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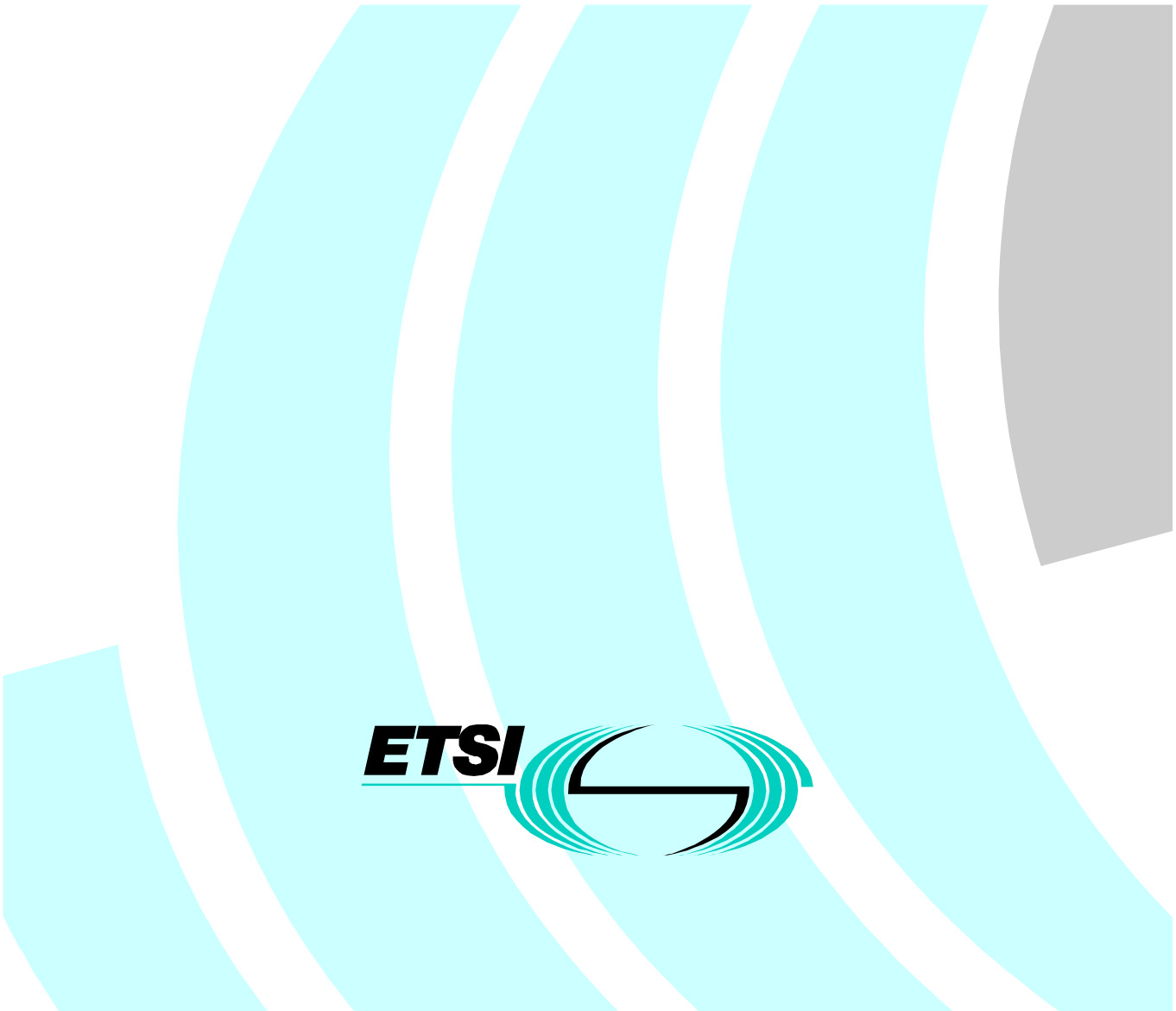
European Standard (Telecommunications series)

Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 32: Test Suite Structure and Test Purposes (TSS&TP) specification for basic services



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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Signalling Protocol and Switching (SPS), and is now submitted for the Voting phase of the ETSI standards Two-step Approval Procedure.

The present document is part 32 of a multi-part standard covering the ISDN User Part (ISUP) version 3 for the international interface, as identified 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 20: "Completion of Calls on No Reply (CCNR) 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: "Protocol Implementation Conformance Statement (PICS) proforma specification for supplementary services";

Part 35: "Test Suite Structure and Test Purposes (TSS&TP) specification for supplementary services";

Part 36: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for supplementary services".

NOTE: Part 13 and 21 to 30 have not been issued.

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

1 Scope

The present document contains the validation (conformance) test specification for ISUP'97 basic call control and signalling procedures defined in ITU-T Recommendation Q.764 [13] as endorsed by EN 300 356-1 [2]. The present document applies only to exchanges having implemented the ISUP v3 protocol specification. It is applicable for validation testing of all types of exchanges as defined in the ISUP v3 protocol specification. Note that the compatibility tests are covered by ITU-T Recommendation Q.784.1 [10].

The main text part of the present document presents the requirements regarding the chosen test method, conventions used within the ATS, the test suite structure and the test purposes (TSS&TP) for ISUP v3 basic call control procedures.

EN 300 356-31 [3] presents the Protocol Implementation Conformance Statements (PICS) ISUP v3 basic call control procedures and EN 300 356-33 [4] presents the actual ATS, which is delivered in electronic form only, and the Protocol Conformance Test Report (PCTR).

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.
- A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

[1] ETSI EN 300 008-1 (V1.3): "Integrated Services Digital Network (ISDN); Signalling System No.7; Message Transfer Part (MTP) to support international interconnection; Part 1: Protocol specification [ITU-T Recommendations Q.701, Q.702, Q.703, Q.704, Q.705, Q.706, Q.707 and Q.708 modified]".

[2] ETSI EN 300 356-1 (V3.2): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 1: Basic services [ITU-T Recommendations Q.761 to Q.764 (1997), modified]".

[3] ETSI EN 300 356-31 (V3.0): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 31: Protocol Implementation Conformance Statement (PICS) proforma specification for basic services".

[4] ETSI EN 300 356-33 (V3.0): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 33: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for basic services".

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

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

[7] ISO/IEC 9646-7: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".

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

[9] ITU-T Recommendation Q.767: "Application of the ISDN user part of CCITT signalling system No. 7 for international ISDN interconnections".

[10] ITU-T Recommendation Q.784.1: "ISUP basic call test specification: Validation and compatibility for ISUP'92 and Q.767 protocols".

[11] ITU-T Recommendation Q.784.2 (1997): "ISUP basic call test specification: Abstract test suite for ISUP'92 basic call control procedures".

[12] ITU-T Recommendation Q.784.3: "ISUP '97 Basic call control procedures, test suite structure and test purposes (TSS & TP)".

NOTE: Not yet publicly available.

[13] ITU-T Recommendation Q.764: "Signaling System No. 7 - ISDN user part signaling procedures".

[14] ITU-T Recommendation Q.762: "Signaling System No. 7 - ISDN user part general functions of messages and signals".

[15] ITU-T Recommendation Q.707: "Testing and maintenance".

[16] ITU-T Recommendation Q.763: "Signalling System No. 7 - ISDN user part format and codes".

[17] ITU-T Recommendation Q.724: "Specifications of Signalling System No.7 - Telephone user part".

3 Definitions and abbreviations

3.1 Definitions

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

- terms defined in ISDN User Part (ISUP) reference specification;
- terms defined in ISO/IEC 9646-1 [5], ISO/IEC 9646-3 [6] and in ISO/IEC 9646-7 [7].

In particular, the following terms apply:

Abstract Test Case (ATC): complete and independent specification of the actions required to achieve a specific test purpose, defined at the level of abstraction of a particular Abstract Test Method, starting in a stable testing state and ending in a stable testing state (see ISO/IEC 9646-1 [5], subclause 3.3.3)

Abstract Test Method (ATM): description of how an IUT is to be tested, given at an appropriate level of abstraction to make the description independent of any particular realization of a Means of Testing, but with enough detail to enable abstract test cases to be specified for this method (see ISO/IEC 9646-1 [5], subclause 3.3.5)

Abstract Test Suite (ATS): test suite composed of abstract test cases (see ISO/IEC 9646-1 [5], subclause 3.3.6)

Implementation Under Test (IUT): implementation of one or more OSI protocols in an adjacent user/provider relationship, being part of a real open system which is to be studied by testing (see ISO/IEC 9646-1 [5], subclause 3.3.43)

ISDN number: number conforming to the numbering and structure specified in ITU-T Recommendation E.164 [8]

Means of Testing (MOT): combination of equipment and procedures that can perform the derivation, selection, parameterization and execution of test cases, in conformance with a reference standardized ATS, and can produce a conformance log (see ISO/IEC 9646-1 [5], subclause 3.3.54)

PICS proforma: document, in the form of a questionnaire, which when completed for an implementation or system becomes the PICS

PIXIT proforma: document, in the form of a questionnaire, which when completed for the IUT becomes the PIXIT

Point of Control and Observation (PCO): point within a testing environment where the occurrence of test events is to be controlled and observed, as defined in an Abstract Test Method (see ISO/IEC 9646-1 [5], subclause 3.3.64)

Pre-test condition: setting or state in the IUT which cannot be achieved by providing stimulus from the test environment

Protocol Implementation Conformance Statement (PICS): statement made by the supplier of a protocol claimed to conform to a given specification, stating which capabilities have been implemented (see ISO/IEC 9646-1 [5], subclause 3.3.39 and subclause 3.3.80)

Protocol Implementation eXtra Information for Testing (PIXIT): statement made by a supplier or implementer of an IUT (protocol) which contains or references all of the information related to the IUT and its testing environment, which will enable the test laboratory to run an appropriate test suite against the IUT (see ISO/IEC 9646-1 [5], subclause 3.3.41 and subclause 3.3.81)

System Under Test (SUT): real open system in which the IUT resides (see [ISO/IEC 9646-1 [5], subclause 3.3.103)

User: access protocol entity at the User side of the user-network interface where a T reference point or coincident S and T reference point applies

3.2 Abbreviations

The ISUP message acronyms can be found in table 2 of ITU-T Recommendation Q.762 [14] as endorsed by EN 300 356-1 [2].

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

ACH	Access signalling PCO - (D-channel)
APH	Access physical circuit PCO - (B-channel)
ASP	Abstract Service Primitive
ATC	Abstract Test Case
ATM	Abstract Test Method
ATS	Abstract Test Suite
CAB	PCO for AB circuits
CAC	PCO for AC circuits
CIC	Circuit Identification Code
CntrlE	Controlling Exchange
DLE	Destination Local Exchange
DSS1	Digital Subscriber System No. 1
ICS	Implementation Conformance Statement
IncIE	Incoming International Exchange
IntermE	Intermediate Exchange
ISC	International Switching Centre
ISDN	Integrated Services Digital Network
ISUP	ISDN User Part
IUT	Implementation Under Test
ITE	International Transit Exchange
LAB	PCO for signalling link AB
LAC	PCO for signalling link AC
LAPD	Link Access Protocol for the D-channel
LT	Lower Tester
MOT	Means Of Testing
MMI	Man Machine Interface
MNT	Maintenance PCO
MTC	Main Test Component
MTP	Message Transfer Part
NNI	Network-network interface
NTE	National Transit Exchange
OLE	Originating Local Exchange
OPR	Operator PCO
OutIE	Outgoing International Exchange

PCO	Point of Control and Observation
PCT	Parallel Test Component
PCTR	Protocol Conformance Test Report
PDU	Protocol Data Unit
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation eXtra Information for Testing
PTC	Parallel Test Component
SCCP	Signalling Connection Control Part
SCS	System Conformance Statement
SP	Signalling Point
SS7	Signalling System N°7
SUT	System Under Test
TP	Test Purpose
Type A	Type A exchange
Type B	Type B exchange
TCP	Test Co-ordination Procedures
TSS	Test Suite Structure
TSS&TP	Test Suite Structure and Test Purposes
TTCN	Tree and Tabular Combined Notation
UNI	User-network interface
UT	Upper Tester

4 Implementation under test and test methods

4.1 Identification of the system and implementation under test

The system under test (SUT) is an exchange.

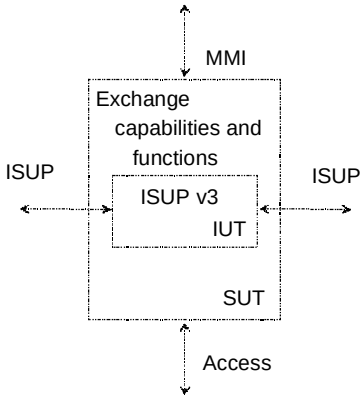

Figure 1: Exchange as SUT

The implementation under test (IUT) is the ISUP v3 implementation in this exchange, as shown in figure 1.

The aim of the ISUP implementation is to assure capabilities and functions for circuit and signalling supervision on one hand and for call handling on the other.

Circuit supervision is done mainly through the MMI (man machine interface) of the exchange. The MMI interface is implementation dependent and thus not standardized.

The effects of signalling procedures of the ISDN User Part can be observed on the NNI (network-network interface), on the circuits controlled by the ISUP. The ISUP signalling protocol can be observed on the SS7 link on the NNI.

The ISUP implementation will in some exchanges have to interwork with the access signalling system on the UNI (user-network interface) and involve call handling in order to establish end-to-end connections.

From the ISUP reference standard several types of exchanges (or roles) can be identified as presented in figure 2.

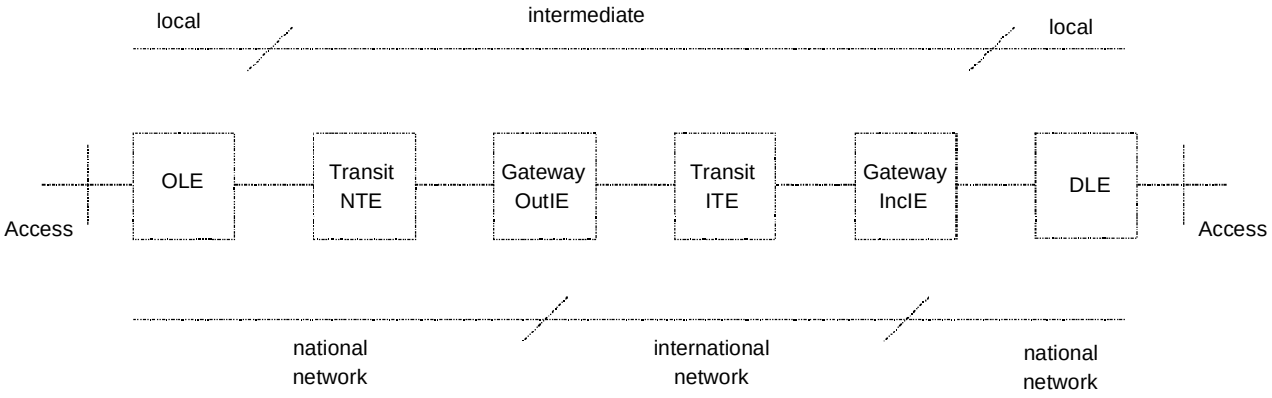

Figure 2: Roles of exchanges

The exchanges can be divided in two main groups according to their functionality: local exchanges, where calls originate and terminate, and intermediate exchanges, with transit functionality. Local exchanges are national, i.e. belong to a national network. Intermediate exchanges are national or international. The international intermediate exchanges which permit access to the international network are the gateway exchanges (incoming and outgoing), also called ISCs - international switching centres.

The roles of the exchanges are summarized in table 1:

Table 1: Roles of exchanges

		Local Exchange	Intermediate Exchange	
			National	International
Originating Local Exchange	Type A	OLE		
Transit Exchange	Type B		NTE	ITE
Incoming/Gateway Exchange	Type A			IncIE
Outgoing/Gateway Exchange	Type A			OutIE
Destination Local Exchange	Type A	DLE		

4.2 ATM and testing configuration for ISUP v3

The Abstract Test Method (ATM) chosen for the ISUP v3 testing specification is the distributed multiparty test method. The ATM is defined at an appropriate level of abstraction so that the test cases may be specified appropriately, without adding restrictions to the implementation under test. The testing architectures are described in the following subclauses.

The ATS is written in concurrent TTCN.

4.2.1 Intermediate exchanges

The configuration proposed for testing intermediate exchanges is shown in figure 3. In order to test the protocol and functionality of transit and gateway exchanges one needs to consider the incoming and outgoing side of the SUT.

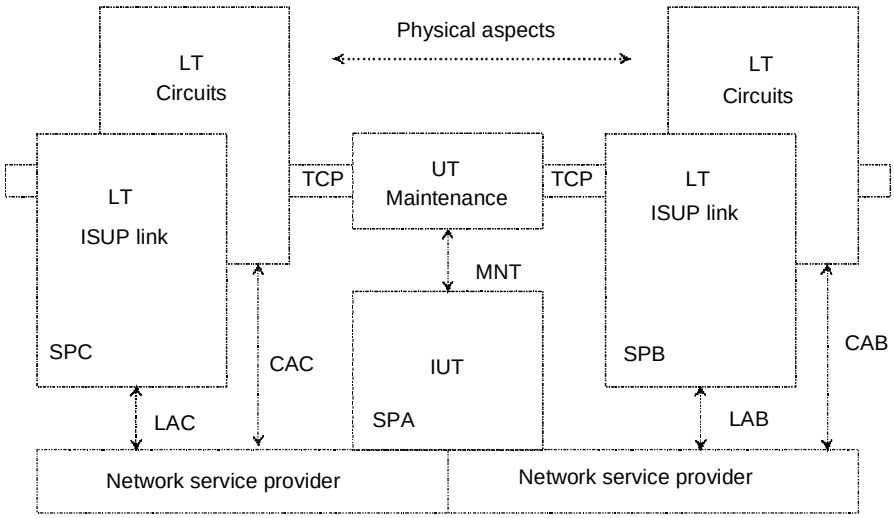

Figure 3: ISUP test method for intermediate exchanges

The IUT is observed and controlled from two ISUP links with associated circuits. The points of control and observation (PCO) are labelled LAB and CAB on one side, and LAC and CAC on the other.

