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*European Standard (Telecommunications series)*

**Integrated Services Digital Network (ISDN);  
Digital Subscriber Signalling System No. one (DSS1) protocol;  
Basic call control;  
Enhancement at the "b" service entry point for  
Virtual Private Network (VPN) applications;  
Part 5: Test Suite Structure and Test Purposes (TSS&TP)  
specification for the network**

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## Foreword

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

The present document is part 5 of a multi-part standard covering the Digital Subscriber Signalling System No. one (DSS1) protocol specification for the Integrated Services Digital Network (ISDN) basic call control extensions at the "b" service entry point for VPN applications, as described below:

- Part 1: "Protocol specification";
- Part 2: "Protocol Implementation Conformance Statement (PICS) proforma specification";
- Part 3: "Test Suite Structure and Test Purposes (TSS&TP) specification for the user";
- Part 4: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for the user";
- Part 5: "Test Suite Structure and Test Purposes (TSS&TP) specification for the network";**
- Part 6: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for the network".

<b>Proposed national transposition dates</b>	
Date of latest announcement of this EN (doa):	3 months after ETSI publication
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# 1 Scope

This fifth part of EN 301 060 is applicable to the basic call control extensions at the "b" service entry point for Virtual Private Network (VPN) applications for the pan-European Integrated Services Digital Network (ISDN) as provided by European public telecommunications operators at the T reference point (as defined in ITU-T Recommendation I.411 [13]) by means of the Digital Subscriber Signalling System No. one (DSS1) protocol. Stage three identifies the protocol procedures and switching functions needed to support a telecommunications service (see CCITT Recommendation I.130 [12]).

The present document specifies the Test Suite Structure and Test Purposes (TSS&TP) for the network side for the ISDN DSS1 basic call control extensions at the "b" service entry point for VPN applications as specified in EN 301 060-1 [1] in compliance with the relevant requirements and in accordance with the relevant guidance given in ISO/IEC 9646-7 [11].

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# 2 Normative references

References may be made to:

- a) specific versions of publications (identified by date of publication, edition number, version number, etc.), in which case, subsequent revisions to the referenced document do not apply; or
- b) all versions up to and including the identified version (identified by "up to and including" before the version identity); or
- c) all versions subsequent to and including the identified version (identified by "onwards" following the version identity); or
- d) publications without mention of a specific version, in which case 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] EN 301 060-1 (V1.2): "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Basic call control; Enhancement at the "b" service entry point for Virtual Private Network (VPN) applications; Part 1: Protocol specification".
- [2] EN 301 060-2 (V1.1): "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Basic call control; Enhancement at the "b" service entry point for Virtual Private Network (VPN) applications; Part 2: Protocol implementation Conformance Statement (PICS) proforma specification".
- [3] EN 300 403-1: "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Signalling network layer for circuit-mode basic call control; Part 1: Protocol specification [ITU-T Recommendation Q.931 (1993), modified]".
- [4] ETS 300 403-2: "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Signalling network layer for circuit-mode basic call control; Part 2: Specification and Description Language (SDL) diagrams".
- [5] EN 300 403-3: "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Signalling network layer for circuit-mode basic call control; Part 3: Protocol Implementation Conformance Statement (PICS) proforma specification".
- [6] ETS 300 403-5: "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Signalling network layer for circuit-mode basic call control; Part 5: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for the user".
- [7] ETS 300 406 (1995): "Methods for Testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".

- [8] ISO/IEC 9646-1: "Information technology; Open systems interconnection; Conformance testing methodology and framework; Part 1: General concepts".
- [9] ISO/IEC 9646-2: "Information technology; Open Systems Interconnection; Conformance testing methodology and framework; Part 2: Abstract Test Suite specification".
- [10] ISO/IEC 9646-3: "Information technology; Open Systems Interconnection; Conformance testing methodology and framework; Part 3: The Tree and Tabular Combined Notation (TTCN)".
- [11] ISO/IEC 9646-7: "Information technology; Open systems interconnection; Conformance testing methodology and framework; Part 7: Implementation Conformance Statements".
- [12] CCITT Recommendation I.130 (1988): "Method for the characterization of telecommunication services supported by an ISDN and network capabilities of an ISDN".
- [13] ITU-T Recommendation I.411 (1993): "ISDN user-network interfaces - Reference configurations".

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## 3 Definitions and abbreviations

### 3.1 Definitions

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

#### 3.1.1 Definitions related to conformance testing

**abstract test case:** Refer to ISO/IEC 9646-1 [8].

**Abstract Test Suite (ATS):** Refer to ISO/IEC 9646-1 [8].

**active test:** A test case where the Implementation Under Test (IUT) is required to send a particular message, but not in reaction to a received message. This would usually involve the use of PIXIT information to see how this message can be generated and quite often is specified in an ATS using an implicit send event.

**Implementation Under Test (IUT):** Refer to ISO/IEC 9646-1 [8].

**implicit send event:** Refer to ISO/IEC 9646-3 [10].

**lower tester:** Refer to ISO/IEC 9646-1 [8].

**passive test:** A test case where the IUT is required to respond to a protocol event (e.g. received message) with another protocol event (e.g. send message) which normally does not require any special operator intervention as associated with the implicit send event.

**point of control and observation:** Refer to ISO/IEC 9646-1 [8].

**Protocol Implementation Conformance Statement (PICS):** Refer to ISO/IEC 9646-1 [8].

**PICS proforma:** Refer to ISO/IEC 9646-1 [8].

**Protocol Implementation eXtra Information for Testing (PIXIT):** Refer to ISO/IEC 9646-1 [8].

**PIXIT proforma:** Refer to ISO/IEC 9646-1 [8].

**system under test:** Refer to ISO/IEC 9646-1 [8].

**Test Purpose (TP):** Refer to ISO/IEC 9646-1 [8].

#### 3.1.2 Definitions related to EN 301 060-1

**dummy call reference:** See EN 300 403-1 [3], subclause 4.3.

**Integrated Services Digital Network (ISDN):** See ITU-T Recommendation I.112 [9], definition 308.

**ISDN number:** A number conforming to the numbering and structure specified in CCITT Recommendation E.164 [10].

**service; telecommunication service:** See ITU-T Recommendation I.112 [9], definition 201.

**supplementary service:** See ITU-T Recommendation I.210 [11], subclause 2.4.

**T:** The DSS1 protocol entity at the User side of the user-network interface where a T reference point applies (User is a Private ISDN).

