 reference None

Test purpose

3PTY; interaction with other networks

To verify that the IUT will discard the call progress information in case of interaction with network which does not provide it. The 3PTY should be completed.

TSS THREE_PTY/	TP ISS_V_16_10	ISUP v2 reference annex ZA/ ETS 300 356-19 [18]	Selection expression OLE	Q.788 reference None
Test purpose				
Coding of compatibility information for the generic notification parameter; To verify that the compatibility information parameter for the **generic notification indicator** parameter is coded correctly.				

6 Test coverage

The TPs defined in this ETS cover most main capabilities of the ISUP version 2 reference specifications for supplementary services. A list containing the number of TPs for each supplementary service is provided in table 2.

Whenever it was possible, the TPs have been described such that they bundle related requirements of the respective base standard. Due to this fact, a TP may lead to implementing several test cases for the ATS.

NOTE: The majority of TPs (over 80%) concentrate on valid behaviour. The number of invalid behaviour TPs is limited. An expansion of the invalid behaviour TPs is left for further study.

Table 2: Number of tests for the ISUP version 2 supplementary services

Item	Supplementary service	Group	Number of test purposes
1	Calling Line Identification Presentation	**CLIP**	19
2	Calling Line Identification Restriction	**CLIR**	11
3	Connected Line Identification Presentation	**COLP**	18
4	Connected Line Identification Restriction	**COLR**	12
5	Terminal Portability	**TP**	11
6	User-to-User Signalling service 1 implicit	**UUS1_I**	6
	User-to-User Signalling service 1 explicit	**UUS1_E**	18
	User-to-User Signalling service 2	**UUS2**	16
	User-to-User Signalling service 3	**UUS3**	17
7	Closed User Group	**CUG**	23
8	Subaddressing	**SUB**	5
9	Malicious Call Identification	**MCID**	18
10	Conference call, add-on	**CONF**	16
11	Explicit Call Transfer	**ECT**	37
12	Call diversion services	**CDIV**	49
13	Call Hold	**HOLD**	12
14	Call Waiting	**CW**	8
15	Completion of Calls to Busy Subscriber (ISUP)	**CCBS_ISUP**	16
	Completion of Calls to Busy Subscriber (ASE)	**CCBS_ASE**	21
16	Three-Party	**THREE_PTY**	10
	Grand total		343

History

Document history			
February 1997	Public Enquiry	PE 9726:	1997-02-28 to 1997-06-27
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