The LAB and LAC PCOs are used by the lower testers (LT) for controlling the ISUP signalling link, whereas the CAB and CAC PCOs are used by the lower testers for observing circuit related events, such as connectivity, echo control check, alerting tone, etc.

The ISUP PDUs to be sent and observed on the LAB PCO side allow for PDU constraints to be specified and coded down to the bit-level.

The MNT PCO is used by the upper tester (UT) to control and observe the maintenance functions of the exchange.

The underlying network service provider is the Message Transfer Part (MTP) protocol as specified in EN 300 008-1 [1] and ITU-T Recommendations Q.707 [15] as endorsed by EN 300 008-1 [1].

Figure 4 shows the actual used configuration for intermediate exchanges, with a main testing component (MTC), responsible for the A-B interface and a slave parallel testing component (PTC), responsible for the C-A interface. The maintenance PCO (MNT) and the operator PCO (OPR), needed for a limited number of test cases are integrated in the MTC, for simplifying reasons.

The test co-ordination procedures (TCP) allow for communication between the testers. The test components are mostly implicitly co-ordinated (asynchronously); the TCPs are only used when it is necessary to obtain the verdict from the parallel test component.

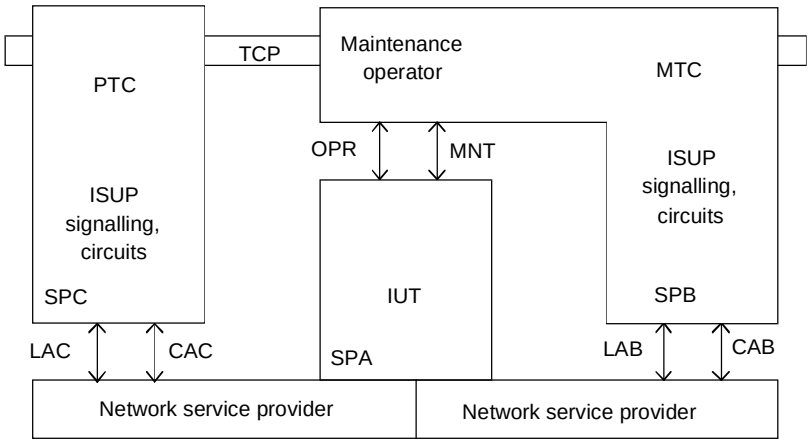

Figure 4: ISUP test configuration for intermediate exchanges

4.2.2 Local exchanges

When testing a local exchange as specified in the reference standard, it is difficult, if not impossible, to observe only ISUP PDUs, if functionality such as connectivity, tones and announcements etc. associated with protocol events is to be considered and used to assign verdicts. The reference standard often refers to actions or events initiated by or to be observed by the calling or called user.

A Point of Control of Observation from ISUP (IUT) to the access side is needed, e.g. for stimulating the local exchange to originate a call (send an IAM). Another PCO is needed to check connectivity or to check tones generated etc. by the local exchange.

There is no exposed interface from ISUP (the IUT) towards the access side. For practical testing purposes the natural choice is the access interface. It is therefore reasonable to make use of the access interface (e.g. the user access interface DSS1) as a PCO and to use existing naming conventions for the abstract service primitives (ASPs) to be used on this PCO.

Figure 5 presents a multiparty testing configuration for local exchanges. In this figure each tester has a single PCO. The PCO for the access uses the underlying access service provider (e.g. LAPD, in case of DSS1) for observing access events and stimulating the ISUP via the access. The ISUP implementation (IUT) cannot be tested without involving the user-network interface (UNI).

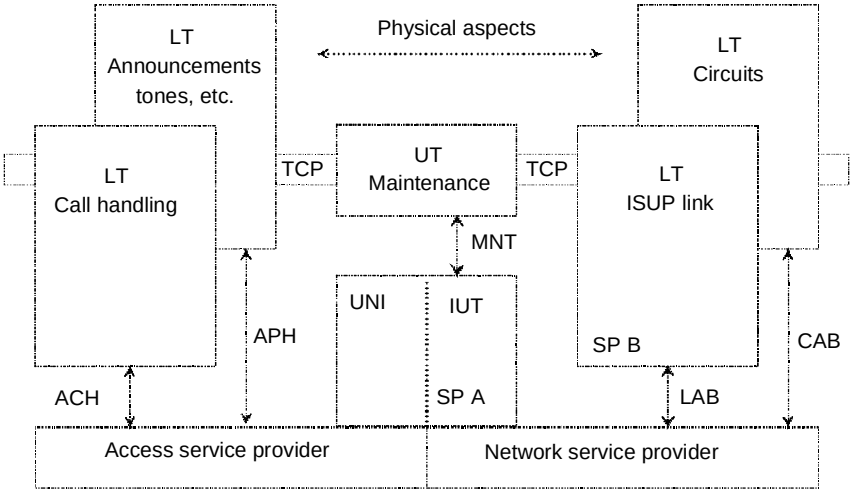

Figure 5: ISUP test method for originating/destination exchanges

On the right side there are two PCOs as in the test configuration presented in the previous subclause. The LAB PCO is used by the LT controlling the ISUP signalling link, whereas the CAB PCO is used by another LT controlling the traffic channels (for observing circuit related events, such as connectivity, echo control check, alerting tone, etc.).

The ISUP PDUs to be sent and observed on the LAB PCO side allow for PDU constraints to be specified and coded down to the bit level.

The MNT PCO is used by the Upper Tester to control and observe the maintenance functions of the exchange.

On the access side there are two PCOs and two LTs similar to the ones on network side. The ACH PCO is used to observe and control the Call Handling events, whereas the APH is used to control and observe physical aspects (e.g. tones and announcements).

The access PDUs to be sent and observed on the ACH PCO are chosen at an appropriate level of abstraction. For the access ASPs DSS1-like, primitive names have been used, whereas access PDU constraints have not been coded to the bit level. The access aspects cannot be left out for local exchanges, widening in this respect to some extent the scope of the ISUP testing.

Figure 6 shows the actual used configuration for local exchanges, with a master-testing component (MTC), responsible for the A-B interface and a slave parallel testing component (PTC), responsible for the UNI access interface. The maintenance PCO is integrated in the MTC, for simplifying reasons.

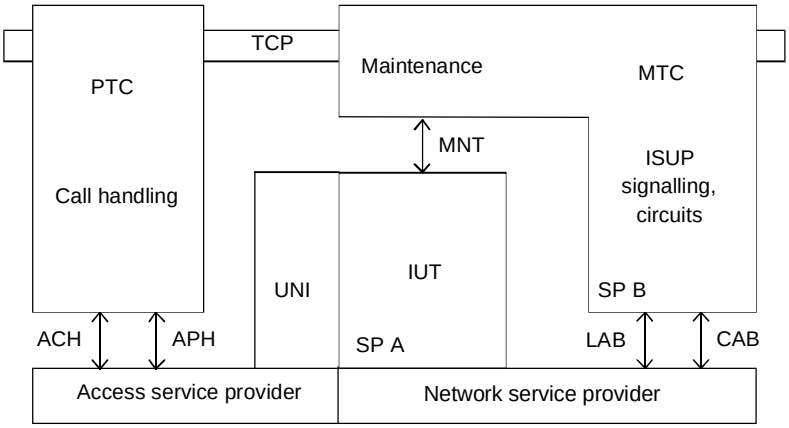

Figure 6: ISUP test configuration for local exchanges

4.2.3 Master-slave aspects in the test configuration

Figures 4 and 6 show the logical test components of the adopted test configuration. The main test component is located on the right side of the IUT, whereas on the left side there are different parallel test components: ISUP (see figure 4) and access (see figure 6).

The ATS is written so that the appropriate configuration is chosen depending on the exchange's role to be tested.

The right side main test component may be international or national ISUP and is configurable so that any two of these may be run based on the answers given to PIXIT questions.

The left side parallel test component may be of any kind: it may be international or national ISUP, an access signalling system or a non-ISUP User part. At test execution exactly one of these configurations will be chosen based on the information provided in the PICS and PIXIT.

For the gateway exchanges it is assumed by default that the call is set up from the left PTC to the right MTC. In some test cases the call set up is done in the reverse direction. These test cases are marked in the ATS with the configuration field set to "reversed". They have to be executed with a different set of PIXIT settings.

The message flow in the test cases is designed in such a way that the verdict is assigned based on observing the behaviour on the right side. The left side will in this case mainly act as a slave stimulus/acceptor. There are, however, test cases where the expected behaviour of both sides is needed to assign the verdict. An example of such a test case is the release on both sides after T7 (waiting for ACM) expiry, where the final verdict has to be based on the verdicts assigned on both the AB and the AC interfaces.

5 Conventions used within the ATS

Abbreviations for ISUP messages and parameters are used consistently throughout the document. Abbreviations for the signalling information of ISUP as defined in ITU-T Recommendation Q.762 [14] as endorsed in EN 300 356-1 [2] are consistently used within the ATS and are useful for understanding and/or maintaining the coding detail level.

5.1 Test suite parameters, constants and variables

Most test suite parameters are named using the pattern: TSP_Xxx.

Most test suite variables are named using the pattern: TSV_Xxx.

All test suite constants are named using the pattern: TSC_Xxx.

5.2 Test case variables

Most test case variables are named using the pattern: TCV_Xxx.

5.3 ASP constraints

The naming scheme for ASP constraints is: PDU_XY_more_specific.

Where PDU indicates the PDU type included, XY indicates the direction and more specific (if any) describes the constraint with abbreviated naming convention.

EXAMPLE: IAM_BA_PDC indicates an IAM sent from SPB to SPA, with a propagation delay counter.

5.4 Timers

All timers are named using the pattern: TN [_min or _max].

EXAMPLE: T7, T7_min, T7_max.

5.5 Test suite operations

Most names for test suite operations follow the scheme: TSO_TestSuiteOperationName.

The TSO functions are specified using the syntax of C programming language.

5.6 Aliases

Aliases are extensively used instead of cumbersome names for ASP primitives (like MTP TRANSFER_IND).

They are named using the scheme:

S_XXX for the sending of an ISUP message XXX which resolves to the MTP TRANSFER_REQ primitive.

R_XXX for the receipt of an ISUP message XXX which is resolved to the MTP TRANSFER_IND primitive.

5.7 Test case and step identifiers

The general naming convention for the test cases is: ISB_{X}_n_n_n..._{a}_{n_a}.

> Where **X** is either: **V** - valid stimulus, **I** - inopportune stimulus or **S** - syntactically invalid stimulus; **n** is a one or two digit test case number aligned with ITU-T Recommendation Q.784.1 [10] and **a** is a lowercase letter to distinguish between tests in case of variants. The last number plus lower case letter is sometimes used to further distinguish between test cases.

The general naming convention for the dispatcher test steps is: S_n_n_n.

> Where the n-s are the same as the test case to which they relate.

The dispatched "slaves" are named as follows:

ISUP slave: I_n_n_n.....

access slave: A_n_n_n.....

non-ISUP slave: T_n_n_n.....

Some generic steps with appropriate names, e.g. to complete the call-setup (+S_ACM_etc_BA, +R_ACM_etc_AC) are also used.

5.8 Constraints

The constraints visible on the test case level are all ASP constraints. The ASPs are chained to PDU constraints every time an ISUP message is involved. This allows for a higher level of abstraction on the test case level and hides the information in the ASP constraint part. In the case of access PDUs, no further PDU constraints are defined. Generally derived PDU constraints are avoided for simplicity reasons.

5.9 Dynamic behaviour part

The general scheme of running a test case can be described briefly as follows:

Firstly, the control is given to the main test component, which starts executing. This main test component controls and observes the IUT on the AB signalling link.

Secondly after possibly initializing some data the main test component creates the corresponding parallel test component. This component is the slave process and it is located in a separate test step. It is dispatched using a parameter derived from the role of the exchange to be tested. For each test case exactly one concurrent "slave" parallel test component, either ISUP, or access, or non-ISUP is created. For example if the test configuration requires an ISUP tester on the left side, then the ISUP parallel test component is created, and so on.

The main (right) and the parallel (left) test components will then co-operate, most of the time asynchronously driven by the received messages, until the test purpose is achieved and the verdict is set.

The behaviour description is kept on an abstract level, hiding whenever it is possible programming details in the underlying test steps. Test steps are used whenever this saves code without decreasing the readability of the test case. Often functionally related test steps are grouped together using local trees.

The comment fields are extensively used. The message sequence chart for the chosen testing configuration is provided at test case level to quickly give an overview of the expected behaviour. For optimal readability a non-proportional font is used for printing the arrow diagrams.

5.10 Pre-test conditions

For each test it is assumed that the circuits are unblocked from both sides and idle. Some particular test cases need special pre-test conditions. These are presented in table 2.

Table 2: Special pre-test conditions

Pre-test condition	Test case
Arrange the data in the IUT such that pass on is not possible.	IBC_V_1_7_1_4 IBC_V_1_7_1_5 IBC_V_1_7_2_5 IBC_V_1_7_2_6_a IBC_V_1_7_2_6_b IBC_V_1_7_2_7_a IBC_V_1_7_2_7_b
Arrange the data in the IUT such that the unknown parameter will be passed on by the IUT.	IBC_I_1_7_2_9_a
Arrange the data in the IUT such that the unknown parameter will be discarded by the IUT.	IBC_I_1_7_2_9_b
Arrange the data in the IUT such that the call is switched via satellite connection.	IBC_V_2_3_4_a IBC_V_2_3_4_b IBC_V_2_3_4_c
Arrange the data in the IUT such that a network initiated Suspend message can be triggered by signalling point C (SP C).	IBC_V_3_5_b
Arrange the data in the IUT such that it is unable to return the circuit to the idle condition in response to a release message.	IBC_V_5_1
Arrange the data in the IUT such that a continuity check is required on the outgoing circuit.	IBC_V_6_1_1_a
Arrange the data in the IUT such that a continuity check is applied on this call.	IBC_V_6_1_3_a
Arrange the data in the IUT such that a continuity check is required on the outgoing circuit.	IBC_V_6_1_4_a IBC_V_6_1_5 IBC_V_6_2_4
Arrange the data in the IUT such that fallback occurs in the IUT.	IBC_V_6_6_3_a IBC_V_6_6_3_b
Arrange the data in the IUT such that there are enough circuits available for the call.	IBC_V_7_3_7 IBC_V_7_3_8 IBC_V_7_3_9
Arrange the data in the IUT such that the ISDN User Part of signalling point B (SPB) becomes unavailable in the IUT.	IBC_V_8_2_2 IBC_V_8_2_3
Arrange the data in the IUT such that the call is routed over a route not requiring echo control devices.	IBC_V_9_1_2

6 Test Suite Structure (TSS)

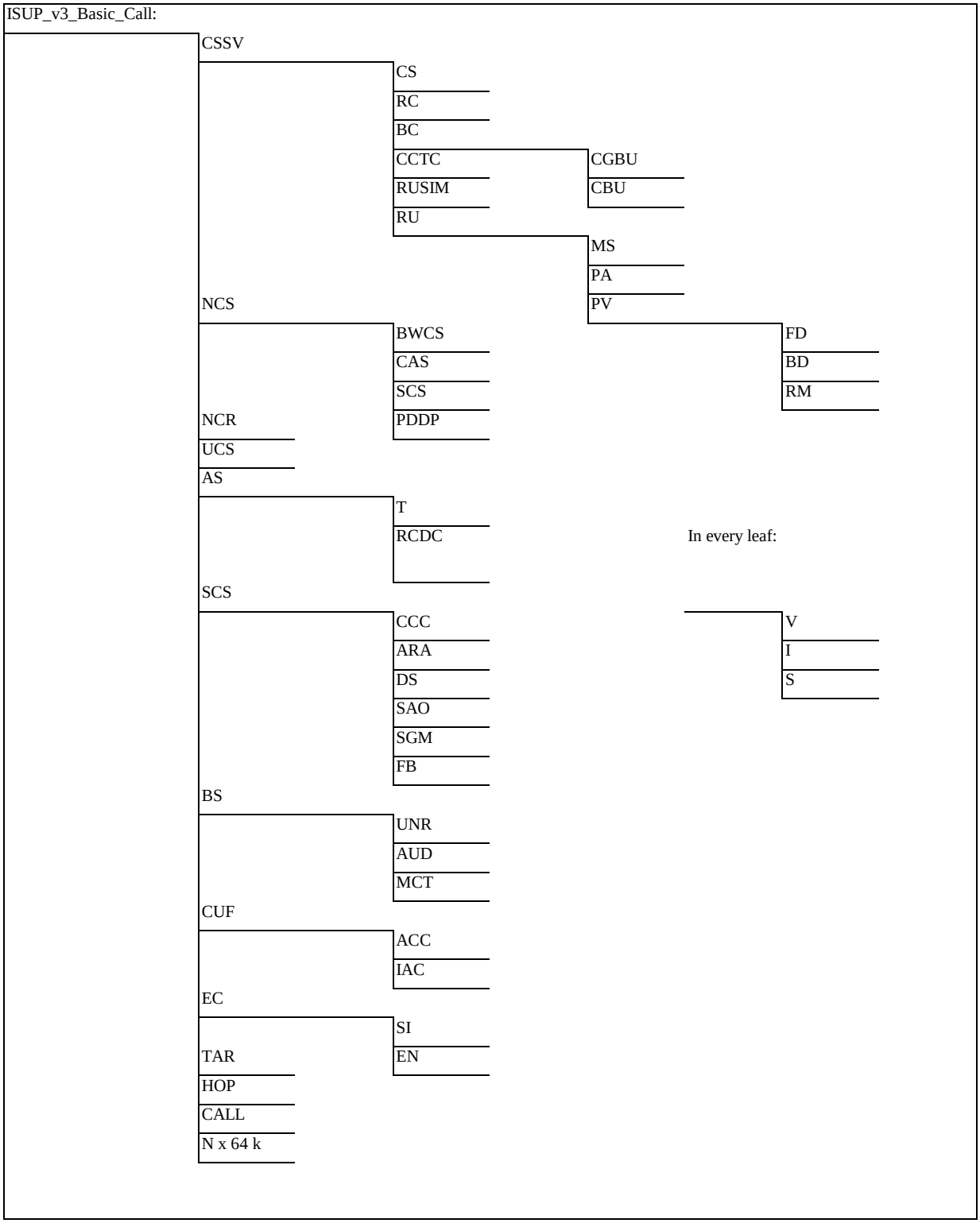

Figure 7: Test suite structure

The test suite structure naming conventions are:

CSSV	Circuit supervision and signalling supervision
CS	Circuit supervision
RC	Reset of circuits
BC	Blocking of circuits
CGBU	Circuit group blocking unblocking
CBU	Circuit blocking unblocking
CCTC	Continuity check test call
RUSIM	Receipt of unreasonable signalling information messages
RU	Receipt of unknown
MS	Messages
PA	Parameters
PV	Parameter values
FD	In the forward direction
BD	In the backward direction
RM	In the release message
NCS	Normal call setup ordinary speech calls
BWCS	Both way circuit selection
CAS	Called address sending
SCS	Successful call setup
PDDP	Propagation delay determination procedure
NCR	Normal call release
UCS	Unsuccessful call setup
AS	Abnormal situations
T	Timers
RCDC	Reset of circuit during a call
SCS	Special call setup
CCC	Continuity check call
ARA	Automatic repeat attempt
DS	Dual seizure
SAO	Semi-automatic operation
SGM	Simple segmentation
FB	Fallback
BS	Bearer services

UNR	64 kbit/s unrestricted connection types
AUD	3,1 kHz audio connection type
MCT	Multirate connection types
CUF	Congestion and user flow control
ACC	Automatic congestion control
IAC	ISUP availability control
EC	Echo control
SI	Simple echo control
EN	Enhanced echo control
TAR	Temporary alternate routing
HOP	Hop Counter Procedure
CALLCOL	Call Collect Request Procedure
N x 64k	N x 64 kbit connection type
V	Valid behaviour stimulus
I	Inopportune stimulus
S	Syntactically incorrect stimulus (e.g. outside range, use of spare values)

7 Test purposes (TP)

7.1 Introduction

For each test requirement a Test Purpose (TP) is defined.