## 3.2 Abbreviations

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

ATS	Abstract Test Suite
ISDN	Integrated Services Digital Network
IUT	Implementation Under Test
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation eXtra Information for Testing
TP	Test Purpose
TSS	Test Suite Structure
VPN	Virtual Private Network

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## 4 Test Suite Structure (TSS)

- Null call state N00
  - Valid
    - Outgoing call
    - Incoming call - point-to-point configuration
  - Inopportune
  - Syntactically invalid
- Overlap Sending call state N02
  - Valid
  - Inopportune
  - Syntactically invalid
- Outgoing Call Proceeding call state N03
  - Valid
  - Inopportune
  - Syntactically invalid
- Call Delivered call state N04
  - Valid
  - Inopportune
  - Syntactically invalid
- Call Present call state N06
  - Valid
    - Point-to-point configuration
  - Inopportune
  - Syntactically invalid
- Call Received call state N07
  - Valid
    - Point-to-point configuration
  - Inopportune
  - Syntactically invalid
- Incoming Call Proceeding call state N09
  - Valid
    - Point-to-point configuration



- Inopportune
  - Syntactically invalid
- Active call state N10 (Incoming call)
  - Valid
  - Inopportune
  - Syntactically invalid
- Active call state N10 (Outgoing call)
  - Valid
  - Inopportune
  - Syntactically invalid
- Disconnect Indication call state N12 (Incoming call)
  - Valid
  - Inopportune
  - Syntactically invalid
- Disconnect Indication call state N12 (Outgoing call)
  - Valid
  - Inopportune
  - Syntactically invalid
- Release Request call state N19 (Incoming call)
  - Valid
  - Inopportune
  - Syntactically invalid
- Release Request call state N19 (Outgoing call)
  - Valid
  - Inopportune
  - Syntactically invalid
- Call Abort call state N22
- Overlap Receiving call state N25
  - Valid
    - Point-to-point configuration
  - Inopportune
  - Syntactically invalid
- Restart Null call state R00 (Incoming call)
  - Valid
  - Inopportune
  - Syntactically invalid
- Restart Null call state R00 (Outgoing call)
  - Valid
  - Inopportune
  - Syntactically invalid
- Restart Request call state R01
  - Valid
  - Inopportune
  - Syntactically invalid
- Message segmentation procedure
  - Valid
  - Inopportune
  - Syntactically invalid

## 5 Test Purposes (TP)

### 5.1 Introduction

For each test requirement, a TP is defined.

#### 5.1.1 TP naming convention

TGs are numbered, starting at 001, within each group. Groups are organized according to the TSS. Additional references are added to identify the actual test suite and whether it applies to the network or the user (see table 1).

**Table 1: TP identifier naming convention scheme**

Identifier:	<b>&lt;layer iut&gt;_&lt;state&gt;_&lt;group&gt;_&lt;nnn&gt;</b>		
<layer iut>	=	layer + type of IUT:	e.g. "L3N" for layer 3, IUT = network
<state>	=	call state:	e.g. N10 for Active call state
<group>	=	group:	one character field representing the group reference according to TSS
			V: Valid stimulus
			I: Inopportune stimulus
			S: Syntactically invalid stimulus
<nnn>	=	sequential number:	(001-999)

#### 5.1.2 Source of TP definition

The TPs are based on EN 300 403-1 [3] and ETS 300 403-2 [4].

#### 5.1.3 TP structure

Each TP has been written in a manner which is consistent with all other TPs. The intention of this is to make the TPs more readable and checkable. A particular structure has been used which is illustrated in table 2. This table should be read in conjunction with any TP, i.e. please use a TP as an example to facilitate the full comprehension of table 2.

Table 2: Structure of a single TP

TP part	Text	Example
<b>Header</b>	<Identifier> <i>tab</i> <subclause number in base EN 300 403-1 [3] or other defined>  <VPNxxx>	see table 1 subclause 2.3.4, subclause 9.3.1.1 [3] (see note 3)  VPNxxx (see note 4)
<b>Stimulus</b>	Ensure that the IUT in the <basic call state> <trigger> <i>see below for message structure</i>  <i>or</i> <goal>	N00, N10, etc. on receipt of a XXXX message (see note 2) to request a ...
<b>Reaction</b>	<action> <conditions> <i>if the action is sending</i> <i>see below for message structure</i> <next action>, etc. <i>and</i> remains in the same state <i>or</i> and enters state <state>	sends, saves, does, etc. using en bloc sending, etc.
<b>Message structure</b>	<message type> message a) with a <info element> information element b) indicating in the <field name> <coding of the field> and <i>back to a) or b)</i>	SETUP, FACILITY, CONNECT, etc. (see note 2) Bearer capability, Facility, etc.
<p>NOTE 1: Text in italics will not appear in TPs and text between &lt;&gt; is filled in for each TP and may differ from one TP to the next.</p> <p>NOTE 2: All messages shall be considered as "valid and compatible" unless otherwise specified in the test purpose.</p> <p>NOTE 3: The subclause indicated there refers directly to the EN 300 403-1 [3] unless otherwise specified, i.e. subclause 9.3.1.1 [6] refers directly to EN 301 060-1 [1].</p> <p>NOTE 4: VPNxxx indicates the origin of the test purpose.  <b>VPNMOD:</b> indicates that the test purpose was taken from ETS 300 403-5 [6] and modified in accordance with the VPN context.  <b>VPNNEW:</b> indicates that the test purpose did not exist in ETS 300 403-5 [6] and was created to cover a VPN specific procedure.            No indication is used when the test purposes was directly taken from ETS 300 403-5 [6] without modification.</p>		

## 5.1.4 Test strategy

As the base standard EN 300 403-1 [3] contains no explicit requirements for testing, the TPs were generated as a result of an analysis of the base standard and the PICS specification EN 300 403-3 [5].

The TPs are only based on conformance requirements related to the externally observable behaviour of the IUT, and are limited to conceivable situations to which a real implementation is likely to be faced (ETS 300 406 [7]).

## 5.1.5 Test of call states

Many TPs include a reference to the IUT's final call state after the realization of the TP. In these cases the TP includes the requirement to ensure that the IUT has entered this particular final call state. Ensuring that the IUT is in a particular call state shall be realized by following the procedures described in subclause 5.8.10 of EN 300 403-1 [3]. According to these procedures, the IUT on receipt of a STATUS ENQUIRY message, shall respond with a STATUS message indicating, in the third octet of the Call state information element, the current call state of the IUT. This exchange of messages is not mentioned explicitly in each TP but is considered to be implicit in the reference to the final call state. This way of phrasing the TPs has been used to avoid over-complicating the text and structure of the TPs and to improve the readability.

The call state being reached by the IUT in the following test purpose is intended for a call in a VPN context.

## 5.1.6 Test of point-to-multipoint configurations

There is no configuration point-to-multipoint in the VPN context.

## 5.1.7 Test of inopportune and syntactically invalid behaviour

In the test groups for inopportune and syntactically invalid behaviour the procedures as described in subclause 5.8 of EN 300 403-1 [3] are tested. This is done in each call state with one message for each of the described error cases. Messages have been chosen that are, if they are received without the inopportune or erroneous coding, expected messages in the call states under test.

Test purposes for inopportune behaviour that is described outside the subclause 5.8 of EN 300 403-1 [3] are found in the valid test groups. This was done, as these procedures are seen more as a part of the basic call procedures than as a part of the error handling procedures.

## 5.2 TPs for the basic call control VPN, layer 3, network

All PICS items referred to in this subclause are as specified in ETS 301 060-2 [2] unless indicated otherwise by another numbered reference.

### 5.2.1 Null call state N00

#### 5.2.1.1 Valid

##### 5.2.1.1.1 Outgoing call

###### **L3N\_N00\_V\_001 subclause 5.1.1 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context during an all channels busy condition, sends a RELEASE COMPLETE message with a Cause information element indicating the cause value 34 "no circuit / channel available" and remains in the Null call state N00.

###### **L3N\_N00\_V\_002 subclauses 5.1.2 a), 5.1.3 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context without Called party number and Sending complete information element and with the Channel identification information element indicating a B-channel that is available and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends SETUP ACKNOWLEDGE message with the Channel identification information element indicating the requested B-channel and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable" and enters the Overlap Sending call state N02.

###### **L3N\_N00\_V\_003 subclauses 5.1.2 a), 5.1.5.1 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with a Called party number information element providing the complete called party information, with a Sending complete information element and with the Channel identification information element indicating a B-channel that is available and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends CALL PROCEEDING message with the Channel identification information element indicating the requested B-channel and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable" and enters the Outgoing Call Proceeding call state N03.

###### **L3N\_N00\_V\_004 subclause 5.1.2 a) VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with the Channel identification information element indicating a B-channel that is not available and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends a RELEASE COMPLETE message with a Cause information element indicating the cause value 34 "no circuit / channel available" or 44 "requested circuit / channel not available" and remains in the Null call state.

###### **L3N\_N00\_V\_005 subclause 5.1.2 a) VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with the Channel identification information element indicating a B-channel that is not subscribed and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends a RELEASE COMPLETE message with a Cause information element indicating the cause value 82 "identified channel does not exist" and remains in the Null call state.

**Selection:** IUT is a primary rate access. PICS: R 6.2.

**L3N\_N00\_V\_006 subclauses 5.1.2 b), 5.1.3 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context without Called party number and Sending complete information element and with the Channel identification information element indicating a B-channel that is available and indicating in the preferred / exclusive bit "indicated channel is preferred", sends a SETUP ACKNOWLEDGE message with the Channel identification information element indicating the requested B-channel and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable" and enters the Overlap Sending call state N02.

**L3N\_N00\_V\_007 subclauses 5.1.2 b), 5.1.3 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context without Called party number and Sending complete information element and with the Channel identification information element indicating a B-channel that is not available and indicating in the preferred / exclusive bit "indicated channel is preferred", sends a SETUP ACKNOWLEDGE message with the Channel identification information element indicating a B-channel that is available and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable" and enters the Overlap Sending call state N02.

**L3N\_N00\_V\_008 subclauses 5.1.2 b), 5.1.5.1 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with a Called party number information element providing the complete called party information, with a Sending complete information element and with the Channel identification information element indicating a B-channel that is available and indicating in the preferred / exclusive bit "indicated channel is preferred", sends CALL PROCEEDING message with the Channel identification information element indicating the requested B-channel and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable" and enters the Outgoing Call Proceeding call state N03.

**L3N\_N00\_V\_009 subclauses 5.1.2 b), 5.1.5.1 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with a Called party number information element providing the complete called party information, with a Sending complete information element and with the Channel identification information element indicating a B-channel that is not available and indicating in the preferred / exclusive bit "indicated channel is preferred", sends CALL PROCEEDING message with the Channel identification information element indicating a B-channel that is available and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable" and enters the Outgoing Call Proceeding call state N03.

**L3N\_N00\_V\_010 subclause 5.1.2 b) VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with the Channel identification information element indicating a B-channel and indicating in the preferred / exclusive bit "indicated channel is preferred", when there is no channel available, sends a RELEASE COMPLETE message with a Cause information element indicating the cause value 34 "no circuit / channel available" or 44 "requested circuit / channel not available" and remains in the Null call state.

**L3N\_N00\_V\_011 subclauses 5.1.2 c), 5.1.3 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context without Called party number and Sending complete information element and with the Channel identification information element indicating in the Info channel selection "any channel", sends a SETUP ACKNOWLEDGE message with the Channel identification information element indicating a B-channel that is available and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable" and enters the Overlap Sending call state N02.

**L3N\_N00\_V\_012 subclauses 5.1.2 c), 5.1.3 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context without Called party number and Sending complete information element and without the Channel identification information element, sends a SETUP ACKNOWLEDGE message with the Channel identification information element indicating a B-channel that is available and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable" and enters the Overlap Sending call state N02.

**L3N\_N00\_V\_013 subclauses 5.1.2 c), 5.1.5.1 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with a Called party number information element providing the complete called party information, with a Sending complete information element and with the Channel identification information element indicating in the Info channel selection "any channel", sends CALL PROCEEDING message with the Channel identification information element indicating a B-channel that is available and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable" and enters the Outgoing Call Proceeding call state N03.

**L3N\_N00\_V\_014 subclauses 5.1.2 c), 5.1.5.1 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with a Called party number information element providing the complete called party information, with a Sending complete information element and without the Channel identification information element, sends CALL PROCEEDING message with the Channel identification information element indicating a B-channel that is available and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable" and enters the Outgoing Call Proceeding call state N03.

**L3N\_N00\_V\_015 subclause 5.1.2 c) VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with the Channel identification information element indicating in the Info channel selection "any channel", when there is no channel available, sends a RELEASE COMPLETE message with a Cause information element indicating the cause value 34 "no circuit / channel available" or 44 "requested circuit / channel not available" and remains in the Null call state.

**L3N\_N00\_V\_016 subclause 5.1.2 c) VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context without the Channel identification information element, when there is no channel available, sends a RELEASE COMPLETE message with a Cause information element indicating the cause value 34 "no circuit / channel available" or 44 "requested circuit / channel not available" and remains in the Null call state.

**L3N\_N00\_V\_017 subclause 5.1.3 a) VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context without Called party number and without Sending complete information element, sends a SETUP ACKNOWLEDGE message and enters the Overlap Sending call state N02.

**L3N\_N00\_V\_018 subclauses 5.1.3 b), c) VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with a Called party number information element indicating incomplete number information and without a Sending complete information element, sends a SETUP ACKNOWLEDGE message and enters the Overlap Sending call state N02.