7.1.1 Test purpose (TP) naming convention

Test purposes are numbered, following the scheme of ITU-T Recommendation Q.784.1 [10], within each group. Groups are organized according to the test suite structure (TSS) down to the last but one level. The classification in the V/I/S groups is done by the inclusion of V, I or S in the test case name. Additional qualifiers, in the form of lower case letters, are added to identify variants within one generic test case from ITU-T Recommendation Q.784.1 [10], see table 3. Additionally defined test cases are numbered succeeding the ones used in ITU-T Recommendation Q.784.1 [10].

Table 3: TP identifier naming convention scheme

Identifier:	**IBC_<V/I/S>_<N>_<N>...<N>_<a>**	
IBC	**=**	**ISUP v3 Basic Call**
<group>	=	group: one character field representing the group reference according to TSS V: Valid stimulus I: Inopportune stimulus S: Syntactically invalid stimulus
<N>	=	Corresponding reference numbers in ITU-T Recommendation Q.784.1 [10] (if any)
<a>	=	Lower case character distinguishing tests with same reference number

In the subgroups of CSSV/RU/PV/(FD, BD, RM) some special naming conventions apply. The paragraph number of the parameter coding description in ITU-T Recommendation Q.763 [16] as endorsed by EN 300 356-1 [2] has been included in the test case name to differentiate the various tests of parameter values.

7.1.2 Source of test purpose definition

The test purposes have been developed based on ITU-T Recommendation Q.784.1 [10]. Some additional validation test cases are defined.

7.1.3 Test purpose structure

All of the following test purposes belong to the main group ISUP_v3_Basic_Call. Each test purpose 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'97 reference	The reference to the requirement in the ISUP '97 standards, which led to the test purpose.
Selection expression	Selection criterion for the test purpose taking into account the exchange's role and the answers to the specified PICS questions. N/A means that the TP is valid for all roles of exchanges.

The test purpose structure is according to the test suite structure (TSS).

Test purposes that test normal behaviour have been grouped in the V - valid behaviour group.

Test purposes that test the IUT behaviour in situations that are not normal operation have been grouped in the I - Inopportune stimulus group.

Test purposes that test the IUT behaviour on spare values or values out of range have been grouped in the S - Syntactically incorrect stimulus group.

7.2 Test purposes for the basic call

All of the following test purposes belong to the main group ISUP_v3_Basic_Call.

7.2.1 CSSV: Circuit supervision and signalling supervision

TSS	TP	ISUP '97 reference	Selection expression	Q.784.1 [10]
CSSV/CS/	IBC_I_1_1	N/A	N/A	reference 1.1
Test purpose				
Non-allocated circuits To verify that on the receipt of a CIC relating to a circuit which does not exist, the IUT will discard the message and alert the maintenance system.				

TSS	TP	ISUP '97 reference	Selection expression	Q.784.1 [10]
CSSV/RC/	IBC_V_1_2_1	2.9.3.1 b)/Q.764 [13]	N/A	reference 1.2.1
Test purpose				
RSC received on an idle circuit To verify that on receipt of a Reset circuit message the IUT will respond by sending a Release complete message.				

TSS	TP	ISUP '97 reference	Selection expression	Q.784.1 [10]
CSSV/RC/	IBC_V_1_2_2	2.9.3.1/Q.764 [13]	N/A	reference 1.2.2
Test purpose				
RSC sent on an idle circuit To verify that the IUT is able to generate a Reset circuit message.				

TSS	TP	ISUP '97 reference	Selection expression	Q.784.1 [10]
CSSV/RC/	IBC_V_1_2_3	2.9.3.1 c)/Q.764 [13]	N/A	reference 1.2.3
Test purpose				
RSC received on a locally blocked circuit To verify that on receipt of a Reset circuit message while in its locally blocked state, the IUT will respond by sending a Blocking message and a Release complete message.				

TSS CSSV/RC/	TP IBC_V_1_2_4	ISUP '97 reference 2.9.3.1 d)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.2.4
Test purpose *RSC received on a remotely blocked circuit* To verify that the IUT is able to react to a Reset circuit message for a remotely blocked circuit.				

TSS CSSV/RC/	TP IBC_V_1_2_5_a	ISUP '97 reference 2.9.3.2/Q.764 [13]	Selection expression PICS A.13/8	Q.784.1 [10] reference 1.2.5
Test purpose *Circuit group reset received* To verify that on receipt of one Circuit group reset message the IUT will respond by sending a Circuit group reset acknowledge message.				

TSS CSSV/RC/	TP IBC_S_1_2_5_b	ISUP '97 reference 2.9.3.2/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.2.5
Test purpose *Circuit group reset received* To verify that a Circuit group reset message is discarded by the IUT if there are no circuits affected by the message.				

TSS CSSV/RC/	TP IBC_S_1_2_5_c	ISUP '97 reference 2.9.3.2/Q.764 [13] 2.9.3.3 i)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.2.5
Test purpose *Circuit group reset received* To verify that a Circuit group reset message is discarded by the IUT if there are more than 32 circuits affected by the message.				

TSS CSSV/RC/	TP IBC_V_1_2_6	ISUP '97 reference 2.9.3.2/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.2.6
Test purpose *Circuit group reset sent* To verify that the IUT is able to generate a Circuit group reset message.				

TSS CSSV/RC/	TP IBC_V_1_2_7	ISUP '97 reference 2.9.3.2.d)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.2.7
Test purpose *Circuit group reset received on remotely blocked circuits* To verify that the IUT is able to react to a Circuit group reset message correctly for remotely blocked circuits.				

TSS CSSV/BC/CGBU/	TP IBC_V_1_3_1_1_a	ISUP '97 reference 2.8.2/Q.764 [13] 2.8.2.2/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.3.1.1
Test purpose *CGB and CGU received (maintenance oriented)* To verify that the Circuit group blocking feature (maintenance oriented) can be correctly initiated.				

TSS CSSV/BC/CGBU/	TP IBC_S_1_3_1_1_b	ISUP '97 reference 2.8.2.2/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.3.1.1
Test purpose *CGB for 0 circuits received (maintenance oriented)* To verify that a Circuit group blocking message (maintenance oriented) is discarded by the IUT if there are no circuits affected by the message.				

TSS CSSV/BC/CGBU/	TP IBC_S_1_3_1_1_c	ISUP '97 reference 2.8.2.3 ix)/Q.764 [13]	Selection expression PICS A.13/14	Q.784.1 [10] reference 1.3.1.1
Test purpose *CGB for more than 32 circuits received (maintenance oriented)* To verify that a Circuit group blocking message (maintenance oriented) is discarded by the IUT if there are more than 32 circuits affected by the message.				

TSS CSSV/BC/CGBU/	TP IBC_V_1_3_1_1_d	ISUP '97 reference 2.8.2/Q.764 [13] 2.8.2.2/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.3.1.1
Test purpose *CGB and CGU received (hardware failure oriented)* To verify that the Circuit group blocking feature (hardware failure oriented) can be correctly initiated.				

TSS CSSV/BC/CGBU/	TP IBC_S_1_3_1_1_e	ISUP '97 reference 2.8.2.2/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.3.1.1
Test purpose *CGB for 0 circuits received (hardware failure oriented)* To verify that a Circuit group blocking message (hardware failure oriented) is discarded by the IUT if there are no circuits affected by the message.				

TSS CSSV/BC/CGBU/	TP IBC_S_1_3_1_1_f	ISUP '97 reference 2.8.2.3 ix)/Q.764 [13]	Selection expression PICS A.13/14	Q.784.1 [10] reference 1.3.1.1
Test purpose *CGB for more than 32 circuits received (hardware failure oriented)* To verify that a Circuit group blocking message (hardware failure oriented) is discarded by the IUT if there are more than 32 circuits affected by the message.				

TSS CSSV/BC/CGBU/	TP IBC_V_1_3_1_2_a	ISUP '97 reference 2.8.2.2/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.3.1.2
Test purpose *CGB and CGU sent* To verify that the IUT is able to generate a Circuit group blocking message and a Circuit group unblocking message (both maintenance oriented).				

TSS CSSV/BC/CGBU/	TP IBC_V_1_3_1_2_b	ISUP '97 reference 2.8.2.2/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.3.1.2
Test purpose *CGB and CGU sent* To verify that the IUT is able to generate a Circuit group blocking message and a Circuit group unblocking message (both hardware failure oriented).				

TSS CSSV/BC/CGBU/	TP IBC_V_1_3_1_3	ISUP '97 reference 2.8.2.2/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference
Test purpose *Blocking with CBG (maintenance oriented); unblocking with UBL* To verify that a circuit which is blocked by a maintenance oriented Circuit group blocking message can be unblocked by an Unblocking message.				

TSS CSSV/BC/CGBU/	TP IBC_I_1_3_1_4	ISUP '97 reference 2.8.2.2/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference
Test purpose *UBL after CGB (hardware failure oriented)* To verify that a hardware failure oriented blocking state cannot be removed by an Unblocking message.				

TSS CSSV/BC/CGBU/	TP IBC_I_1_3_1_5_a	ISUP '97 reference 2.8.2.3 i)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference
Test purpose *CGB sent for remotely blocked circuits (maintenance oriented)* To verify that a Circuit group blocking acknowledgement message is returned if a Circuit group blocking message is received by the IUT for remotely blocked circuits (all maintenance oriented).				

TSS CSSV/BC/CGBU/	TP IBC_I_1_3_1_5_b	ISUP '97 reference 2.8.2.3 i)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference
Test purpose *CGB sent for remotely blocked circuits (hardware failure)* To verify that a Circuit group blocking acknowledgement message is returned if a Circuit group blocking message is received by the IUT for remotely blocked circuits (all hardware failure oriented).				

TSS CSSV/BC/CGBU/	TP IBC_I_1_3_1_6_a	ISUP '97 reference 2.8.2.3 ii)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference
Test purpose *CGU sent for unblocked circuits (maintenance oriented)* To verify that a Circuit group unblocking acknowledge message is returned if a Circuit group unblocking message is received by the IUT for unblocked circuits (all maintenance oriented).				

TSS CSSV/BC/CGBU/	TP IBC_I_1_3_1_6_b	ISUP '97 reference 2.8.2.3 ii)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference
Test purpose *CGU sent for unblocked circuits (hardware failure oriented)* To verify that a Circuit group unblocking acknowledge message is returned if a Circuit group unblocking message is received by the IUT for unblocked circuits (all hardware failure oriented).				

TSS CSSV/BC/CGBU/	TP IBC_I_1_3_1_7_a	ISUP '97 reference 2.8.2.3 iii)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference
Test purpose *Circuit group blocking for unequipped circuits* To verify that the IUT will return a Circuit group blocking acknowledge message with no indication for unequipped circuits if the corresponding Circuit group blocking message contains unequipped circuits (all maintenance oriented).				

TSS CSSV/BC/CGBU/	TP IBC_I_1_3_1_7_b	ISUP '97 reference 2.8.2.3 iii)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference
Test purpose *Circuit group blocking for unequipped circuits* To verify that the IUT will return a Circuit group blocking acknowledge message with no indication for unequipped circuits if the corresponding Circuit group blocking message contains unequipped circuits (all hardware failure oriented).				

TSS CSSV/BC/CGBU/	TP IBC_I_1_3_1_8_a	ISUP '97 reference 2.8.2.3 vi)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference
Test purpose *Wrong CGUA received* To verify that on receipt of a Circuit group unblocking acknowledge message which states unblocking of circuits which shall stay in locally blocked state, these circuits stay in locally blocked state and that the maintenance system is alerted (all maintenance oriented).				

TSS CSSV/BC/CGBU/	TP IBC_I_1_3_1_8_b	ISUP '97 reference 2.8.2.3 vi)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference
Test purpose *Wrong CGUA received* To verify that on receipt of a Circuit group unblocking acknowledge message which states unblocking of circuits which shall stay in locally blocked state these circuits stay in locally blocked state and that the maintenance system is alerted (all hardware failure oriented).				

TSS CSSV/BC/CGBU/	TP IBC_I_1_3_1_9_a	ISUP '97 reference 2.8.2.3 vii)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference
Test purpose *Unexpected CGBA* To verify that a unexpected Circuit group blocking acknowledge message (maintenance oriented) will be discarded by the IUT without blocking the affected circuits.				

TSS CSSV/BC/CGBU/	TP IBC_I_1_3_1_9_b	ISUP '97 reference 2.8.2.3 vii)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference
Test purpose *Unexpected CGBA* To verify that an unexpected Circuit group blocking acknowledge message (hardware failure oriented) will be discarded by the IUT without blocking the affected circuits.				

TSS CSSV/BC/CGBU/	TP IBC_I_1_3_1_10_a	ISUP '97 reference 2.8.2.3 vii)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference
Test purpose *Unexpected CGUA* To verify that an unexpected Circuit group unblocking acknowledge message (maintenance oriented) will be discarded by the IUT without unblocking the affected circuits.				

TSS CSSV/BC/CGBU/	TP IBC_I_1_3_1_10_b	ISUP '97 reference 2.8.2.3 vii)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference
Test purpose *Unexpected CGUA* To verify that an unexpected Circuit group unblocking acknowledge message (hardware failure oriented) will be discarded by the IUT without unblocking the affected circuits.				

TSS CSSV/BC/CBU/	TP IBC_V_1_3_2_1	ISUP '97 reference 2.8.2/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.3.2.1
Test purpose *BLO received* To verify that the blocking/unblocking procedure can be correctly initiated.				

TSS CSSV/BC/CBU/	TP IBC_V_1_3_2_2	ISUP '97 reference 2.8.2/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.3.2.2
Test purpose *BLO sent* To verify that the IUT is able to generate Blocking messages.				

TSS CSSV/BC/CBU/	TP IBC_V_1_3_2_3	ISUP '97 reference 2.8.2/Q.764 [13] 2.8.2.3 x)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.3.2.3
Test purpose *Blocking from both ends; removal of blocking from one end* To verify that the blocking/unblocking procedure can be correctly initiated.				

TSS CSSV/BC/CBU/	TP IBC_V_1_3_2_4	ISUP '97 reference 2.8.2.3 xiv)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.3.2.4
Test purpose *IAM received on a remotely blocked circuit* To verify that a received IAM will unblock a remotely blocked circuit.				

TSS CSSV/BC/CBU/	TP IBC_V_1_3_2_5	ISUP '97 reference 2.8.2/Q.764 [13] 2.8.2.2/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.3.2.5
Test purpose *Blocking with CGB, unblocking with UBL* To verify that a circuit which is blocked by a maintenance oriented circuit group blocking message can successfully be unblocked by an Unblocking message.				

TSS CSSV/BC/CBU/	TP IBC_V_1_3_2_6	ISUP '97 reference 2.8.2/Q.764 [13] 2.8.2.2/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference
Test purpose *Blocking with BLO, unblocking with CGU* To verify that a circuit which is blocked by a Blocking message can successfully be unblocked by a maintenance oriented Circuit group unblocking message.				

TSS CSSV/BC/CBU/	TP IBC_I_1_3_2_7	ISUP '97 reference 2.8.2.3 xi)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference
Test purpose *Unblocking message for unblocked circuit* To verify that the IUT will return an Unblocking acknowledge message if for an unblocked circuit an Unblocking message is received.				

TSS CSSV/BC/CBU/	TP IBC_I_1_3_2_8	ISUP '97 reference 2.8.2.3 xii)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference
Test purpose *Unexpected BLA for an unblocked circuit* To verify that if an unexpected Blocking acknowledge message is received for an unblocked circuit the circuit remains unblocked and that the maintenance system is alerted.				

TSS CSSV/BC/CBU/	TP IBC_I_1_3_2_9	ISUP '97 reference 2.8.2.3 xiii)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference
Test purpose *Unexpected UBA for blocked circuit* To verify that after receiving an unexpected Unblocking acknowledge message for a blocked circuit the IUT will alert the maintenance system and that the circuit remains blocked.				

TSS CSSV/CCP/	TP IBC_V_1_4_1	ISUP '97 reference 2.1.8/Q.764 [13]	Selection expression PICS A.13/3	Q.784.1 [10] reference 1.4.1
Test purpose *CCR received: successful* To verify that the continuity check procedure for the proper alignment of circuits can be correctly performed.				