**L3N\_N00\_V\_019 subclauses 5.1.1, 5.1.4 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with a Called party number information element indicating incomplete number information and with a Sending complete information element, either sends a RELEASE COMPLETE message indicating in the Cause information element one of the cause values 1 "unassigned (unallocated) number", 3 "no route to destination", 22 "number changed" or 28 "invalid number format (incomplete number)" and remains in the Null call state N00; or sends a CALL PROCEEDING message followed by a DISCONNECT message indicating in the Cause information element one of the cause values 1 "unassigned (unallocated) number", 3 "no route to destination", 22 "number changed" or 28 "invalid number format (incomplete number)" and enters the Disconnect Indication call state N12.

**L3N\_N00\_V\_020 subclauses 5.1.1, 5.1.4 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with a Called party number information element indicating invalid number information and with a Sending complete information element, either sends a RELEASE COMPLETE message indicating in the Cause information element one of the cause values 1 "unassigned (unallocated) number", 3 "no route to destination", 22 "number changed" or 28 "invalid number format (incomplete number)" and remains in the Null call state N00; or sends a CALL PROCEEDING message followed by a DISCONNECT message indicating in the Cause information element one of the cause values 1 "unassigned (unallocated) number", 3 "no route to destination", 22 "number changed" or 28 "invalid number format (incomplete number)" and enters the Disconnect Indication call state N12.

**L3N\_N00\_V\_021 subclauses 5.1.1, 5.1.5.1 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with a Called party number information element providing the complete called party information and without a Sending complete information element, either sends a CALL PROCEEDING message and enters the Outgoing Call Proceeding call state N03 or sends a SETUP ACKNOWLEDGE message followed by a CALL PROCEEDING message and enters the Outgoing Call Proceeding call state N03.

NOTE: The IUT may wait on the expiry of T302 before it sends the CALL PROCEEDING message.

**L3N\_N00\_V\_022 subclauses 5.1.1, 5.1.5.1 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with a Called party number information element providing the complete called party information and with a Sending complete information element, sends a CALL PROCEEDING message and enters the Outgoing Call Proceeding call state N03.

**L3N\_N00\_V\_023 subclauses 5.1.1, 5.1.3 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context without Called party number and Sending complete information element and with a Bearer capability information element indicating the information transfer capability value 0 "speech", sends a SETUP ACKNOWLEDGE message and enters the Overlap Sending call state N02.

**Selection:** IUT supports the information transfer capability speech. PICS: ISn 1.2.1. [14]

**L3N\_N00\_V\_024 subclauses 5.1.1, 5.1.3 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context without Called party number and Sending complete information element and with a Bearer capability information element indicating the information transfer capability value 8 "unrestricted digital information", sends a SETUP ACKNOWLEDGE message and enters the Overlap Sending call state N02.

**Selection:** IUT supports the information transfer capability unrestricted digital information. PICS: ISn 1.2.2. [15]

**L3N\_N00\_V\_025 subclauses 5.1.1, 5.1.3 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context without Called party number and Sending complete information element and with a Bearer capability information element indicating the information transfer capability value 16 "3,1 kHz audio", sends a SETUP ACKNOWLEDGE message and enters the Overlap Sending call state N02.

**Selection:** IUT supports the information transfer capability 3,1 kHz audio. PICS: ISn 1.2.4. [16]

**L3N\_N00\_V\_026 subclauses 5.1.1, 5.1.3 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context without Called party number and Sending complete information element and with a Bearer capability information element indicating the information transfer capability value 17 "unrestricted digital information with tones / announcements", sends a SETUP ACKNOWLEDGE message and enters the Overlap Sending call state N02.

**Selection:** IUT supports the information transfer capability unrestricted digital information with tones / announcements. PICS: ISn 1.2.5. [17]

**L3N\_N00\_V\_027 subclauses 5.1.1, 5.1.5.1 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with a Called party number information element providing the complete called party information, with a Sending complete information element and with a Bearer capability information element indicating the information transfer capability value 0 "speech", sends a CALL PROCEEDING message and enters the Outgoing Call Proceeding call state N03.

**Selection:** IUT supports the information transfer capability speech. PICS: ISn 1.2.1. [18]

**L3N\_N00\_V\_028 subclauses 5.1.1, 5.1.5.1 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with a Called party number information element providing the complete called party information, with a Sending complete information element and with a Bearer capability information element indicating the information transfer capability value 8 "unrestricted digital information", sends a CALL PROCEEDING message and enters the Outgoing Call Proceeding call state N03.

**Selection:** IUT supports the information transfer capability unrestricted digital information. PICS: ISn 1.2.2. [19]

**L3N\_N00\_V\_029 subclauses 5.1.1, 5.1.5.1 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with a Called party number information element providing the complete called party information, with a Sending complete information element and with a Bearer capability information element indicating the information transfer capability value 16 "3,1 kHz audio", sends a CALL PROCEEDING message and enters the Outgoing Call Proceeding call state N03.

**Selection:** IUT supports the information transfer capability 3,1 kHz audio. PICS: ISn 1.2.4. [20]

**L3N\_N00\_V\_030 subclauses 5.1.1, 5.1.5.1 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with a Called party number information element providing the complete called party information, with a Sending complete information element and with a Bearer capability information element indicating the information transfer capability value 17 "unrestricted digital information with tones / announcements", sends a CALL PROCEEDING message and enters the Outgoing Call Proceeding call state N03.

**Selection:** IUT supports the information transfer capability unrestricted digital information with tones / announcements. PICS: ISn 1.2.5. [21]

**L3N\_N00\_V\_031 subclauses 5.1.1, 5.1.5.1 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with a Bearer capability information element indicating a service that is not authorized or not available, sends a RELEASE COMPLETE message indicating in the Cause information element one of the cause values 57 "bearer capability not authorized", 58 "bearer capability not available", 63 "service or option not available, unspecified" or 65 "bearer service not implemented" and remains in the Null call state N00.

**L3N\_N00\_V\_v01 subclause 9.3.1.1 [6] VPNNEW**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context, with a calling party number information element with presentation allowed, transfers the information element (resulting in the sending of the SETUP message with the calling party number IE on the next entity PINX interface), and enters the Call initiated call state N01.

**Selection:** IUT does not provide the emulation of Outgoing gateway PINX. PICS: NOT Tin6.

IUT does not provide the emulation of Terminating PINX. PICS: NOT Tin2.

**L3N\_N00\_V\_v02 subclauses 9.3.1.1 [6] VPNNEW**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context, with a calling party number information element with presentation restricted, transfers the information element (resulting in the sending of the SETUP message with the calling party number IE on the next entity PINX interface), and enters the Call initiated call state N01.

**Selection:** IUT does not provide the emulation of Outgoing gateway PINX. PICS: NOT Tin6.

IUT does not provide the emulation of Terminating PINX. PICS: NOT Tin2.