TSS CSSV/CCP/	TP IBC_V_1_4_2	ISUP '97 reference 2.1.8/Q.764 [13]	Selection expression PICS A.13/3	Q.784.1 [10] reference 1.4.2
Test purpose *CCR sent: successful* To verify that the continuity check procedure for the proper alignment of circuits can be correctly performed.				

TSS CSSV/CCP/	TP IBC_V_1_4_3	ISUP '97 reference 2.1.8/Q.764 [13]	Selection expression PICS A.13/3	Q.784.1 [10] reference 1.4.3
Test purpose *CCR received: unsuccessful* To verify that the messages associated with an unsuccessful continuity check procedure can be correctly received by the IUT.				

TSS CSSV/CCP/	TP IBC_V_1_4_4	ISUP '97 reference 2.1.8/Q.764 [13]	Selection expression PICS A.13/3	Q.784.1 [10] reference 1.4.4
Test purpose *CCR sent unsuccessful* To verify that the IUT can handle an unsuccessful continuity check procedure.				

TSS CSSV/CCP/	TP IBC_I_1_4_5	ISUP '97 reference table A.1 of Q.764 [13]	Selection expression PICS A.13/3, A13/27	Q.784.1 [10] reference 1.4.5
Test purpose *CCR not received; verify timer T27* To verify that the IUT sends a Reset circuit message if after an unsuccessful continuity check within T27 there is no Continuity check request message received.				

TSS CSSV/RUSIM/	TP IBC_I_1_5_1_a	ISUP '97 reference 2.9.5.1 a)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.5.1
Test purpose *Receipt of unexpected messages* To verify that the IUT is able to send a Release complete message if an unexpected release message is received.				

TSS CSSV/RUSIM/	TP IBC_I_1_5_1_b	ISUP '97 reference 2.9.5.1 b)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.5.1
Test purpose *Receipt of unexpected messages* To verify that a release complete message is discarded by the IUT if it is sent relating to an idle circuit.				

TSS CSSV/RUSIM/	TP IBC_I_1_5_1_c	ISUP '97 reference 2.9.5.1 e)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.5.1
Test purpose *Receipt of unexpected messages* To verify that an unexpected message other than Release and release complete is discarded and that a Reset circuit message is returned by the IUT.				

TSS CSSV/RUSIM/	TP IBC_I_1_5_2_a	ISUP '97 reference 2.9.5.1 e)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.5.2
Test purpose *Receipt of unexpected messages during call setup* To verify that the IUT is able to discard an unexpected message after a backward message is received.				

TSS CSSV/RUSIM/	TP IBC_I_1_5_2_b	ISUP '97 reference 2.9.5.1 e)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.5.2
Test purpose *Receipt of unexpected messages during call setup* To verify that the IUT is able to send a Reset circuit message if an unexpected message is received before a backward message for an incoming call.				

TSS CSSV/RUSIM/	TP IBC_I_1_5_3	ISUP '97 reference 2.9.5.1 c)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.5.3
Test purpose *Unexpected RLC for a busy circuit* To verify that the IUT is able to Release a call if an unexpected Release complete message is received for a busy circuit.				

TSS CSSV/RU/MS/	TP IBC_V_1_7_1_1	ISUP '97 reference 2.9.5.3.1 1) a)/Q.764 [13] 2.9.5.3.1 2) a)/Q.764 [13]	Selection expression PICS A.13/19	Q.784.1 [10] reference 1.7.1.1
Test purpose *Message compatibility information: Release call* To verify that the IUT (type A and B exchanges) releases the call if indicated in the Message compatibility information.				

TSS CSSV/RU/MS/	TP IBC_V_1_7_1_2_a	ISUP '97 reference 2.9.5.3.1 1) a)/Q.764 [13] 2.9.5.3.1 2) a)/Q.764 [13]	Selection expression PICS A.13/19	Q.784.1 [10] reference 1.7.1.2
Test purpose *Message compatibility information: Discard message* To verify that the IUT (type A and B exchanges) is able to discard an unknown message, if indicated in the Message compatibility information and if the sending of a Confusion message is not requested.				

TSS CSSV/RU/MS/	TP IBC_V_1_7_1_2_b	ISUP '97 reference 2.9.5.3.1 1) a)/Q.764 [13] 2.9.5.3.1 2) a)/Q.764 [13]	Selection expression PICS A.13/19	Q.784.1 [10] reference 1.7.1.2
Test purpose *Message compatibility information: Discard message* To verify that the IUT (type A and B exchanges) is able to discard an unknown message and send back a Confusion message if indicated in the Message compatibility information and the sending of a Confusion message is requested.				

TSS CSSV/RU/MS/	TP IBC_V_1_7_1_3	ISUP '97 reference 2.9.5.3.1 1) a)/Q.764 [13] 2.9.5.3.1 2) a)/Q.764 [13]	Selection expression PICS A.13/19	Q.784.1 [10] reference 1.7.1.3
Test purpose *Message compatibility information: Pass on* To verify that the IUT (type A and B exchanges) is able to pass on an unknown message, if indicated in the Message compatibility information (bit A = 1).				

TSS CSSV/RU/MS/	TP IBC_V_1_7_1_4	ISUP '97 reference 2.9.5.3.1 1) a)/Q.764 [13] 2.9.5.3.1 2) a)/Q.764 [13]	Selection expression PICS A.13/19	Q.784.1 [10] reference 1.7.1.4
Test purpose *Message compatibility information: Pass on not possible* To verify that the IUT (type A and B exchanges) releases the call if pass on is not possible and if indicated in the Message compatibility information (bit A = 1).				

TSS CSSV/RU/MS/	TP IBC_V_1_7_1_5	ISUP '97 reference 2.9.5.3.1 1) a)/Q.764 [13] 2.9.5.3.1 2) a)/Q.764 [13]	Selection expression PICS A.13/19	Q.784.1 [10] reference 1.7.1.5
Test purpose *Message compatibility information: Pass on not possible* To verify that the IUT (type A and B exchanges) is able to discard an unknown message if pass on is not possible and if indicated in the Message compatibility information (bit A = 1).				

TSS CSSV/RU/MS/	TP IBC_V_1_7_1_6	ISUP '97 reference 2.9.5.3.1 2) a)/Q.764 [13]	Selection expression Type B PICS A.13/19	Q.784.1 [10] reference 1.7.1.6
Test purpose *Message compatibility information: Transit interpretation* To verify that the IUT (type B exchange) is able to ignore the remaining part of the instruction indicator if A = 0.				

TSS CSSV/RU/MS/	TP IBC_I_1_7_1_7	ISUP '97 reference 2.9.5.3.1 1) b)/Q.764 [13] 2.9.5.3.1 2) b)/Q.764 [13]	Selection expression PICS A.13/19	Q.784.1 [10] reference 1.7.1.7
Test purpose *Unknown message without Message compatibility information* To check that the IUT (type A and B exchanges) is able to discard an unknown message and send a Confusion message if the unknown message contains no Message compatibility information parameter.				

TSS CSSV/RU/PA/	TP IBC_V_1_7_2_1	ISUP '97 reference 2.9.5.3.2 i) a)/Q.764 [13] 2.9.5.3.2 ii) a)/Q.764 [13]	Selection expression PICS A.13/19	Q.784.1 [10] reference 1.7.2.1
Test purpose *Parameter compatibility information: Release call* To verify that the IUT (type A and B exchanges) is able to release the call if indicated in the Parameter compatibility information (bit A = 1).				

TSS CSSV/RU/PA/	TP IBC_V_1_7_2_2_a	ISUP '97 reference 2.9.5.3.2 i) a)/Q.764 [13] 2.9.5.3.2 ii) a)/Q.764 [13]	Selection expression PICS A.13/19	Q.784.1 [10] reference 1.7.2.2
Test purpose *Parameter compatibility information: Discard message* To verify that the IUT (type A and B exchanges) is able to discard the message containing an unknown parameter if indicated in the Parameter compatibility information and that a notification is not requested (bit A = 1).				

TSS CSSV/RU/PA/	TP IBC_V_1_7_2_2_b	ISUP '97 reference 2.9.5.3.2 i) a)/Q.764 [13] 2.9.5.3.2 ii) a)/Q.764 [13]	Selection expression PICS A.13/19	Q.784.1 [10] reference 1.7.2.2
Test purpose *Parameter compatibility information: Discard message* To verify that the IUT (type A and B exchanges) is able to discard the message containing an unknown parameter and send a notification if indicated in the Parameter compatibility information and that a notification is requested (bit A = 1).				

TSS CSSV/RU/PA/	TP IBC_V_1_7_2_3_a	ISUP '97 reference 2.9.5.3.2 i) a)/Q.764 [13] 2.9.5.3.2 ii) a)/Q.764 [13]	Selection expression PICS A.13/19	Q.784.1 [10] reference 1.7.2.3
Test purpose *Parameter compatibility information: Discard parameter* To verify that the IUT (type A and B exchanges) is able to discard an unknown parameter and send a notification, if indicated in the Parameter compatibility information (bit A = 1).				

TSS CSSV/RU/PA/	TP IBC_V_1_7_2_3_b	ISUP '97 reference 2.9.5.3.2 i) a)/Q.764 [13] 2.9.5.3.2 ii) a)/Q.764 [13]	Selection expression PICS A.13/19	Q.784.1 [10] reference 1.7.2.3
Test purpose *Parameter compatibility information: Discard parameter* To verify that the IUT (type A and B exchanges) is able to discard an unknown parameter if indicated in the Parameter compatibility information (bit A = 1).				

TSS CSSV/RU/PA/	TP IBC_V_1_7_2_4	ISUP '97 reference 2.9.5.3.2 i) a)/Q.764 [13] 2.9.5.3.2 ii) a)/Q.764 [13]	Selection expression PICS A.13/19	Q.784.1 [10] reference 1.7.2.4
Test purpose *Parameter compatibility information: Pass on* To verify that the IUT (type A and B exchanges) is able to pass on an unknown parameter if indicated in the Parameter compatibility information (bit A = 1).				

TSS CSSV/RU/PA/	TP IBC_V_1_7_2_5	ISUP '97 reference 2.9.5.3.2 i) a)/Q.764 [13] 2.9.5.3.2 ii) a)/Q.764 [13]	Selection expression PICS A.13/19	Q.784.1 [10] reference 1.7.2.5
Test purpose *Parameter compatibility information: Pass on not possible, release call* To verify that the IUT (type A and B exchanges) releases the call if pass on is not possible and if it is indicated in the Parameter compatibility information (bit A = 1).				

TSS CSSV/RU/PA/	TP IBC_V_1_7_2_6_a	ISUP '97 reference 2.9.5.3.2 i) a)/Q.764 [13] 2.9.5.3.2 ii) a)/Q.764 [13]	Selection expression PICS A.13/19	Q.784.1 [10] reference 1.7.2.6
Test purpose *Parameter compatibility information: Pass on not possible, discard message* To verify that the IUT (type A and B exchanges) is able to discard a message containing an unknown parameter and send a notification if pass on is not possible and if indicated in the Parameter compatibility information (bit A = 1).				

TSS CSSV/RU/PA/	TP IBC_V_1_7_2_6_b	ISUP '97 reference 2.9.5.3.2 i) a)/Q.764 [13] 2.9.5.3.2 ii) a)/Q.764 [13]	Selection expression PICS A.13/19	Q.784.1 [10] reference 1.7.2.6
Test purpose *Parameter compatibility information: Pass on not possible, discard message* To verify that the IUT (type A and B exchanges) is able to discard a message containing an unknown parameter if pass on is not possible and if indicated in the Parameter compatibility information (bit A = 1).				

TSS CSSV/RU/PA/	TP IBC_V_1_7_2_7_a	ISUP '97 reference 2.9.5.3.2 i) a)/Q.764 [13] 2.9.5.3.2 ii) a)/Q.764 [13]	Selection expression PICS A.13/19	Q.784.1 [10] reference 1.7.2.7
Test purpose *Parameter compatibility information: Pass on not possible, discard parameter* To verify that the IUT (type A and B exchanges) is able to discard an unknown parameter and send a notification if pass on is not possible and if indicated in the Parameter compatibility information (bit A = 1).				

TSS CSSV/RU/PA/	TP IBC_V_1_7_2_7_b	ISUP '97 reference 2.9.5.3.2 i) a)/Q.764 [13] 2.9.5.3.2 ii) a)/Q.764 [13]	Selection expression PICS A.13/19	Q.784.1 [10] reference 1.7.2.7
Test purpose *Parameter compatibility information: Pass on not possible, discard parameter* To verify that the IUT (type A and B exchanges) is able to discard an unknown parameter if pass on is not possible and if indicated in the Parameter compatibility information (bit A = 1).				

TSS CSSV/RU/PA/	TP IBC_V_1_7_2_8	ISUP '97 reference 2.9.5.3.2 ii) a)/Q.764 [13]	Selection expression Type B PICS A.13/19	Q.784.1 [10] reference 1.7.2.8
Test purpose *Parameter compatibility information: Transit interpretation* To verify that the IUT (type B exchange) is able to ignore the remaining part of the Instruction indicator if A = 0.				

TSS CSSV/RU/PA/	TP IBC_I_1_7_2_9_a	ISUP '97 reference 2.9.5.3.2 i) b)/Q.764 [13] 2.9.5.3.2 ii) b)/Q.764 [13]	Selection expression PICS A.13/19 PICS A.13/21	Q.784.1 [10] reference 1.7.2.9
Test purpose *Unknown parameter without Compatibility information: Pass on* To check that the IUT (type A and B exchanges) is able to pass on an unknown parameter if there is no Parameter compatibility information for it.				

TSS CSSV/RU/PA/	TP IBC_I_1_7_2_9_b	ISUP '97 reference 2.9.5.3.2 i) b)/Q.764 [13] 2.9.5.3.2 ii) b)/Q.764 [13]	Selection expression PICS A.13/19 PICS A.13/20	Q.784.1 [10] reference 1.7.2.9
Test purpose *Unknown parameter without Compatibility information: Discard* To check that the IUT (type A and B exchanges) is able to discard an unknown parameter and send a Confusion message if there is no Parameter compatibility information for it.				

TSS CSSV/RU/PA/	TP IBC_I_1_7_2_10	ISUP '97 reference 2.9.5.3/Q.764 [13]	Selection expression PICS A.13/19	Q.784.1 [10] reference 1.7.2.10
Test purpose *Unknown parameter within a Release message* To check that the IUT (type A and B exchanges) is able to discard an unknown parameter in a Release message without returning a CFN message.				

TSS CSSV/RU/PA/	TP IBC_I_1_7_2_11	ISUP '97 reference 2.9.5.3/Q.764 [13]	Selection expression PICS A.13/19	Q.784.1 [10] reference
Test purpose *Unknown parameter within a Confusion message* To check that the IUT (type A and B exchanges) is able to discard an unknown parameter within a CFN message without returning a CFN message.				

TSS CSSV/RU/PA/	TP IBC_I_1_7_2_12	ISUP '97 reference 2.9.5.3/Q.764 [13]	Selection expression PICS A.13/19	Q.784.1 [10] reference
Test purpose *Unknown parameter within a Release complete message* To check that the IUT (type A and B exchanges) is able to discard an unknown parameter in a Release complete message without returning a CFN message.				

TSS CSSV/RU/PA/	TP IBC_V_1_7_2_13_a	ISUP '97 reference 2.9.5.4.1/Q.764 [13]	Selection expression Type A PICS A.13/19	Q.784.1 [10] reference
Test purpose *Response indicating unrecognized information, discard* To verify that the IUT (type A exchange) is able to discard a CFN message.				

TSS CSSV/RU/PA/	TP IBC_V_1_7_2_13_b	ISUP '97 reference 2.9.5.4.2 ii) a)/Q.764 [13]	Selection expression Type B PICS A.13/19	Q.784.1 [10] reference
Test purpose *Response indicating unrecognized information, pass on* To verify that the IUT (type B exchange) is able to pass on transparently a CFN message.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_9	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A and B exchanges) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,9 Called party number (CdPN) The Filler in the Address signals shall default to '0'H.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_10_a	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3.10 Calling party number (CgPN) The CgPN parameter shall be discarded if the Nature of address indicator is coded with a spare value.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_10_b	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,10 Calling party number (CgPN) The CgPN parameter shall be discarded if the Numbering plan indicator is coded with a spare value.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_10_c	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,10 Calling party number (CgPN) The Address presentation restricted indicator shall default to '01'B - presentation restricted.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_10_d	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,10 Calling party number (CgPN) The CgPN parameter shall be discarded if the Screening indicator is coded with a spare value.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_10_e	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,10 Calling party number (CgPN) The Filler in the Address signals shall default to '0'H.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_11	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,11 Calling party's category (CgPC) The Calling party's category shall default to '0A'H - ordinary calling subscriber.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_23_a	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,23 Forward call indicators (FCI) The End-to-end method indicator shall default to '00'B.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_23_b	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,23 Forward call indicators (FCI) The End-to-end information indicator shall default to '0'B.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_23_c	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,23 Forward call indicators (FCI) The SCCP method indicator shall default to '00'B.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_35_a	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A and B exchanges) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,35 Nature of connection indicators (NatCon) The Satellite indicator set to the spare value ('11'B) shall default to '10'B - two satellites in the connection.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_35_b	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A and B exchanges) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,35 Nature of connection indicators (NatCon) The Continuity check indicator set to the spare value ('11'B) shall default either to '00'B - continuity check not required or '01'B - continuity check required on this circuit and a Confusion message with cause 110 and diagnostics shall be sent.				
NOTE: The sending of the CFN message with cause #110 is an error in this case, because the parameter to be discarded belongs to the mandatory fixed part of the message.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_38	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,38 Optional forward call indicators (OFCI) The CUG call indicator shall default to '00'B - non-CUG call.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_39_a	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,39 Original called number (OriCdNb) The OriCdNb parameter shall be discarded if the Nature of address indicator is coded with a spare value.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_39_b	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,39 Original called number (OriCdNb) The OriCdNb parameter shall be discarded if the Numbering plan indicator is coded with a spare value.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_39_c	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,39 Original called number (OriCdNb) The Address presentation restricted indicator shall default to '01'B - presentation restricted.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_39_d	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,39 Original called number (OriCdNb) The Filler in the Address signals shall default to '0'H.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_44_a	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,44 Redirecting number (RgNb) The RgNb parameter shall be discarded if the Nature of address indicator is coded with a spare value.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_44_b	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,44 Redirecting number (RgNb) The RgNb parameter shall be discarded if the Numbering plan indicator is coded with a spare value.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_44_c	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,44 Redirecting number (RgNb) The Address presentation restricted indicator shall default to '01'B - presentation restricted.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_44_d	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,44 Redirecting number (RgNb) The RgNb parameter shall be discarded if the Screening indicator is coded with a spare value.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_44_e	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,44 Redirecting number (RgNb) The Filler in the Address signals shall default to '0'H.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_45_a	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,45 Redirection information (RnInf) The spare value of the Redirecting indicator in the Redirection information shall default to '100'B - Call diversion, all redirection information presentation restricted.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_45_b	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,45 Redirection information (RnInf) The spare values of the Original redirection reason in the Redirection information shall default to '0'H - unknown/not available.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_45_c	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,45 Redirection information (RnInf) The spare values of the Redirection counter in the Redirection information shall default to 5 forwarding.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_45_d	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,45 Redirection information (RnInf) The spare value of the Redirecting reason in the Redirection information shall default to '0'H - unknown/not available.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_51	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A and B exchanges) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,51 Subsequent number (SubNb) The Filler in the Subsequent number shall default to '0'H.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_60_a	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,60 User-to-user indicators (UUInd) The spare value of the Service 1 field in the User-to-user indicators shall default to '00'B - no information. The Type (bit A) is request (0).				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_60_b	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,60 User-to-user indicators (UUInd) The spare value of the Service 2 field in the User-to-user indicators shall default to '00'B - no information. The Type (bit A) is request (0).				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_a_60_c	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,60 User-to-user indicators (UUInd) The spare value of the Service 3 field in the User-to-user indicators shall default to '00'B - no information. The Type (bit A) is request (0).				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_b_9_a	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A and B exchanges) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,9 Called party number (CdPN) The call shall be cleared if the Nature of address indicator is coded with a spare value.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_b_9_b	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A and B exchanges) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,9 Called party number (CdPN) The call shall be cleared if the Numbering plan indicator is coded with a spare value.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_b_23	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A and B exchanges) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,23 Forward call indicators (FCI) The call shall be cleared if the ISUP preference indicator is coded with a spare value.				