**L3N\_N00\_V\_v03 subclauses 9.3.1.1 [6] VPNNEW**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context, with a calling party number information element with presentation allowed, transfers this information element (resulting in the sending of the SETUP message with the calling party number IE on the called user interface), and enters the Call initiated call state N01.

**Selection:** The IUT provides the emulation of Outgoing gateway PINX. PICS: Tin6.

**L3N\_N00\_V\_v04 subclauses 9.3.1.1 [6] VPNNEW**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context, with a calling party number information element with presentation allowed, transfers this information element (resulting in the sending of the SETUP message with the calling party number IE on the called user interface), and enters the Call initiated call state N01.

**Selection:** The IUT provides the emulation of a Terminating PINX. PICS: Tin2.

**L3N\_N00\_V\_v05 subclauses 9.3.1.1 [6] VPNNEW**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context, with a calling party number information element with presentation restricted, discard this information element (resulting in the sending of the SETUP message without the calling party number IE on the called user interface), and enters the Call initiated call state N01.

**Selection:** The IUT provides the emulation of a Terminating PINX. PICS: Tin2.

**L3N\_N00\_V\_v06 subclauses 9.3.1.1 [6] VPNNEW**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context, with a Transit counter information element, transfers the information element (resulting in the sending of the SETUP message with the transit counter IE on the next entity PINX interface), and enters the Call initiated call state N01.

**Selection:** IUT does not provide the emulation of Outgoing gateway PINX. PICS: NOT Tin6.

IUT does not provide the emulation of Terminating PINX. PICS: NOT Tin2.

**L3N\_N00\_V\_v07 subclauses 9.3.1.1 [6] VPNNEW**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context, with a Transit counter information element, discard the information element (resulting in the sending of the SETUP message without the transit counter IE on the called user interface), and enters the Call initiated call state N01.

**Selection:** IUT provides the emulation of Terminating PINX. PICS: Tin2.



**L3N\_N00\_V\_v08 subclauses 9.3.1.2 [6] VPNNEW**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context, with progress indicator information element (no more than three), transfers the information element (resulting in the sending of the SETUP message with progress indicator on the next entity PINX interface), and enters the Call initiated call state N01.

**Selection:** IUT does not provide the emulation of Terminating PINX. PICS: NOT Tin2.

**5.2.1.1.2 Incoming call - point-to-point configuration**

**Selection:** IUT supports the point-to-point configuration. PICS: R 7.1.

**L3N\_N00\_V\_032 subclause 5.2.1 VPNMOD**

Ensure that the IUT in the Null call state N00, to indicate the arrival of a call to a point-to-point configuration, sends a SETUP message with the VPN indicator information element using the point-to-point data link and enters the Call Present call state N06.

**L3N\_N00\_V\_033 subclause 5.2.1 VPNMOD**

Ensure that the IUT in the Null call state N00, to indicate the arrival of a call to a point-to-point configuration, sends a SETUP message with the VPN indicator information element using the point-to-point data link with the Called party number information element providing the complete called party information and enters the Call Present call state N06.

**Selection:** IUT supports en-bloc receiving procedures. PICS: MCn 2.1. [22]

**L3N\_N00\_V\_034 subclause 5.2.1 VPNMOD**

Ensure that the IUT in the Null call state N00, to indicate the arrival of a call to a point-to-point configuration, sends a SETUP message with the VPN indicator information element using the point-to-point data link without the Sending complete information element and enters the Call Present call state N06.

**Selection:** IUT supports overlap receiving procedures. PICS: MCn 2.2. [23]

**L3N\_N00\_V\_035 subclause 5.2.1 VPNMOD**

Ensure that the IUT in the Null call state N00, to indicate the arrival of a call (bearer service = speech) to a point-to-point configuration, sends a SETUP message with the VPN indicator information element using the point-to-point data link with a Bearer capability information element indicating the information transfer capability value 0 "speech" and enters the Call Present call state N06.

**Selection:** IUT supports the information transfer capability speech. PICS: ISn 1.2.1. [24]

**L3N\_N00\_V\_036 subclause 5.2.1 VPNMOD**

Ensure that the IUT in the Null call state N00, to indicate the arrival of a call (bearer service = unrestricted digital information) to a point-to-point configuration, sends a SETUP with the VPN indicator information element message using the point-to-point data link with a Bearer capability information element indicating the information transfer capability value 8 "unrestricted digital information" and enters the Call Present call state N06.

**Selection:** IUT supports the information transfer capability unrestricted digital information. PICS: ISn 1.2.2. [25]

**L3N\_N00\_V\_037 subclause 5.2.1 VPNMOD**

Ensure that the IUT in the Null call state N00, to indicate the arrival of a call (bearer service = 3,1 kHz audio) to a point-to-point configuration, sends a SETUP message with the VPN indicator information element using the point-to-point data link with a Bearer capability information element indicating the information transfer capability value 16 "3,1 kHz audio" and enters the Call Present call state N06.

**Selection:** IUT supports the information transfer capability 3,1 kHz audio. PICS: ISn 1.2.4. [26]

**L3N\_N00\_V\_038 subclause 5.2.1 VPNMOD**

Ensure that the IUT in the Null call state N00, to indicate the arrival of a call (bearer service = unrestricted digital information with tones / announcements) to a point-to-point configuration, sends a SETUP message with the VPN indicator information element using the point-to-point data link with a Bearer capability information element indicating the information transfer capability value 17 "unrestricted digital information with tones / announcements" and enters the Call Present call state N06.

**Selection:** IUT supports the information transfer capability unrestricted digital information with tones / announcements. PICS: ISn 1.2.5. [27]

**L3N\_N00\_V\_039 subclauses 5.2.1, 5.11.2 VPNMOD**

Ensure that the IUT in the Null call state N00, to indicate the arrival of a call for which fallback to an alternative bearer capability is allowed to a point-to-point configuration, sends a SETUP message with the VPN indicator information element using the point-to-point data link with two Bearer capability information elements and enters the Call Present call state N06.

**Selection:** IUT supports procedures for Bearer capability selection at the destination side. PICS: MCn 21.2. [28]

**L3N\_N00\_V\_040 subclauses 5.2.1, 5.12.2 VPNMOD**

Ensure that the IUT in the Null call state N00, to indicate the arrival of a call for which high layer compatibility selection is allowed to a point-to-point configuration, sends a SETUP message with the VPN indicator information element using the point-to-point data link with two High layer compatibility information elements and enters the Call Present call state N06.

**Selection:** IUT supports procedures for High layer compatibility selection at the destination side.  
PICS: MCn 22.2. [29]

**L3N\_N00\_V\_v09 subclauses 9.3.2.1 [6] VPNNEW**

Ensure that the IUT in the Null call state N00, to indicate the arrival of a call for which a VPN indicator is provided sends a SETUP message with the VPN indicator information element using the point-to-point data link and enters the Call Present call state N06.