TSS CSSV/RU/PV/FD/	TP IBC_S_1_7_3_1_b_54	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 1.7.3.1
Test purpose *Receipt of unknown parameter values in the forward direction* To verify that the IUT (type A and B exchanges) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,54 Transmission medium requirement (TMR) The call shall be cleared if the Transmission medium requirement is coded with a spare value.				

TSS CSSV/RU/PV/BD/	TP IBC_S_1_7_3_2_5_a	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.2
Test purpose *Receipt of unknown parameter values in the backward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,5 Backward call indicators (BCI) The Charging indicator shall default to '10'B - charge.				

TSS CSSV/RU/PV/BD/	TP IBC_S_1_7_3_2_5_b	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.2
Test purpose *Receipt of unknown parameter values in the backward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,5 Backward call indicators (BCI) The Called party's status indicator shall default to '00'B - no indication.				

TSS CSSV/RU/PV/BD/	TP IBC_S_1_7_3_2_5_c	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.2
Test purpose *Receipt of unknown parameter values in the backward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,5 Backward call indicators (BCI) The Called party's category indicator shall default to '00'B - no indication.				

TSS CSSV/RU/PV/BD/	TP IBC_S_1_7_3_2_5_d	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.2
Test purpose *Receipt of unknown parameter values in the backward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,5 Backward call indicators (BCI) The End-to-end method indicator shall default to '00'B - no End-to-end method available.				

TSS CSSV/RU/PV/BD/	TP IBC_S_1_7_3_2_5_e	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.2
Test purpose *Receipt of unknown parameter values in the backward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,5 Backward call indicators (BCI) The End-to-end information indicator shall default to '0'B - no End-to-end information available.				

TSS CSSV/RU/PV/BD/	TP IBC_S_1_7_3_2_5_f	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.2
Test purpose *Receipt of unknown parameter values in the backward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,5 Backward call indicators (BCI) The Holding indicator shall default to '0'B - holding not requested.				

TSS CSSV/RU/PV/BD/	TP IBC_S_1_7_3_2_5_g	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.2
Test purpose *Receipt of unknown parameter values in the backward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,5 Backward call indicators (BCI) The SCCP method indicator shall default to '00'B - no indication.				

TSS CSSV/RU/PV/BD/	TP IBC_S_1_7_3_2_16_a	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.2
Test purpose *Receipt of unknown parameter values in the backward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,16 Connected number (ConNb) The Connected number parameter shall be discarded if the Nature of address indicator is coded with a spare value.				

TSS CSSV/RU/PV/BD/	TP IBC_S_1_7_3_2_16_b	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.2
Test purpose *Receipt of unknown parameter values in the backward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,16 Connected number (ConNb) The Connected number parameter shall be discarded if the Numbering plan indicator is coded with a spare value.				

TSS CSSV/RU/PV/BD/	TP IBC_S_1_7_3_2_16_c	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.2
Test purpose *Receipt of unknown parameter values in the backward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,16 Connected number (ConNb) The Address presentation restricted indicator shall default to '01'B - presentation restricted.				

TSS CSSV/RU/PV/BD/	TP IBC_S_1_7_3_2_16_d	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.2
Test purpose *Receipt of unknown parameter values in the backward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,16 Connected number (ConNb) The Connected number parameter shall be discarded if the Screening indicator is coded with a spare value.				

TSS CSSV/RU/PV/BD/	TP IBC_S_1_7_3_2_16_e	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.2
Test purpose *Receipt of unknown parameter values in the backward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,16 Connected number (ConNb) The Filler in the Address signals shall default to '0'H.				

TSS CSSV/RU/PV/BD/	TP IBC_S_1_7_3_2_21	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.2
Test purpose *Receipt of unknown parameter values in the backward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,21 Event information (EvInf) The CPG message shall be discarded if the Event information is not recognized.				

TSS CSSV/RU/PV/BD/	TP IBC_S_1_7_3_2_46_a	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.2

Test purpose

Receipt of unknown parameter values in the backward direction
To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16]
Parameter: 3,46 Redirection number (RnNb)
The Redirection number parameter shall be discarded if the Nature of address indicator is coded with a spare value.

TSS CSSV/RU/PV/BD/	TP IBC_S_1_7_3_2_46_b	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.2

Test purpose

Receipt of unknown parameter values in the backward direction
To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16]
Parameter: 3,46 Redirection number (RnNb)
The Redirection number parameter shall be discarded if the Numbering plan indicator is coded with a spare value.

TSS CSSV/RU/PV/BD/	TP IBC_S_1_7_3_2_46_c	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.2

Test purpose

Receipt of unknown parameter values in the backward direction
To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16]
Parameter: 3,46 Redirection number (RnNb)
The Filler in the Address signals shall default to '0'H.

TSS CSSV/RU/PV/BD/	TP IBC_S_1_7_3_2_60_a	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.2

Test purpose

Receipt of unknown parameter values in the backward direction
To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16]
Parameter: 3,60 User-to-user indicators (UUInd)
The spare value of the Service 1 field in the User-to-user indicators shall default to '00'B - no information. The Type (bit A) is response (1).

TSS CSSV/RU/PV/BD/	TP IBC_S_1_7_3_2_60_b	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.2
Test purpose *Receipt of unknown parameter values in the backward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,60 User-to-user indicators (UUInd) The spare value of the Service 2 field in the User-to-user indicators shall default to '00'B - no information. The Type (bit A) is response (1).				

TSS CSSV/RU/PV/BD/	TP IBC_S_1_7_3_2_60_c	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference 1.7.3.2
Test purpose *Receipt of unknown parameter values in the backward direction* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,60 User-to-user indicators (UUInd) The spare value of the Service 3 field in the User-to-user indicators shall default to '00'B - no information. The Type (bit A) is response (1).				

TSS CSSV/RU/PV/	TP IBC_I_1_7_3_3	ISUP '97 reference table A.2 of Q.763 [16] table A.3 of Q.763 [16]	Selection expression N/A	Q.784.1 [10] reference
Test purpose *Illegal value in the Type indicator of the Circuit group blocking message* To verify the IUT is able to discard a Circuit group blocking message and sends a Confusion message if the Type indicator field of the Circuit group supervision message type indicator is set to an illegal value.				

TSS CSSV/RU/PV/RM/	TP IBC_S_1_7_3_4_a_12_a	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference
Test purpose *Receipt of unknown parameter values in the Release message* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,12 Cause indicators (Cause) The Coding standard of the Cause indicators shall default to '00'B - CCITT.				

TSS CSSV/RU/PV/RM/	TP IBC_S_1_7_3_4_a_12_b_1	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference
Test purpose *Receipt of unknown parameter values in Release message* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,12 Cause indicators (Cause) The Location in the Cause indicators shall default to '7'H - international network.				

TSS CSSV/RU/PV/RM/	TP IBC_S_1_7_3_4_a_12_b_2	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference
Test purpose *Receipt of unknown parameter values in the Release message* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,12 Cause indicators (Cause) The Location in the Cause indicators shall default to 'A'H - network beyond interworking point.				

TSS CSSV/RU/PV/RM/	TP IBC_S_1_7_3_4_a_12_c	ISUP '97 reference 2.9.5.3.3/Q.764 [13]	Selection expression Gateway	Q.784.1 [10] reference
Test purpose *Receipt of unknown parameter values in the Release message* To verify that the IUT (type A exchange) is able to handle unknown parameter values as demanded in Annex A of Q.763 [16] Parameter: 3,12 Cause indicators (Cause) The spare Cause value of the Cause indicators shall default to: 31 - Normal event, unspecified (classes 000 and 001) 47 - Resource unavailable, unspecified (class 010) 63 - Service/option not available, unspecified (class 011) 79 - Service/option not implemented, unspecified (class 100) 95 - Invalid message, unspecified (class 101) 111 - Protocol error, unspecified (class 110) 127 - Interworking, unspecified (class 111).				

7.2.2 NCS: Normal call setup ordinary speech calls

TSS NCS/BWCS/	TP IBC_V_2_1_1	ISUP '97 reference 2.1/Q.764 [13] 2.9.1.4/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.1.1
Test purpose *IAM sent by controlling SP* To verify that the IUT can initiate an outgoing call on a circuit capable of both way operation when the IUT is the controlling SP.				

TSS NCS/BWCS/	TP IBC_V_2_1_2	ISUP '97 reference 2.1/Q.764 [13] 2.9.1.4/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.1.2
Test purpose *IAM sent by non-controlling SP* To verify that IUT can initiate an outgoing call on a circuit capable of both way operation when the IUT is the non-controlling SP.				

TSS NCS/CAS/	TP IBC_V_2_2_1_a	ISUP '97 reference 2.1.1, 2.1.4, 2.1.7, 2.3/Q.764 [13]	Selection expression (OLE and PICS A.3/1) or (IntermE and PICS A.3/5)	Q.784.1 [10] reference 2.2.1
Test purpose *"En bloc" operation* To verify that a call can be successfully established (all digits included in the outgoing IAM).				

TSS NCS/CAS/	TP IBC_V_2_2_1_b	ISUP '97 reference 2.1.1, 2.1.4, 2.1.7, 2.3/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.2.1
Test purpose *"En bloc" operation* To verify that a call can be successfully established (all digits included in the incoming IAM).				

TSS NCS/CAS/	TP IBC_V_2_2_2_a	ISUP '97 reference 2.1.1, 2.1.4, 2.1.7, 2.3/Q.764 [13]	Selection expression (OLE and PICS A.3/2, A.4/1) or (IntermE and PICS A.3/6)	Q.784.1 [10] reference 2.2.2
Test purpose *Overlap operation (with SAM)* To verify that the IUT can initiate a call using an IAM followed by a SAM.				

TSS NCS/CAS/	TP IBC_V_2_2_2_b	ISUP '97 reference 2.1.1, 2.1.4, 2.1.7, 2.3/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.2.2
Test purpose *Overlap operation (with SAM)* To verify that the IUT can receive a call using an IAM followed by a SAM.				

TSS NCS/SCS/	TP IBC_V_2_3_1_a	ISUP '97 reference 2.1.4.1 2) b)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.1
Test purpose *Ordinary call (with various indications in ACM)* To verify that a call can be successfully completed using various indications in the address complete message (Subscr free and ISDN).				

TSS NCS/SCS/	TP IBC_V_2_3_1_b	ISUP '97 reference 2.1.4.1 1) a)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.1
Test purpose *Ordinary call (with various indications in ACM)* To verify that a call can be successfully completed using various indications in the address complete message (Subscr free and non-ISDN).				

TSS NCS/SCS/	TP IBC_V_2_3_1_c	ISUP '97 reference 2.1.4.1 2) a)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.1
Test purpose *Ordinary call (with various indications in ACM)* To verify that a call can be successfully completed using various indications in the address complete message (No indication and ISDN).				

TSS NCS/SCS/	TP IBC_V_2_3_1_d	ISUP '97 reference 2.1.4.1 2) a)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.1
Test purpose *Ordinary call (with various indications in ACM)* To verify that a call can be successfully completed using various indications in the address complete message (No indication and non-ISDN).				

TSS NCS/SCS/	TP IBC_V_2_3_1_e	ISUP '97 reference 2.1.4.1 2) b)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.1
Test purpose *Ordinary call (with various indications in ACM)* To verify that a call can be successfully completed using various indications in the address complete message (subscr free and ISDN).				

TSS NCS/SCS/	TP IBC_V_2_3_1_f	ISUP '97 reference 2.1.4.1 1) a)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.1
Test purpose *Ordinary call (with various indications in ACM)* To verify that a call can be successfully completed using various indications in the address complete message (subscr free and non-ISDN).				

TSS NCS/SCS/	TP IBC_V_2_3_1_g	ISUP '97 reference 2.1.4.1 2) a)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.1
Test purpose *Ordinary call (with various indications in ACM)* To verify that a call can be successfully completed using various indications in the address complete message (No indication and ISDN).				

TSS NCS/SCS/	TP IBC_V_2_3_1_h	ISUP '97 reference 2.1.4.1 1) b)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.1
Test purpose *Ordinary call (with various indications in ACM)* To verify that a call can be successfully completed using various indications in the address complete message (No indication and non-ISDN).				

TSS NCS/SCS/	TP IBC_V_2_3_2_a	ISUP '97 reference 2.1.5/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.2
Test purpose *Ordinary outgoing call (with ACM, CPG, and ANM)* To verify that a call can be successfully completed using an address complete message, a call progress message, and an answer message (CPG alerting).				

TSS NCS/SCS/	TP IBC_V_2_3_2_b	ISUP '97 reference 2.1.5/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.2
Test purpose *Ordinary outgoing call (with ACM, CPG, and ANM)* To verify that a call can be successfully completed using an address complete message, a call progress message, and an answer message (CPG progress).				

TSS NCS/SCS/	TP IBC_V_2_3_2_c	ISUP '97 reference 2.1.5/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.2
Test purpose *Ordinary outgoing call (with ACM, CPG, and ANM)* To verify that a call can be successfully completed using an address complete message, a call progress message, and an answer message (CPG in-band information).				

TSS NCS/SCS/	TP IBC_V_2_3_2_d	ISUP '97 reference 2.1.5/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.2
Test purpose *Ordinary incoming call (with ACM, CPG, and ANM)* To verify that a call can be successfully completed using an address complete message, a call progress message, and an answer message (CPG alerting).				

TSS NCS/SCS/	TP IBC_V_2_3_2_e	ISUP '97 reference 2.1.5/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.2
Test purpose *Ordinary incoming call (with ACM, CPG, and ANM)* To verify that a call can be successfully completed using an address complete message, a call progress message, and an answer message (CPG progress).				

TSS NCS/SCS/	TP IBC_V_2_3_2_f	ISUP '97 reference 2.1.5/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.2
Test purpose *Ordinary incoming call (with ACM, CPG, and ANM)* To verify that a call can be successfully completed using an address complete message, a call progress message, and an answer message (CPG in-band information).				

TSS NCS/SCS/	TP IBC_V_2_3_3	ISUP '97 reference 2.1.4.1 ii)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.3
Test purpose *Ordinary call (with CON)* To verify that a call can be successfully completed using the connect message (indications: subscriber free and access ISDN).				

TSS NCS/SCS/	TP IBC_V_2_3_4_a	ISUP '97 reference 2.1.1.2 b)/Q.764 [13]	Selection expression NTE, ITE, IncIE,OutIE	Q.784.1 [10] reference 2.3.4
Test purpose *Call switched via satellite* To verify that the satellite indicator in the initial address message is correctly set (No satellite already in the connection).				

TSS NCS/SCS/	TP IBC_V_2_3_4_b	ISUP '97 reference 2.1.1.2 b)/Q.764 [13]	Selection expression NTE, ITE, IncIE,OutIE	Q.784.1 [10] reference 2.3.4
Test purpose *Call switched via satellite* To verify that the satellite indicator in the initial address message is correctly set (1 satellite already in the connection).				

TSS NCS/SCS/	TP IBC_V_2_3_4_c	ISUP '97 reference 2.1.1.2 b)/Q.764 [13]	Selection expression NTE, ITE, IncIE,OutIE	Q.784.1 [10] reference 2.3.4
Test purpose *Call switched via satellite* To verify that the satellite indicator in the initial address message is correctly set (2 satellites already in the connection).				

TSS NCS/SCS/	TP IBC_V_2_3_5_a	ISUP '97 reference 2.8.2.1/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.5
Test purpose *Blocking and unblocking during a call (initiated)* To verify that the circuit blocking and unblocking procedure can be correctly initiated after ANM - outgoing call.				

TSS NCS/SCS/	TP IBC_V_2_3_5_b	ISUP '97 reference 2.8.2.1/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.5
Test purpose *Blocking and unblocking during a call (initiated)* To verify that the circuit blocking and unblocking procedure can be correctly initiated after ACM - outgoing call.				