**L3N\_N00\_V\_v10 subclauses 9.3.2.1 [6] VPNNEW**

Ensure that the IUT in the Null call state N00, to indicate the arrival of a call for which a VPN indicator is not already available sends a SETUP message with the VPN indicator information element using the point-to-point data link and enters the Call Present call state N06.

**Selection:** The IUT provides the emulation of an originating PINX . PICS: Tin1.

The IUT provides the emulation of an incoming gateway PINX. PICS: Tin5

**L3N\_N00\_V\_v11 subclauses 9.3.2.1 [6] VPNNEW**

Ensure that the IUT in the Null call state N00, to indicate the arrival of a call for which a calling party number is available and presentation allowed sends a SETUP message with the calling party number information element using the point-to-point data link and enters the Call Present call state N06.

**L3N\_N00\_V\_v12 subclauses 9.3.2.1 [6] VPNNEW**

Ensure that the IUT in the Null call state N00, to indicate the arrival of a call for which a calling party number is not available sends a SETUP message with the generated calling party number information element using the point-to-point data link and enters the Call Present call state N06.

**Selection:** The IUT provides the emulation of an originating PINX . PICS: Tin1 .

**L3N\_N00\_V\_v13 subclauses 9.3.2.1 [6] VPNNEW**

Ensure that the IUT in the Null call state N00, to indicate the arrival of a call for which a calling party number is available but presentation is restricted sends a SETUP message with the complete calling party number information element using the point-to-point data link and enters the Call Present call state N06.

**Selection:** The IUT provides the emulation of an originating PINX . PICS: Tin2 .

**L3N\_N00\_V\_v14 subclauses 9.3.2.1 [6] VPNNEW**

Ensure that the IUT in the Null call state N00, to indicate the arrival of a call for which a calling party number and a calling party subaddress are available but presentation is restricted sends a SETUP message with the complete calling party number information element and calling party subaddress using the point-to-point data link and enters the Call Present call state N06.

**Selection:** The IUT provides the emulation of an originating PINX . PICS: Tin1 .

**L3N\_N00\_V\_v15 subclauses 9.3.2.1 [6] VPNNEW**

Ensure that the IUT in the Null call state N00, to indicate the arrival of a call for which a transit counter element is available sends a SETUP message with the transit counter information element using the point-to-point data link and enters the Call Present call state N06.

**5.2.1.2 Inopportune****L3N\_N00\_I\_001 subclause 5.8.3.1**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message using the dummy call reference, sends no message and remains in the Null call state N00.

**L3N\_N00\_I\_002 subclause 5.8.3.2 a)**

Ensure that the IUT in the Null call state N00, on receipt of an inopportune message (DISCONNECT, call reference not recognized as relating to a call), sends a RELEASE or a RELEASE COMPLETE message with a Cause information element indicating the cause value 81 "invalid call reference value" and enters the Release Request call state N19 or remains in the Null call state N00.

**L3N\_N00\_I\_003 subclause 5.8.3.2 b)**

Ensure that the IUT in the Null call state N00, on receipt of a RELEASE message, sends a RELEASE COMPLETE message with a Cause information element indicating the cause value 81 "invalid call reference value" and remains in the Null call state N00.

**L3N\_N00\_I\_004 subclause 5.8.3.2 c)**

Ensure that the IUT in the Null call state N00, on receipt of a RELEASE COMPLETE message, sends no message and remains in the Null call state N00.

**L3N\_N00\_I\_005 subclause 5.8.3.2 d)**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message with a call reference flag bit set to 1, sends no message and remains in the Null call state N00.

**L3N\_N00\_I\_007 subclause 5.8.3.2 f)**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message using the global call reference, sends a STATUS message using the global call reference with a Call state information element indicating the call state associated with the global call reference and a Cause information element indicating the cause value 81 "invalid call reference value" and remains in the Null call state N00.

**L3N\_N00\_I\_008 subclauses 5.8.3.2 g), 5.8.11**

Ensure that the IUT in the Null call state N00, on receipt of a STATUS message with a Call state information element indicating a call state other than the Null call state, sends a RELEASE or a RELEASE COMPLETE message with a Cause information element indicating the cause value 101 "message not compatible with call state" and enters the Release Request call state N19 or remains in the Null call state N00.

**L3N\_N00\_I\_009 subclauses 5.8.3.2 g), 5.8.11**

Ensure that the IUT in the Null call state N00, on receipt of a STATUS message with a Call state information element indicating the Null call state, sends no message and remains in the Null call state N00.

**L3N\_N00\_I\_010 subclauses 5.8.3.2 g), 5.8.11**

Ensure that the IUT in the Null call state N00, on receipt of a STATUS message using the global call reference and with a Call state information element indicating a call state other than the Null call state, sends no message and remains in the Null call state N00.

**L3N\_N00\_I\_011 subclauses 5.8.3.2 h), 5.8.10**

Ensure that the IUT in the Null call state N00, on receipt of a STATUS ENQUIRY message, sends a STATUS message with a Call state information element indicating the Null call state and a Cause information element indicating the cause value 30 "response to STATUS ENQUIRY", 97 "message type non-existent or not implemented" or 98 "message not compatible with call state" and remains in the Null call state N00.

**L3N\_N00\_I\_012 subclause 5.8.5.2 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with a duplicated Called party number information element (repetition not permitted), ignores the second occurrence of that information element and processes the remaining contents of the message as valid.

**L3N\_N00\_I\_013 subclause 5.8.8**

Ensure that the IUT in the Null call state N00, on receipt of a DL-ESTABLISH-INDICATION, sends no message and remains in the Null call state N00.

### 5.2.1.3 Syntactically invalid

**L3N\_N00\_S\_001 subclause 5.8.1 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with an erroneous protocol discriminator, coded other than '08'H, sends no message and remains in the Null call state N00.

**L3N\_N00\_S\_002 subclause 5.8.2**

Ensure that the IUT in the Null call state N00, on receipt of a message which is too short, sends no message and remains in the Null call state N00.

**L3N\_N00\_S\_003 subclause 5.8.3.1 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with an invalid call reference format (octet 1, bits 8 - 5 ≠ '0000'B), sends no message and remains in the Null call state N00.

**L3N\_N00\_S\_004 subclause 5.8.3.1 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with an invalid call reference format (octet 1, bits 4 to 1, length value too high), sends no message and remains in the Null call state N00.

**L3N\_N00\_S\_005 subclause 5.8.3.2 a)**

Ensure that the IUT in the Null call state N00, on receipt of a message with an unrecognized message type, sends a RELEASE or a RELEASE COMPLETE message with a Cause information element indicating the cause value 81 "invalid call reference value" and enters the Release Request call state N19 or remains in the Null call state N00.

**L3N\_N00\_S\_006 subclauses 5.8.5.1, 5.8.6.1 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with a mandatory information element out of sequence, processes the message as valid or sends a RELEASE COMPLETE message with a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Null call state N00.

**L3N\_N00\_S\_007 subclause 5.8.5.1 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with a non-mandatory information element out of sequence, processes the message as valid.

**L3N\_N00\_S\_008 subclause 5.8.6.1 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with a mandatory information element missing, sends a RELEASE COMPLETE message with a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Null call state N00.

**L3N\_N00\_S\_009 subclause 5.8.6.2 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with a mandatory information element content error, sends a RELEASE COMPLETE message with a Cause information element indicating the cause value 100 "invalid information element contents" and remains in the Null call state N00.

**L3N\_N00\_S\_010 subclauses 5.8.7.1, 5.8.6.1 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with an unrecognized information element (coded comprehension required), sends a RELEASE COMPLETE message with a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Null call state N00.

**L3N\_N00\_S\_011 subclause 5.8.7.1 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with an unrecognized information element (coded comprehension not required), processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

**L3N\_N00\_S\_012 subclause 5.8.7.2 VPNMOD**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with a non-mandatory information element content error, processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 100 "invalid information element contents".

**L3N\_N00\_S\_v16 subclauses 7.2.6 [6] VPNNEW**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context, with an erroneous coding of Transit counter information element, discard the Information element and processes the message as valid (resulting in the sending of the SETUP message without the transit counter IE on the next entity PINX interface), and enters the Call initiated call state N01.

**Selection:** IUT does not provide the emulation of Outgoing gateway PINX. PICS: NOT Tin6.

IUT does not provide the emulation of Terminating PINX. PICS: NOT Tin8.

**L3N\_N00\_S\_v17 subclauses 7.2.6 [6] VPNNEW**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context, with an too short coding of Transit counter information element, discard the Information element and processes the message as valid (resulting in the sending of the SETUP message without the transit counter IE on the next entity PINX interface), and enters the Call initiated call state N01.

**Selection:** IUT does not provide the emulation of Outgoing gateway PINX. PICS: NOT Tin6.

IUT does not provide the emulation of Terminating PINX. PICS: NOT Tin2.

**L3N\_N00\_S\_v18 subclauses 7.2.7 [6] VPNNEW**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP for which a VPN indicator with erroneous coding is provided sends a RELEASE COMPLETE message with a Cause information element indicating the cause value 100 "invalid information element contents" and remains in the Null call state N00.

**L3N\_N00\_S\_v19 subclause 9.3.1.1 [6] VPNNEW**

Ensure that the IUT in the Null call state N00, on receipt of a SETUP message in a VPN context with a Called party number information element missing, sends a RELEASE COMPLETE message with a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Null call state N00.

## 5.2.2 Overlap sending call state N02

### 5.2.2.1 Valid

**L3N\_N02\_V\_001 subclause 5.1.5.2 b)**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of an INFORMATION message with a Called party number information element providing the complete called party information and without a Sending complete information element, sends a CALL PROCEEDING message and enters the Outgoing Call Proceeding call state N03.

**NOTE:** The IUT may wait on the expiry of T302 before it sends the CALL PROCEEDING message.

**L3N\_N02\_V\_002 subclause 5.1.5.2 a)**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of an INFORMATION message with a Called party number information element providing the complete called party information and with a Sending complete information element, sends a CALL PROCEEDING message and enters the Outgoing Call Proceeding call state N03.

**L3N\_N02\_V\_003 subclause 5.1.5.2**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of an INFORMATION message with a Called party number information element providing incomplete called party information and without a Sending complete information element, sends no message and remains in the Overlap Sending call state N02.

**L3N\_N02\_V\_004 subclauses 5.1.4, 5.1.5.2**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of an INFORMATION message with a Called party number information element providing incomplete called party information and with a Sending complete information element, either sends a DISCONNECT message indicating in the Cause information element one of the cause values 1 "unassigned (unallocated) number", 3 "no route to destination", 22 "number changed" or 28 "invalid number format (incomplete number)" and enters the Disconnect Indication call state N12 or sends a CALL PROCEEDING message followed by a DISCONNECT message indicating in the Cause information element one of the cause values 1 "unassigned (unallocated) number", 3 "no route to destination", 22 "number changed" or 28 "invalid number format (incomplete number)" and enters the Disconnect Indication call state N12.

**L3N\_N02\_V\_005 subclauses 5.1.4, 5.1.5.2**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of an INFORMATION message with a Called party number information element providing invalid called party information, sends a DISCONNECT message indicating in the Cause information element one of the cause values 1 "unassigned (unallocated) number", 3 "no route to destination", 22 "number changed" or 28 "invalid number format (incomplete number)" and enters the Disconnect Indication call state N12.

**L3N\_N02\_V\_006 subclauses 5.1.4, 5.1.5.2**

Ensure that the IUT in the Overlap Sending call state N02, when the complete called party information has not yet been received, on the expiry of the mandatory timer T302, either sends a DISCONNECT message with a Cause information element indicating the cause value 28 "invalid number format (incomplete number)" and enters the Disconnect Indication call state N12 or sends a CALL PROCEEDING message followed by a DISCONNECT message with a Cause information element indicating the cause value 28 "invalid number format (incomplete number)" and enters the Disconnect Indication call state N12.

**L3N\_N02\_V\_007 subclauses 5.1.5.2, 5.1.7**

Ensure that the IUT in the Overlap Sending call state N02, to indicate that remote user alerting has been initiated, sends an ALERTING message and enters the Call Delivered call state N04.

**L3N\_N02\_V\_008 subclauses 5.1.5.2, 5.1.8**

Ensure that the IUT in the Overlap Sending call state N02, to indicate that the remote user has answered the call, sends a CONNECT message and enters the Active call state N10.

**L3N\_N02\_V\_009 subclauses 5.1.5.2, 5.3.3**

Ensure that the IUT in the Overlap Sending call state N02, when the requested service is not authorized or not available, sends a DISCONNECT message indicating in the Cause information element one of the cause values 57 "bearer capability not authorized", 58 "bearer capability not available", 63 "service or option not available, unspecified" or 65 "bearer service not implemented" and enters the Disconnect Indication call state N12.

**L3N\_N02\_V\_010 subclause 5.3.3**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of a DISCONNECT message, sends a RELEASE message and enters the Release Request call state N19.

**L3N\_N02\_V\_011 subclause 5.1.6**

Ensure that the IUT in the Overlap Sending call state N02, to indicate that the call may leave an ISDN environment, sends a PROGRESS message and remains in the Overlap Sending call state N02.