TSS NCS/SCS/	TP IBC_V_2_3_5_c	ISUP '97 reference 2.8.2.1/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.5
Test purpose *Blocking and unblocking during a call (initiated)* To verify that the circuit blocking and unblocking procedure can be correctly initiated after ANM - incoming call.				

TSS NCS/SCS/	TP IBC_V_2_3_5_d	ISUP '97 reference 2.8.2.1/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.5
Test purpose *Blocking and unblocking during a call (initiated)* To verify that the circuit blocking and unblocking procedure can be correctly initiated after ACM - incoming call.				

TSS NCS/SCS/	TP IBC_V_2_3_6_a	ISUP '97 reference 2.8.2.1/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.6
Test purpose *Blocking and unblocking during a call (received)* To verify that the circuit blocking and unblocking procedure can be correctly received after ANM - outgoing call.				

TSS NCS/SCS/	TP IBC_V_2_3_6_b	ISUP '97 reference 2.8.2.1/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.6
Test purpose *Blocking and unblocking during a call (received)* To verify that the circuit blocking and unblocking procedure can be correctly received after ACM - outgoing call.				

TSS NCS/SCS/	TP IBC_V_2_3_6_c	ISUP '97 reference 2.8.2.1/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.6
Test purpose *Blocking and unblocking during a call (received)* To verify that the circuit blocking and unblocking procedure can be correctly received after ANM - incoming call.				

TSS NCS/SCS/	TP IBC_V_2_3_6_d	ISUP '97 reference 2.8.2.1/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 2.3.6
Test purpose *Blocking and unblocking during a call (received)* To verify that the circuit blocking and unblocking procedure can be correctly received after ACM - incoming call.				

TSS NCS/PDDP/	TP IBC_V_2_4_1	ISUP '97 reference 2.6/Q.764 [13]	Selection expression IntermE and PICS A.13/11	Q.784.1 [10] reference 2.4.1
Test purpose *IAM sent containing the PDC* To verify that the IUT is able to increase the PDC by the delay value of the outgoing route (D ms).				

TSS NCS/PDDP/	TP IBC_V_2_4_2	ISUP '97 reference 2.6/Q.764 [13]	Selection expression IntermE	Q.784.1 [10] reference 2.4.2
Test purpose *Sending of call history information* To verify that a call can be successfully completed and the value of the call history information is higher than the value of the propagation delay counter.				

TSS NCS/PDDP/	TP IBC_V_2_4_3_a	ISUP '97 reference 2.6/Q.764 [13]	Selection expression IntermE	Q.784.1 [10] reference 2.4.3
Test purpose *Abnormal procedures, protocol delay counter not received* To verify that the IUT is able to include a PDC in the IAM.				

TSS NCS/PDDP/	TP IBC_V_2_4_3_b	ISUP '97 reference 2.6/Q.764 [13]	Selection expression PICS A.13/11 and PICS A.10/2	Q.784.1 [10] reference 2.4.3
Test purpose *Abnormal procedures, call history information not received* Check that the IUT conveys the Call history information correctly.				

7.2.3 NCR Normal call release

TSS NCR/	TP IBC_V_3_1_a	ISUP '97 reference 2.3/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 3.1
Test purpose *Calling party clears before address complete, outgoing call* To verify that the calling party can successfully release a call prior to receipt of any backward message.				

TSS NCR/	TP IBC_V_3_1_b	ISUP '97 reference 2.3/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 3.1
Test purpose *Calling party clears before address complete, incoming call* To verify that the calling party can successfully release a call prior to receipt of any backward message.				

TSS NCR/	TP IBC_V_3_2_a	ISUP '97 reference 2.3/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 3.2
Test purpose *Calling party clears before answer, outgoing call* To verify that the calling party can successfully release a call prior to receipt of answer.				

TSS NCR/	TP IBC_V_3_2_b	ISUP '97 reference 2.3/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 3.2
Test purpose *Calling party clears before answer, incoming call* To verify that the calling party can successfully release a call prior to receipt of answer.				

TSS NCR/	TP IBC_V_3_3_a	ISUP '97 reference 2.3/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 3.3
Test purpose *Calling party clears after answer, outgoing call* To verify that the calling party can successfully release a call after answer.				

TSS NCR/	TP IBC_V_3_3_b	ISUP '97 reference 2.3/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 3.3
Test purpose *Calling party clears after answer, incoming call* To verify that the calling party can successfully release a call after answer.				

TSS NCR/	TP IBC_V_3_4_a	ISUP '97 reference 2.3/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 3.4
Test purpose *Called party clears after answer, outgoing call* To verify that a call can be successfully released in the backward direction.				

TSS NCR/	TP IBC_V_3_4_b	ISUP '97 reference 2.3/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 3.4
Test purpose *Called party clears after answer, incoming call* To verify that a call can be successfully released in the backward direction.				

TSS NCR/	TP IBC_V_3_5_a	ISUP '97 reference 2.4/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 3.5
Test purpose *Suspend initiated by the network, outgoing call* To verify that the called subscriber can successfully clear back and re-answer the call.				

TSS NCR/	TP IBC_V_3_5_b	ISUP '97 reference 2.4/Q.764 [13]	Selection expression IntermE PICS A.9/1,A.9/2, A.11/1.A.11/2	Q.784.1 [10] reference 3.5
Test purpose *Suspend initiated by the network, incoming call* To verify that the called subscriber can successfully clear back and reanswer the call.				

TSS NCR/	TP IBC_V_3_8	ISUP '97 reference 2.3.1 e)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 3.8
Test purpose *Collision of REL messages* To verify that a release message may be received at an exchange from a succeeding or preceding exchange after the release of the switch path is initiated.				

7.2.4 UCS: Unsuccessful call setup

TSS UCS/	TP IBC_V_4_1_a	ISUP '97 reference 2.2/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 4.1
Test purpose *Validate a set of known causes for release* To verify that the call is released immediately by the outgoing signalling point, if a release message with a given cause is received and the correct indication is given to the calling party.				

TSS UCS/	TP IBC_V_4_1_b	ISUP '97 reference 2.2/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 4.1
Test purpose *Validate a set of known causes for release* To verify that the call is released immediately by the outgoing signalling point, if a release message with a given cause is received and the correct indication is given to the calling party.				

7.2.5 AS: Abnormal situations

TSS AS/	TP IBC_V_5_1	ISUP '97 reference 2.9.8.1/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 5.1
Test purpose *Inability to release in response to a REL after ANM* To verify that, if the SP is unable to return a circuit to the idle condition in response to a release message, the circuit will be blocked.				

TSS AS/T/	TP IBC_I_5_2_1	ISUP '97 reference 2.9.8.3/Q.764 [13]	Selection expression PICS A.14/7	Q.784.1 [10] reference 5.2.1
Test purpose *T7: waiting for ACM or CON* To check that at the expiry of T7 the circuit will be released.				

TSS AS/T/	TP IBC_V_5_2_2	ISUP '97 reference 2.9.8.3 a)/Q.764 [13]	Selection expression CntrlE PICS A.5/4	Q.784.1 [10] reference 5.2.2
Test purpose *T9: waiting for ANM* To verify that, if an answer message is not received within T9 after receiving an address complete message, the connection is released by the outgoing signalling point.				

TSS AS/T/	TP IBC_I_5_2_3	ISUP '97 reference 2.2; 2.9.6/Q.764 [13]	Selection expression PICS A.14/1, A.14/5	Q.784.1 [10] reference 5.2.3
Test purpose *T1 and T5: failure to receive a RLC* To verify that appropriate actions take place at the expiry of timers T1 and T5.				

TSS AS/T/	TP IBC_V_5_2_4	ISUP '97 reference 2.4.1.3, 2.4.2.3, 2.4.3/Q.764 [13]	Selection expression CntrlE PICS A.14/6	Q.784.1 [10] reference 5.2.4
Test purpose *T6: waiting for RES (network)* To verify that the call is released at the expiry of timer T6.				

TSS AS/T/	TP IBC_I_5_2_5	ISUP '97 reference 2.9.8.3/Q.764 [13]	Selection expression PICS A.13/3, A.14/8	Q.784.1 [10] reference 5.2.5
Test purpose *T8: waiting for COT message if applicable* To verify that when the IAM indicates that the continuity check is required or performed on a previous circuit and the COT message is not received within T8, the connection is released by the incoming signalling point.				

TSS AS/T/	TP IBC_I_5_2_6	ISUP '97 reference 2.9.4/Q.764 [13]	Selection expression PICS A.14/12, A.14/13	Q.784.1 [10] reference 5.2.6
Test purpose *T12 and T13: failure to receive a BLA* To verify that appropriate actions take place at the expiry of timers T12 and T13.				

TSS AS/T/	TP IBC_I_5_2_7	ISUP '97 reference 2.9.4/Q.764 [13]	Selection expression PICS A.14/14, A.14/15	Q.784.1 [10] reference 5.2.7
Test purpose *T14 and T15: failure to receive a UBA* To verify that appropriate actions take place at the expiry of timers T14 and T15.				

TSS AS/T/	TP IBC_I_5_2_8	ISUP '97 reference 2.9.3.1/Q.764 [13]	Selection expression PICS A.14/16, A.14/17	Q.784.1 [10] reference 5.2.8
Test purpose *T16 and T17: failure to receive a RLC* To verify that appropriate actions take place at the expiry of timers T16 and T17.				

TSS AS/T/	TP IBC_I_5_2_9	ISUP '97 reference 2.9.4/Q.764 [13]	Selection expression PICS A.14/18, A.14/19	Q.784.1 [10] reference 5.2.9
Test purpose *T18 and T19: failure to receive a CGBA* To verify that appropriate actions take place at the expiry of timers T18 and T19.				

TSS AS/T/	TP IBC_I_5_2_10	ISUP '97 reference 2.9.4/Q.764 [13]	Selection expression PICS A.14/20, A.14/21	Q.784.1 [10] reference 5.2.10
Test purpose *T20 and T21: failure to receive a CGUA* To verify that appropriate actions take place at the expiry of timers T20 and T21.				

TSS AS/T/	TP IBC_I_5_2_11	ISUP '97 reference 2.9.3.2/Q.764 [13]	Selection expression PICS A.14/22, A.14/23	Q.784.1 [10] reference 5.2.11
Test purpose *T22 and T23: failure to receive a GRA* To verify that appropriate actions take place at the expiry of timers T22 and T23.				

TSS AS/RCDC/	TP IBC_V_5_3_1	ISUP '97 reference 2.9.3.1 a)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 5.3.1
Test purpose *Reset of an outgoing circuit during a call* To verify that on receipt of a RSC message the call is immediately released.				

TSS AS/RCDC/	TP IBC_V_5_3_2	ISUP '97 reference 2.9.3.1 a)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 5.3.2
Test purpose *Reset of an incoming circuit during a call* To verify that on receipt of a RSC message the call is immediately released.				

7.2.6 SCS: Special call setup

TSS SCS/CCC/	TP IBC_V_6_1_1_a	ISUP '97 reference 2.1.8/Q.764 [13]	Selection expression PICS A.13/3	Q.784.1 [10] reference 6.1.1
Test purpose *Continuity check required* To verify that a call can be set up on a circuit requiring a continuity check - outgoing call.				

TSS SCS/CCC/	TP IBC_V_6_1_1_b	ISUP '97 reference 2.1.8/Q.764 [13]	Selection expression PICS A.13/3	Q.784.1 [10] reference 6.1.1
Test purpose *Continuity check required* To verify that a call can be set up on a circuit requiring a continuity check - incoming call.				

TSS SCS/CCC/	TP IBC_V_6_1_2	ISUP '97 reference 2.1.8/Q.764 [13] 7/Q.724 [17]	Selection expression PICS A.13/3	Q.784.1 [10] reference 6.1.2
Test purpose *COT applied on a previous circuit* To verify if a continuity check is being performed on a previous circuit, a backward message is delayed until receipt of the COT message.				

TSS SCS/CCC/	TP IBC_V_6_1_3_a	ISUP '97 reference 2.3; 2.1.8/Q.764 [13]	Selection expression PICS A.13/3	Q.784.1 [10] reference 6.1.3
Test purpose *Calling party clears during a COT* To verify that the calling party can successfully clear the call during the continuity check phase - outgoing call.				

TSS SCS/CCC/	TP IBC_V_6_1_3_b	ISUP '97 reference 2.3; 2.1.8/Q.764 [13]	Selection expression PICS A.13/3	Q.784.1 [10] reference 6.1.3
Test purpose *Calling party clears during a COT* To verify that the calling party can successfully clear the call during the continuity check phase - incoming call.				

TSS SCS/CCC/	TP IBC_V_6_1_4_a	ISUP '97 reference 2.1.8/Q.764 [13]	Selection expression PICS A.13/3	Q.784.1 [10] reference 6.1.4
Test purpose *Delay of through connect* To verify that the completion of the speech path is delayed until the residual check-tone has propagated through the return of the speech path (outgoing call).				

TSS SCS/CCC/	TP IBC_V_6_1_4_b	ISUP '97 reference 2.1.8/Q.764 [13]	Selection expression PICS A.13.3	Q.784.1 [10] reference 6.1.4
Test purpose *Delay of through connect* To verify that the completion of the speech path is delayed until the residual check-tone has propagated through the return of the speech path (incoming call).				

TSS SCS/CCC/	TP IBC_V_6_1_5	ISUP '97 reference 2.1.8; 2.8.1 iv); table A.1 of Q.764 [13]	Selection expression PICS A.13/3	Q.784.1 [10] reference 6.1.5
Test purpose *COT unsuccessful* To verify that a repeat attempt of the continuity check is made on the failed circuit.				

TSS SCS/ARA/	TP IBC_V_6_2_1	ISUP '97 reference 2.8.1 i); 2.9.1.4/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 6.2.1
Test purpose *Dual seizure for non-controlling SP* To verify that an automatic repeat attempt will be made on detection of a dual seizure.				

TSS SCS/ARA/	TP IBC_V_6_2_2	ISUP '97 reference 2.8.1 ii): 2.8.2.1/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 6.2.2
Test purpose *Blocking of a circuit* To verify that an automatic repeat attempt will be made on receipt of the blocking message after sending an initial address message and before any backward messages have been received.				

TSS SCS/ARA/	TP IBC_V_6_2_3	ISUP '97 reference 2.8.1 iii)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 6.2.3
Test purpose *Circuit reset* To verify that an automatic repeat attempt will be made on receipt of the reset circuit message after sending an initial address message and before any backward messages have been received.				

TSS SCS/ARA/	TP IBC_V_6_2_4	ISUP '97 reference 2.1.8; 2.8.1 iv); table A.1 of Q.764 [13]	Selection expression PICS A.13/3	Q.784.1 [10] reference 6.2.4
Test purpose *Continuity check required* To verify that an automatic repeat attempt will be made on continuity check failure.				

TSS SCS/ARA/	TP IBC_I_6_2_5	ISUP '97 reference 2.8.1 iv); 2.9.5.1 d)/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 6.2.5
Test purpose *Receipt of unreasonable signalling information* To verify that an automatic repeat attempt will be made on receipt of unreasonable signalling information after sending an initial address message and before receiving any backward messages.				

TSS SCS/DS/	TP IBC_V_6_3_1	ISUP '97 reference 2.8.1 i); 2.9.1.4/Q.764 [13]	Selection expression N/A	Q.784.1 [10] reference 6.3.1
Test purpose *Dual seizure for controlling SP* To verify that on detection of dual seizure, the call initiated by the controlling signalling point is completed and the non-controlling signalling point is backed off.				

TSS SCS/SAO/	TP IBC_V_6_4_1	ISUP '97 reference 2.1.10, 2.1.1.7.1/Q.764 [13]	Selection expression OutIE and PICS A.13/6	Q.784.1 [10] reference 6.4.1
Test purpose *FOT sent following a call to a subscriber* To verify that the FOT is correctly sent.				

TSS SCS/SAO/	TP IBC_V_6_4_2	ISUP '97 reference 2.1.10 2.1.1.7.1/Q.764 [13]	Selection expression IncIE and PICS A.13/6	Q.784.1 [10] reference 6.4.2
Test purpose *FOT received following a call to a subscriber* To verify that the FOT is correctly received.				

TSS SCS/SAO/	TP IBC_V_6_4_3	ISUP '97 reference 2.1.10, 2.1.1.7.1/Q.764 [13]	Selection expression Gateway and PICS A.13/6	Q.784.1 [10] reference 6.4.3
Test purpose *FOT sent following a call via codes 11 and 12* To verify that the FOT is correctly sent.				

TSS SCS/SAO/	TP IBC_V_6_4_4	ISUP '97 reference 2.1.10, 2.1.1.7.1/Q.764 [13]	Selection expression Gateway and PICS A.13/6	Q.784.1 [10] reference 6.4.4
Test purpose *FOT received following a call via codes 11 and 12* To verify that the FOT is correctly received.				

TSS SCS/SGM/	TP IBC_V_6_5_1	ISUP '97 reference 2.1.12/Q.764 [13]	Selection expression PICS A.13/7	Q.784.1 [10] reference 6.5.1
Test purpose *Sending of SGM* Verify that a call can be successfully completed if segmentation applies.				

TSS SCS/SGM/	TP IBC_V_6_5_2	ISUP '97 reference 2.6/Q.764 [13]	Selection expression PICS A.13/7	Q.784.1 [10] reference 6.5.2
Test purpose *Receipt of SGM* Verify that a call can be successfully completed if segmentation applies.				

TSS SCS/SGM/	TP IBC_V_6_5_3	ISUP '97 reference 2.1.12/Q.764 [13]	Selection expression PICS A.13/7	Q.784.1 [10] reference 6.5.3
Test purpose *Receipt of SGM after timer T34 expired* Verify that a call can be successfully completed if segmentation applies and that the SGM message will be discarded if the IUT receives it after T34 expires.				

TSS SCS/FB/	TP IBC_V_6_6_1	ISUP '97 reference 2.5.2/Q.764 [13]	Selection expression PICS A.13/10	Q.784.1 [10] reference 6.6.1
Test purpose *Fallback does not occur* To verify that a call can be successfully completed if fallback does not occur.				

TSS SCS/FB/	TP IBC_V_6_6_2_a	ISUP '97 reference 2.5.2. /Q.764 [13]	Selection expression PICS A.13/10	Q.784.1 [10] reference 6.6.2
Test purpose *Fallback occurs behind the IUT* To verify that a call can be successfully completed if fallback occurs behind the IUT and it is indicated in the ACM.				

TSS SCS/FB/	TP IBC_V_6_6_2_b	ISUP '97 reference 2.5.2/Q.764 [13]	Selection expression PICS A.13/10	Q.784.1 [10] reference 6.6.2
Test purpose *Fallback occurs behind the IUT* To verify that a call can be successfully completed if fallback occurs behind the IUT and it is indicated in the CPG.				

TSS SCS/FB/	TP IBC_V_6_6_2_c	ISUP '97 reference 2.5.2/Q.764 [13]	Selection expression PICS A.13/10	Q.784.1 [10] reference 6.6.2
Test purpose *Fallback occurs behind the IUT* To verify that a call can be successfully completed if fallback occurs behind the IUT and it is indicated in the ANM.				

TSS SCS/FB/	TP IBC_V_6_6_2_d	ISUP '97 reference 2.5.2/Q.764 [13]	Selection expression PICS A.13/10	Q.784.1 [10] reference 6.6.2
Test purpose *Fallback occurs behind the IUT* To verify that a call can be successfully completed if fallback occurs behind the IUT and it is indicated in the CON.				

TSS SCS/FB/	TP IBC_V_6_6_3_a	ISUP '97 reference 2.5.1.2.2; 2.5.1.3/Q.764 [13]	Selection expression PICS A.13/10	Q.784.1 [10] reference 6.6.3
Test purpose *Fallback occurs in the IUT* To verify that the IUT is able to perform Fallback (indication in ACM).				

TSS SCS/FB/	TP IBC_V_6_6_3_b	ISUP '97 reference 2.5.1; 2.5.1.2; 2.5.2.2.2; 2 2.5.1.3/Q.764 [13]	Selection expression PICS A.13/10	Q.784.1 [10] reference 6.6.3
Test purpose *Fallback occurs in the IUT* To verify that the IUT is able to perform Fallback (indication in CPG).				

TSS SCS/FB/	TP IBC_V_6_6_3_c	ISUP '97 reference 2.5.3/Q.764 [13]	Selection expression PICS A.13/10	Q.784.1 [10] reference 6.6.3
Test purpose *Fallback occurs in the IUT* To verify that the IUT is able to perform Fallback (indication in ANM).				

TSS SCS/FB/	TP IBC_V_6_6_3_d	ISUP '97 reference 2.5.3/Q.764 [13]	Selection expression PICS A.13/10	Q.784.1 [10] reference 6.6.3
Test purpose *Fallback occurs in the IUT* To verify that the IUT is able to perform fallback (indication in CON).				

7.2.7 BS: Bearer services

TSS BS/UNR/	TP IBC_V_7_1_1_a	ISUP '97 reference 2.1/Q.764 [13]	Selection expression PICS A.2/3	Q.784.1 [10] reference 7.1.1
Test purpose *Successful call setup* To verify that a 64 kbit/s call can be successfully completed using appropriate transmission medium requirement and user service information parameters (outgoing call, 2,4 kbit/s).				

TSS BS/UNR/	TP IBC_V_7_1_1_b	ISUP '97 reference 2.1/Q.764 [13]	Selection expression PICS A.2/3	Q.784.1 [10] reference 7.1.1
Test purpose *Successful call setup* To verify that a 64 kbit/s call can be successfully completed using appropriate transmission medium requirement and user service information parameters (outgoing call, 4,8 kbit/s).				

TSS BS/UNR/	TP IBC_V_7_1_1_c	ISUP '97 reference 2.1/Q.764 [13]	Selection expression PICS A.2/3	Q.784.1 [10] reference 7.1.1
Test purpose *Successful call setup* To verify that a 64 kbit/s call can be successfully completed using appropriate transmission medium requirement and user service information parameters (outgoing call, 9,6 kbit/s).				

TSS BS/UNR/	TP IBC_V_7_1_1_d	ISUP '97 reference 2.1/Q.764 [13]	Selection expression PICS A.2/3	Q.784.1 [10] reference 7.1.1
Test purpose *Successful call setup* To verify that a 64 kbit/s call can be successfully completed using appropriate transmission medium requirement and user service information parameters (outgoing call, 19,2 kbit/s).				

TSS BS/UNR/	TP IBC_V_7_1_1_e	ISUP '97 reference 2.1/Q.764 [13]	Selection expression PICS A.2/3	Q.784.1 [10] reference 7.1.1
Test purpose *Successful call setup* To verify that a 64 kbit/s call can be successfully completed using appropriate transmission medium requirement and user service information parameters (outgoing call, 64 kbit/s).				

TSS BS/UNR/	TP IBC_V_7_1_1_f	ISUP '97 reference 2.1/Q.764 [13]	Selection expression PICS A.2/3	Q.784.1 [10] reference 7.1.1
Test purpose *Successful call setup* To verify that a 64 kbit/s call can be successfully completed using appropriate transmission medium requirement and user service information parameters (incoming call, 2,4 kbit/s).				

TSS BS/UNR/	TP IBC_V_7_1_1_g	ISUP '97 reference 2.1/Q.764 [13]	Selection expression PICS A.2/3	Q.784.1 [10] reference 7.1.1
Test purpose *Successful call setup* To verify that a 64 kbit/s call can be successfully completed using appropriate transmission medium requirement and user service information parameters (incoming call, 4,8 kbit/s).				

TSS BS/UNR/	TP IBC_V_7_1_1_h	ISUP '97 reference 2.1/Q.764 [13]	Selection expression PICS A.2/3	Q.784.1 [10] reference 7.1.1
Test purpose *Successful call setup* To verify that a 64 kbit/s call can be successfully completed using appropriate transmission medium requirement and user service information parameters (incoming call, 9,6 kbit/s).				

TSS BS/UNR/	TP IBC_V_7_1_1_i	ISUP '97 reference 2.1/Q.764 [13]	Selection expression PICS A.2/3	Q.784.1 [10] reference 7.1.1
Test purpose *Successful call setup* To verify that a 64 kbit/s call can be successfully completed using appropriate transmission medium requirement and user service information parameters (incoming call, 19,2 kbit/s).				

TSS BS/UNR/	TP IBC_V_7_1_1_j	ISUP '97 reference 2.1/Q.764 [13]	Selection expression PICS A.2/3	Q.784.1 [10] reference 7.1.1
Test purpose *Successful call setup* To verify that a 64 kbit/s call can be successfully completed using appropriate transmission medium requirement and user service information parameters (incoming call, 64 kbit/s).				

TSS BS/UNR/	TP IBC_V_7_1_2_a	ISUP '97 reference 2.2/Q.764 [13]	Selection expression PICS A.2/3	Q.784.1 [10] reference 7.1.2
Test purpose *Unsuccessful call setup* To verify that the call will be immediately released by the outgoing signalling point, if a release message with a given cause is received and for circuits equipped with echo control, the echo control device is enabled (cause: unallocated number).				

TSS BS/UNR/	TP IBC_V_7_1_2_b	ISUP '97 reference 2.2/Q.764 [13]	Selection expression PICS A.2/3	Q.784.1 [10] reference 7.1.2
Test purpose *Unsuccessful call setup* To verify that the call will be immediately released by the outgoing signalling point, if a release message with a given cause is received and for circuits equipped with echo control, the echo control device is enabled (cause: no circuit available).				

TSS BS/UNR/	TP IBC_V_7_1_2_c	ISUP '97 reference 2.2/Q.764 [13]	Selection expression PICS A.2/3	Q.784.1 [10] reference 7.1.2
Test purpose *Unsuccessful call setup* To verify that the call will be immediately released by the outgoing signalling point, if a release message with a given cause is received and for circuits equipped with echo control, the echo control device is enabled (cause: BC not authorized).				

TSS BS/UNR/	TP IBC_V_7_1_2_d	ISUP '97 reference 2.2/Q.764 [13]	Selection expression PICS A.2/3	Q.784.1 [10] reference 7.1.2
Test purpose *Unsuccessful call setup* To verify that the call will be immediately released by the outgoing signalling point, if a release message with a given cause is received and for circuits equipped with echo control, the echo control device is enabled (cause: BC not presently available).				

TSS BS/UNR/	TP IBC_V_7_1_2_e	ISUP '97 reference 2.2/Q.764 [13]	Selection expression PICS A.2/3	Q.784.1 [10] reference 7.1.2
Test purpose *Unsuccessful call setup* To verify that the call will be immediately released by the outgoing signalling point, if a release message with a given cause is received and for circuits equipped with echo control, the echo control device is enabled (cause: BC not implemented).				

TSS BS/UNR/	TP IBC_V_7_1_3	ISUP '97 reference 2.8.1 i); 2.9.1.4/Q.764 [13]	Selection expression PICS A.2/3	Q.784.1 [10] reference 7.1.3
Test purpose *Dual seizure* To verify that an automatic repeat attempt will be made on detection of a dual seizure with two 64 kbit/s calls.				

TSS BS/AUD/	TP IBC_V_7_2_1_a	ISUP '97 reference 2.1/Q.764 [13]	Selection expression PICS A.2/2	Q.784.1 [10] reference 7.2.1
Test purpose *Successful call setup* To verify that a 3,1 kHz audio call can be successfully completed using appropriate transmission medium requirement and user service information parameters (outgoing call).				

TSS BS/AUD/	TP IBC_V_7_2_1_b	ISUP '97 reference 2.1/Q.764 [13]	Selection expression PICS A.2/2	Q.784.1 [10] reference 7.2.1
Test purpose *Successful call setup* To verify that a 3,1 kHz audio call can be successfully completed using appropriate transmission medium requirement and user service information parameters (incoming call).				

TSS BS/MCT/	TP IBC_V_7_3_1_a	ISUP '97 reference 2.1/Q.764 [13] 1.2/Q.763 [16]	Selection expression PICS A.2/5	Q.784.1 [10] reference 7.3.1
Test purpose *Outgoing call with "2 x 64 kbit/s unrestricted": successful* To verify that the IUT is able to setup an outgoing call with the bearer service "2 x 64 kbit/s unrestricted".				

TSS BS/MCT/	TP IBC_V_7_3_1_b	ISUP '97 reference 2.1/Q.764 [13] 1.2/Q.763 [16]	Selection expression PICS A.2/5	Q.784.1 [10] reference 7.3.1
Test purpose *Outgoing call with "384 kbit/s unrestricted": successful* To verify that the IUT is able to setup an outgoing call with the bearer service "384 kbit/s unrestricted".				

TSS BS/MCT/	TP IBC_V_7_3_1_c	ISUP '97 reference 2.1/Q.764 [13] 1.2/Q.763 [16]	Selection expression PICS A.2/5	Q.784.1 [10] reference 7.3.1
Test purpose *Outgoing call with "1 536 kbit/s unrestricted": successful* To verify that the IUT is able to setup an outgoing call with the bearer service "1 536 kbit/s unrestricted".				

TSS BS/MCT/	TP IBC_V_7_3_1_d	ISUP '97 reference 2.1/Q.764 [13] 1.2/Q.763 [16]	Selection expression PICS A.2/5	Q.784.1 [10] reference 7.3.1
Test purpose *Outgoing call with "1 920 kbit/s unrestricted": successful* To verify that the IUT is able to setup an outgoing call with the bearer service "1 920 kbit/s unrestricted".				

TSS BS/MCT/	TP IBC_V_7_3_2_a	ISUP '97 reference 2.1/Q.764 [13] 1.2/Q.763 [16]	Selection expression PICS A.2/5	Q.784.1 [10] reference 7.3.2
Test purpose *Incoming call with "2 x 64 kbit/s unrestricted": successful* To verify that the IUT is able to setup an incoming call with the bearer service "2 x 64 kbit/s unrestricted".				

TSS BS/MCT/	TP IBC_V_7_3_2_b	ISUP '97 reference 2.1/Q.764 [13] 1.2/Q.763 [16]	Selection expression PICS A.2/5	Q.784.1 [10] reference 7.3.2
Test purpose *Incoming call with "384 kbit/s unrestricted": successful* To verify that the IUT is able to setup an incoming call with the bearer service "384 kbit/s unrestricted".				

TSS BS/MCT/	TP IBC_V_7_3_2_c	ISUP '97 reference 2.1/Q.764 [13] 1.2/Q.763 [16]	Selection expression PICS A.2/5	Q.784.1 [10] reference 7.3.2
Test purpose *Incoming call with "1 536 kbit/s unrestricted": successful* To verify that the IUT is able to setup an incoming call with the bearer service "1 536 kbit/s unrestricted".				

TSS BS/MCT/	TP IBC_V_7_3_2_d	ISUP '97 reference 2.1/Q.764 [13] 1.2/Q.763 [16]	Selection expression PICS A.2/5	Q.784.1 [10] reference 7.3.2
Test purpose *Incoming call with "1 920 kbit/s unrestricted": successful* To verify that the IUT is able to setup an incoming call with the bearer service "1 920 kbit/s unrestricted".				

TSS BS/MCT/	TP IBC_V_7_3_3	ISUP '97 reference 2.1/Q.764 [13] 1.2/Q.763 [16]	Selection expression PICS A.2/5	Q.784.1 [10] reference 7.3.3
Test purpose *Unsuccessful multirate call setup: one circuit already busy* To verify that a multirate call setup is rejected by the IUT if one of the circuits necessary for the call is already busy.				

TSS BS/MCT/	TP IBC_V_7_3_4	ISUP '97 reference 2.9.1.4/Q.764 [13] 1.2/Q.763 [16]	Selection expression PICS A.2/5	Q.784.1 [10] reference 7.3.4
Test purpose *Dual seizure of different connection types: Controlling exchange* To verify that the IUT is able to detect a dual seizure for calls of different multirate connection types and that it completes the call involving the greater number of circuits.				

TSS BS/MCT/	TP IBC_V_7_3_5	ISUP '97 reference 2.9.1.4 b)/Q.764 [13] 1.2/Q.763 [16]	Selection expression PICS A.2/5	Q.784.1 [10] reference 7.3.5
Test purpose *Dual seizure of different connection types: Non-controlling exchange* To verify that the IUT is able to detect a dual seizure for calls of different multirate connection types and that it re-attempts the call involving the smaller number of circuits.				

7.2.8 CUF: Congestion and user flow control

TSS	TP	ISUP '97 reference	Selection expression	Q.784.1 [10] reference
CUFC/ACC/	IBC_V_8_1_1	2.11/Q.764 [13]	PICS A.13/23	8.1.1
Test purpose *Receipt of a release message containing an automatic congestion level parameter* To verify that the adjacent exchange (SPA), after having received a release message containing an automatic congestion level parameter, reduces the traffic to the overload affected exchange (SPB).				

TSS	TP	ISUP '97 reference	Selection expression	Q.784.1 [10] reference
CUFC/ACC/	IBC_V_8_1_2	2.11/Q.764 [13]	PICS A.13/23	8.1.2
Test purpose *Sending of a release message containing an automatic congestion level parameter* To verify that the IUT is able to send a release message containing an automatic congestion level parameter.				

TSS	TP	ISUP '97 reference	Selection expression	Q.784.1 [10] reference
CUFC/IAC/	IBC_V_8_2_1	2.13/Q.764 [13]	PICS A.13/24	8.2.1
Test purpose *Receipt of a user part test message* To verify that on receipt of a user part test message the IUT will respond by sending a user part available message.				

TSS	TP	ISUP '97 reference	Selection expression	Q.784.1 [10] reference
CUFC/IAC/	IBC_V_8_2_2	2.13/Q.764 [13]	PICS A.13/24	8.2.2
Test purpose *Sending of a user part test message* To verify that the IUT is able to send a user part test message.				

TSS	TP	ISUP '97 reference	Selection expression	Q.784.1 [10] reference
CUFC/IAC/	IBC_V_8_2_3	2.13/Q.764 [13]	PICS A.13/24	8.2.3
Test purpose *T4: waiting to receive a response to a user part test message* To verify that the IUT is able to restart the availability test procedure after expiry of timer T4.				

7.2.9 EC: Echo control

TSS	TP	ISUP '97 reference	Selection expression	Q.784.1 [10] reference
EC/SI	IBC_V_9_1_1	2.7.3/Q.764 [13]	A13/12	
Test purpose *Q.767 [9] echo control procedure for call setup (initiated in SPA)* To verify that the call can be successfully established with the inclusion of echo control devices. Pre-test conditions: None.				

TSS	TP	ISUP '97 reference	Selection expression	Q.784.1 [10] reference
EC/SI	IBC_V_9_1_2	2.7.3/Q.764 [13]	A13/12	
Test purpose *Q.767 [9] echo control procedure for call setup (initiated in SPB)* To verify that the call can be successfully established if the IUT does not include an outgoing half echo control device. Pre-test conditions: None.				

TSS	TP	ISUP '97 reference	Selection expression	Q.784.1 [10] reference
EC/SI	IBC_V_9_1_3	2.7.2.1/Q.764 [13]	A13/12	
Test purpose *Q.767 [9] echo control procedure for call setup (initiated in SPB)* To verify that the call can be successfully completed and enhanced echo control indicators and parameters are passed transparently. Pre-test conditions: None.				

TSS EC/EN	TP IBC_V_9_2_1	ISUP '97 reference 2.7.2, Annex C.1 of Q.764 [13]	Selection expression PICS A.13/13	Q.784.1 [10] reference

Test purpose

*Q.764 [*13*] enhanced echo control procedure for call setup (initiated in SPB)*
To verify that a call can be setup where all exchanges support enhanced echo control signalling procedures and have echo control equipment available.

Pre-test conditions: None.

TSS EC/EN	TP IBC_V_9_2_2	ISUP '97 reference 2.7.2, Annex C.2 of Q.764 [13]	Selection expression PICS A.13/13	Q.784.1 [10] reference

Test purpose

*Q.764 [*13*] enhanced echo control procedure for call setup incorporating multiple forwarding (initiated in SPA)*
To verify that a call can be setup incorporating call forwarding where all exchanges support enhanced echo control signalling procedures and echo control equipment is not available.

Pre-test conditions: Call forwarding enabled.

TSS EC/EN	TP IBC_V_9_2_3	ISUP '97 reference 2.7.2, Annex C.3 of Q.764 [13]	Selection expression PICS A.13/13	Q.784.1 [10] reference

Test purpose

*Q.764 [*13*] enhanced echo control procedure for call setup (initiated in SPA)*
To verify that a call can be setup where all exchanges support enhanced echo control signalling procedures and echo control equipment is not available in all exchanges.

Pre-test conditions: None.

TSS EC/EN	TP IBC_V_9_2_4	ISUP '97 reference 2.7.2, Annex C.4.1 of Q.764 [13]	Selection expression PICS A.13/13	Q.784.1 [10] reference

Test purpose

*Q.764 [*13*] enhanced echo control procedure for call setup (initiated in SPA)*
To verify that a call can be setup from a non enhanced (simple) echo control switch where following exchanges support enhanced echo control signalling procedures and echo control equipment is available.

Pre-test conditions: None.

TSS EC/EN	TP IBC_V_9_2_5	ISUP '97 reference 2.7.2, Annex C.4.2 of Q.764 [13]	Selection expression PICS A.13/13	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] enhanced echo control procedure for call setup (initiated in SPA)* To verify that a call can be setup from an ISUP'92 switch to an ISUP'97 enhanced echo control switch where following exchanges support enhanced echo control signalling procedures and echo control equipment is available. Pre-test conditions: None.				

TSS EC/EN	TP IBC_V_9_2_6	ISUP '97 reference 2.7.2, Annex C.5.1 of Q.764 [13]	Selection expression PICS A.13/13	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] enhanced echo control procedure for call setup (initiated in SPA)* To verify that a call can be terminated on a simple echo control switch after originating from an ISUP'97 enhanced echo control switch. Pre-test conditions: None.				

TSS EC/EN	TP IBC_V_9_2_7	ISUP '97 reference 2.7.2, Annex C.5.2 of Q.764 [13]	Selection expression PICS A.13/13	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] enhanced echo control procedure for call setup (initiated in SPA)* To verify that a call can be terminated on an ISUP'92 switch after originating from an ISUP'97 enhanced echo control switch where echo control equipment is provided. Pre-test conditions: None.				

TSS EC/EN	TP IBC_V_9_2_8	ISUP '97 reference 2.7.2, Annex C.6.1 of Q.764 [13]	Selection expression PICS A.13/13	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] enhanced echo control procedure for call setup (initiated in SPA)* To verify that a call can be terminated on an ISUP'92 switch after originating from an ISUP'97 simple echo control switch where following exchanges support enhanced echo control signalling procedures. Pre-test conditions: None.				

TSS EC/EN	TP IBC_V_9_2_9	ISUP '97 reference 2.7.2, Annex C.6.2 of Q.764 [13]	Selection expression PICS A.13/13	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] enhanced echo control procedure for call setup (initiated in SPA)* To verify that a call can be terminated on an ISUP'97 simple echo control switch after originating from an ISUP'92 echo control switch where following exchanges support simple echo control signalling procedures. Pre-test conditions: Call invokes I.N. query.				

TSS EC/EN	TP IBC_V_9_2_10	ISUP '97 reference 2.7.2, Annex C.7 of Q.764 [13]	Selection expression PICS A.13/13	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] enhanced echo control procedure for call setup (initiated in SPA)* To verify that interworking with Intelligent Network entities calls can be terminated on an enhanced echo control switch. Pre-test conditions: None.				

TSS EC/EN	TP IBC_V_9_2_11	ISUP '97 reference 2.7.2.2.3.1.1 table 2 and table 3 of Q.764 [13]	Selection expression PICS A.13/13	Q.784.1 [10] reference
Test purpose *Q.767 [9] echo control procedure for call setup (initiated in SPA)* To verify that a call with OECD information indicator set to o.i. (outgoing echo control device included) is correctly mapped to ECIF o.i. and ECIFA values o.a in the forward direction. Pre-test conditions: None.				

TSS EC/EN	TP IBC_V_9_2_12	ISUP '97 reference 2.7.2.2.3.1.1 table 2 and table of Q.764 [13]	Selection expression PICS A.13/13	Q.784.1 [10] reference
Test purpose *Q.767 [9] echo control procedure for call setup (initiated in SPA)* To verify that a call with OECD information indicator set to o.n.i, o.a. (outgoing echo control device not included but available) is correctly mapped to ECIF o.n.i. and ECIFA values o.a in the forward direction. Pre-test conditions: None.				

TSS EC/EN	TP IBC_V_9_2_13	ISUP '97 reference 2.7.2.2.3.1.1 table 2 and table 3 of Q.764 [13]	Selection expression PICS A.13/13	Q.784.1 [10] reference
Test purpose *Q.767 [9] echo control procedure for call setup (initiated in SPA)* To verify that a call with OECD information indicator set to o.n.i, o.n, a. (outgoing echo control device not included and not available) is correctly mapped to ECIF o.n.i. and ECIFA values o.n, a in the forward direction. Pre-test conditions: None.				

TSS EC/EN	TP IBC_V_9_2_14	ISUP '97 reference 2.7.2.2.3.1.1 table 2 and table 3 of Q.764 [13]	Selection expression PICS A.13/13	Q.784.1 [10] reference
Test purpose *Q.767 [9] echo control procedure for call setup (initiated in SPA)* To verify that a call with OECD information not received and the ECD indicator set to o.n.i. then the call is correctly mapped to ECIF o.n.i. and ECIFA values o.n, a in the forward direction. Pre-test conditions: None.				

TSS EC/EN	TP IBC_V_9_2_15	ISUP '97 reference 2.7.2.2.3.1.1 table 2 and table 3 of Q.764 [13]	Selection expression PICS A.13/13	Q.784.1 [10] reference
Test purpose *Q.767 [9] echo control procedure for call setup (initiated in SPA)* To verify that a call with OECD information not received and the ECD indicator set to o.i. then the call is correctly mapped to ECIF o.i. and ECIFA values o.a in the forward direction. Pre-test conditions: None.				

TSS EC/EN	TP IBC_V_9_2_16	ISUP '97 reference 2.7.2.2.3.1.1 table 2 and table 3 of Q.764 [13]	Selection expression PICS A.13/13	Q.784.1 [10] reference
Test purpose *Q.767 [9] echo control procedure for call setup (initiated in SPA)* To verify that a call with OECD information set to no information then the call is correctly mapped to ECIF o.n.i. and ECIFA values o.n.a. in the forward direction. Pre-test conditions: None.				

TSS EC/EN	TP IBC_V_9_2_17	ISUP '97 reference 2.7.2.2.3.1.3 table 4 of Q.764 [13]	Selection expression PICS A.13/13	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] enhanced echo control procedure for call setup (initiated in SPA)* To verify that on reception of IECD and OECD indicators in an NRM message the correct ECRF values are sent forward. Pre-test conditions: None.				

TSS EC/EN	TP IBC_V_9_2_18	ISUP '97 reference 2.7.2.2.3.1.4 table 5 of Q.764 [13]	Selection expression PICS A.13/13	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] enhanced echo control procedure for call setup (initiated in SPA)* To verify that on reception of the ECRF event an NRM message is generated with the correct OECD request indicator and IECD request indicator in the echo control information parameter. Pre-test conditions: None.				

TSS EC/EN	TP IBC_V_9_2_19	ISUP '97 reference 2.7.2.2.3.2.2 table 7.1 and table 7.2 of Q.764 [13]	Selection expression PICS A.13/13	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] enhanced echo control procedure for call setup (initiated in SPA)* To verify that on reception of an echo request event (ECRB) an OECD request is included in the first backward message to the preceding exchange. Pre-test conditions: None.				

7.2.10 TAR: Temporary alternate routing

TSS TAR/	TP IBC_V_10_1_1	ISUP '97 reference 2.16 of Q.764 [13]	Selection expression PICS A.13/26	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] support for Temporary alternative routing (TAR)* To verify that an exchange which applies network management controls for temporary alternate routing sets the TAR indicator to TAR controlled call in an initial address message. Pre-test conditions: None.				

TSS TAR/	TP IBC_V_10_1_2	ISUP '97 reference 2.16 of Q.764 [13]	Selection expression PICS A.13/26	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] support for Temporary alternative routing (TAR)* To verify that on reception of a network management control parameter with the TAR indicator set to TAR controlled call in an initial address message the subsequent exchange does not apply network management temporary alternate routing. Pre-test conditions: None.				

7.2.11 HOP: Hop Counter Procedure

TSS HOP/	TP IBC_V_11_1_1	ISUP '97 reference 2.17.1 of Q.764 [13]	Selection expression PICS A.13/27	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] support for Hop Counter Procedure* To verify that when the hop counter capability is activated the outgoing IAM includes the hop counter parameter set to the initial count value. Pre-test conditions: None.				

TSS HOP/	TP IBC_V_11_1_2	ISUP '97 reference 2.17.1 of Q.764 [13]	Selection expression Type B NTE, ITE, InclE, OutlE	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] support for Hop Counter Procedure* To verify that when a call forwarding exchange receives a Release message with cause No 25 (exchange routing error), the management system is notified and cause value 31 (normal unspecified) returned to the preceding exchange. Pre-test conditions: None.				

TSS HOP/	TP IBC_V_11_1_3	ISUP '97 reference 2.17.1 of Q.764 [13]	Selection expression Type A PICS A.13/27	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] support for Hop Counter Procedure* To verify that when an originating exchange receives a Release message with cause No 25 (exchange routing error), the management system is notified. Pre-test conditions: None.				

TSS HOP/	TP IBC_V_11_1_4	ISUP '97 reference 2.17.2 of Q.764 [13]	Selection expression Type B NTE, ITE, InclE, OutlE	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] support for Hop Counter Procedure* To verify that when the hop counter parameter is received in an IAM the intermediate exchange decrements the hop counter parameter by one in the outgoing IAM. Pre-test conditions: None.				

TSS HOP/	TP IBC_V_11_1_5	ISUP '97 reference 2.17.2 of Q.764 [13]	Selection expression Type B NTE, ITE, InclE, OutlE	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] support for Hop Counter Procedure* To verify that when an intermediate exchange receives a hop counter parameter set to one the call is released by returning a Release message with cause No 25 (exchange routing error) to the preceding exchange and the management system is notified. Pre-test conditions: None.				

7.2.12 CALLCOL: Call Collect Request Procedure

TSS CALLCOL/	TP IBC_V_12_1_1	ISUP '97 reference 2.18 of Q.764 [13]	Selection expression PICS A.13/28	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] support for Call Collect Request Procedure* To verify that when an exchange invokes an operator service request that a call be charged to a called party then a collect call request parameter coded to collect call requested is sent in the IAM sent beyond that exchange. Pre-test conditions: None.				

TSS CALLCOL/	TP IBC_V_12_1_2	ISUP '97 reference 2.18 of Q.764 [13]	Selection expression PICS A.13/28	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] support for Call Collect Request Procedure* To verify that when an exchange receives an indication in an IAM of a collect call request parameter coded to collect call requested then that exchange takes correct action to charge the called party. Pre-test conditions: None.				

7.2.13 N x 64 k: N x 64 kbit connection type

TSS N x 64 k/	TP IBC_V_13_1_1	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [13] Procedure for Nx64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to N x 64 k/bits service and circuit assignment map parameter is not included then the correct number of contiguous circuits is selected with the lowest member circuit being identified by the circuit identification code. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_2	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [13] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to N x 64 k/bits service and circuit assignment map parameter is included then the correct number of non-contiguous circuits is selected as specified by the circuit assignment map parameter. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_a	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [13] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 3 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_b	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 4 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_c	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 5 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_d	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 7 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_e	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 8 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_f	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 9 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_g	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 10 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_h	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 11 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_i	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 12 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_j	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 13 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_k	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [13] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 14 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_l	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [13] Procedure for Nx64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 15 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_m	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [13] Procedure for Nx64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 16 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_n	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [13] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 17 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_o	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [13] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 18 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_p	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [13] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 19 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_q	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 20 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_r	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 21 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_s	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 22 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_t	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 23 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_u	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 25 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_v	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 26 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_w	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 27 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_x	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 28 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed.				
Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_3_y	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] Procedure for N x 64 kbit/s connection type* To verify that when an exchange receives an IAM with the TMR set to 29 x 64 k/bits unrestricted then the correct number of contiguous circuits is selected and the call is successfully completed. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_4	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] Procedure for N x 64 kbit/s connection type* To verify that when an intermediate exchange receives an IAM with the TMR set to N x 64 k/bits service then the correct number of non-contiguous circuits are selected in the outgoing call as specified by the regenerated circuit assignment map parameter. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_5	ISUP '97 reference 2.1.13 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] Procedure for N x 64 kbit/s connection type* To verify that an ISC supporting non-contiguous circuit selection interworking with an exchange supporting only contiguous circuit selection and ISUP'92 multirate connection types receives an IAM from either source that only contiguous circuit selection is regenerated. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_6	ISUP '97 reference 2.9.1.4 b) of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [*13*] Procedure for N x 64 kbit/s connection type* To verify that in the event of dual seizure where different connection types occur the call with the greater number of 64 kbit/s circuits has priority. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_7	ISUP '97 reference 2.9.1.4 c) of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference

Test purpose

*Q.764 [*13*] Procedure for N x 64 kbit/s connection type*
To verify that in the event of dual seizure where the same multirate connection types occur the circuit identification code value in the IAM is divided by the number of 64 kbit/s circuits required by the call with the resulting integer used to determine for higher signalling point code and even result for priority on the call.

Pre-test conditions: None.

TSS N x 64 k/	TP IBC_V_13_1_8	ISUP '97 reference 2.9.1.4 c) of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference

Test purpose

*Q.764 [*13*] Procedure for N x 64 kbit/s connection type*
To verify that in the event of dual seizure where the same multirate connection types occur the circuit identification code value in the IAM is divided by the number of 64 kbit/s circuits required with the resulting integer used to determine for lower signalling point code and odd result for priority on the call.

Pre-test conditions: None.

TSS N x 64 k/	TP IBC_V_13_1_9	ISUP '97 reference 2.9.1.4 d) of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference

Test purpose

*Q.764 [*13*] Procedure for N x 64 kbit/s connection type*
To verify that in the event of dual seizure where one of the calls is of N x 64 kbit/s connection type one exchange will control all the circuits derived to support the N x 64 kbit/s connection. (dependant on bilateral agreement).

Pre-test conditions: None.

TSS N x 64 k/	TP IBC_V_13_1_10	ISUP '97 reference 2.9.3.1 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [13] Procedure for N x 64 kbit/s connection type* To verify that in the event of reset circuit being received for a circuit being used by a N x 64 kbit/s all the circuits associated with that call are cleared. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_10_a	ISUP '97 reference 2.9.3.1 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [13] Procedure for N x 64 kbit/s connection type* To verify that in the event of reset circuit being received for a circuit where an IAM for a N x 64 kbit/s call has been sent but no backward message has been received then an automatic repeat attempt will be made after clearing the original circuits. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_11	ISUP '97 reference 2.9.3.2 of Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference
Test purpose *Q.764 [13] Procedure for N x 64 kbit/s connection type* To verify that in the event of circuit group reset being received for a circuit being used by a N x 64 kbit/s all the circuits associated with that call are cleared. Pre-test conditions: None.				

TSS N x 64 k/	TP IBC_V_13_1_12	ISUP '97 reference 2.9.5.1 e) /Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference

Test purpose

*Q.764 [*13*] Procedure for N x 64 kbit/s connection type*
To verify that in the event of a release complete message being received for a circuit being used by a N x 64 kbit/s where a release message has not been sent then a release message is sent for the lowest circuit identification code of the N x 64 kbit/s call and all the circuits associated with that call are cleared.

Pre-test conditions: None.

TSS N x 64 k/	TP IBC_V_13_1_13	ISUP '97 reference 2.9.5.1 f) /Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference

Test purpose

*Q.764 [*13*] Procedure for N x 64 kbit/s connection type*
To verify that in the event that an unexpected message is received for a call where circuits are seized for a N x 64 kbit/s call but prior to the receipt of a backward message multiple reset circuit messages or a circuit group reset message is sent then for an incoming call and any interconnected circuits will be released.

Pre-test conditions: None.

TSS N x 64 k/	TP IBC_V_13_1_14	ISUP '97 reference 2.9.5.1 f) /Q.764 [13]	Selection expression PICS A 2/10	Q.784.1 [10] reference

Test purpose

*Q.764 [*13*] Procedure for N x 64 kbit/s connection type*
To verify that in the event that an unexpected message is received for a call where circuits are seized for a N x 64 kbit/s call but prior to the receipt of a backward message multiple reset circuit messages or a circuit group reset message is sent then for an outgoing call and an automatic repeat attempt is provided on another circuit.

Pre-test conditions: None.

8 Test coverage

8.1 General remarks

The test purposes defined in this test specification cover most main capabilities of the ISUP '97 reference specification. A list of areas/capabilities currently not covered is provided in table 4 of ITU-T Recommendation Q.784.3 [12]. The test purposes defined are not exhaustive, and do not cover all aspects of the reference specification. As can be seen from table 5 of ITU-T Recommendation Q.784.2 [11], the majority of test purposes (60 %) concentrate on valid behaviour.

The number of invalid behaviour test purposes is limited. An expansion of the invalid behaviour test purposes is left for further study.

Table 4: Issues not tested

Behaviour on receipt of ISUP messages with format error	Not tested
Overlength messages	Not tested
Dynamic Echo Control Procedure	For further study

Table 5: Number of test purposes ISUP v3 Basic Call

Number of test cases for valid behaviour (V)	162
Number of test cases for inopportune behaviour (I)	41
Number of test cases with syntactically incorrect stimulus (S)	65
Total	268

Bibliography

The following material, though not specifically referenced in the body of the present document (or not publicly available), gives supporting information.

- ISO/IEC 9646-2: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 2: Abstract test suite specification".
- ISO/IEC 9646-3/DAM 1: "Conformance testing methodology and framework - Part 3: The Tree and Tabular Combined Notation; Amendment 1: TTCN extensions".
- ISO/IEC 9646-5: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 5: Requirements on test laboratories and clients for the conformance assessment process".
- ITU-T Recommendation Q.850: "Usage of cause and location in the Digital Subscriber Signalling System No. 1 and the Signalling System No. 7 ISDN User Part".

History

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