**L3N\_N02\_V\_012 clause 5**

Ensure that the IUT in the Overlap Sending call state N02, to provide additional information, sends an INFORMATION message and remains in the Overlap Sending call state N02.

**L3N\_N02\_V\_013 subclause 5.8.10**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of a STATUS ENQUIRY message, sends a STATUS message with a Call state information element indicating the Overlap Sending call state and a Cause information element indicating the cause value 30 "response to STATUS ENQUIRY", 97 "message type non-existent or not implemented" or 98 "message not compatible with call state" and remains in the Overlap Sending call state N02.

### 5.2.2.2 Inopportune

#### **L3N\_N02\_I\_001 subclause 5.8**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of a DISCONNECT message delivered in a DL-UNIT-DATA-INDICATION, sends no message and remains in the Overlap Sending call state N02 or processes the message as valid.

#### **L3N\_N02\_I\_002 subclause 5.8.3.1**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of a DISCONNECT message using the dummy call reference, sends no message and remains in the Overlap Sending call state N02.

#### **L3N\_N02\_I\_003 subclause 5.8.3.2 a)**

Ensure that the IUT in the Overlap Sending call state N02 for CR1, on receipt of a DISCONNECT message for CR2 which is not recognized as relating to a call, sends a RELEASE or a RELEASE COMPLETE message for CR2 with a Cause information element indicating the cause value 81 "invalid call reference value" and enters the Release Request call state N19 or remains in the Null call state N00 for CR2 and remains in the Overlap Sending call state N02 for CR1.

#### **L3N\_N02\_I\_004 subclause 5.8.3.2 e)**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of a SETUP message with a call reference that is already in use, sends no message and remains in the Overlap Sending call state N02.

#### **L3N\_N02\_I\_005 subclause 5.8.3.2 f)**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of a DISCONNECT message using the global call reference, sends a STATUS message using the global call reference with a Call state information element indicating the call state associated with the global call reference and a Cause information element indicating the cause value 81 "invalid call reference value" and remains in the Overlap Sending call state N02.

#### **L3N\_N02\_I\_006 subclause 5.8.4**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of an inopportune message (ALERTING), sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 101 "message not compatible with call state" or a STATUS ENQUIRY message and remains in the Overlap Sending call state N02.

#### **L3N\_N02\_I\_007 subclause 5.8.4**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of a RELEASE message, sends a RELEASE COMPLETE message and enters the Null call state N00.

#### **L3N\_N02\_I\_008 subclause 5.8.4**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of a RELEASE COMPLETE message, sends no message and enters the Null call state N00.

#### **L3N\_N02\_I\_009 subclause 5.8.5.2**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of a INFORMATION message with a duplicated Called party number information element (repetition not permitted), ignores the second occurrence of that information element and processes the remaining contents of the message as valid.

#### **L3N\_N02\_I\_010 subclause 5.8.8 a)**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of a DL-ESTABLISH-INDICATION, sends a DISCONNECT message with a Cause information element indicating the cause value 41 "temporary failure" and enters the Disconnect Indication call state N12.

#### **L3N\_N02\_I\_011 subclause 5.8.11**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of a STATUS message with a Call state information element indicating the Null call state, sends no message and enters the Null call state N00.

### 5.2.2.3 Syntactically invalid

#### **L3N\_N02\_S\_001 subclause 5.8.1**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of a DISCONNECT message with an erroneous protocol discriminator, coded other than '08'H, sends no message and remains in the Overlap Sending call state N02.

#### **L3N\_N02\_S\_002 subclause 5.8.2**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of a message which is too short, sends no message and remains in the Overlap Sending call state N02.

#### **L3N\_N02\_S\_003 subclause 5.8.3.1**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of a DISCONNECT message with an invalid call reference format (octet 1, bits 8 to 5 ≠ '0000'B), sends no message and remains in the Overlap Sending call state N02.

#### **L3N\_N02\_S\_004 subclause 5.8.3.1**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of a DISCONNECT message with an invalid call reference format (octet 1, bits 4 to 1, length value too high), sends no message and remains in the Overlap Sending call state N02.

**L3N\_N02\_S\_005 subclause 5.8.4**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of a message with an unrecognized message type, sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Overlap Sending call state N02.

**L3N\_N02\_S\_006 subclause 5.8.6.1**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of a DISCONNECT message with a mandatory information element missing, sends a RELEASE message with a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Release Request call state N19.

**L3N\_N02\_S\_007 subclause 5.8.6.2**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of a DISCONNECT message with a mandatory information element content error, sends a RELEASE message with a Cause information element indicating the cause value 100 "invalid information element contents" and enters the Release Request call state N19.

**L3N\_N02\_S\_008 subclauses 5.8.7.1, 5.8.6.1**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of a DISCONNECT message with an unrecognized information element (coded comprehension required), sends a RELEASE message with a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Release Request call state N19.

**L3N\_N02\_S\_009 subclause 5.8.7.1**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of a DISCONNECT message with an unrecognized information element (coded comprehension not required), sends a RELEASE message with a Cause information element indicating the cause value 99 "information element non-existent or not implemented" and enters the Release Request call state N19.

**L3N\_N02\_S\_010 subclause 5.8.7.2**

Ensure that the IUT in the Overlap Sending call state N02, on receipt of a DISCONNECT message with a non-mandatory information element content error, processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 100 "invalid information element contents".

## 5.2.3 Outgoing call proceeding call state N03

### 5.2.3.1 Valid

**L3N\_N03\_V\_001 subclause 5.1.7**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, to indicate that remote user alerting has been initiated, sends an ALERTING message and enters the Call Delivered call state N04.

**L3N\_N03\_V\_002 subclause 5.1.8**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, to indicate that the remote user has answered the call, sends a CONNECT message and enters the Active call state N10.

**L3N\_N03\_V\_003 subclauses 5.1.8, 5.11.1**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, when fallback to an alternative bearer capability is allowed, to indicate that the remote user has answered the call, sends a CONNECT message with a Bearer capability information element and enters the Active call state N10.

**Selection:** IUT supports procedures for Bearer capability selection at the originating side. PICS: MCn 21.1. [30]

**L3N\_N03\_V\_004 subclauses 5.1.8, 5.12.1**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, when fallback to an alternative high layer compatibility is allowed, to indicate that the remote user has answered the call, sends a CONNECT message with a High layer compatibility information element and enters the Active call state N10.

**Selection:** IUT supports procedures for High layer compatibility selection at the originating side.  
PICS: MCn 22.1. [31]

**L3N\_N03\_V\_005 subclause 5.1.8**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, to indicate that the remote user has sent an invitation to clear the call, sends a DISCONNECT message and enters the Disconnect Indication call state N12.

**L3N\_N03\_V\_006 subclause 5.2.5.4**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, to indicate that the called party does not respond, sends a DISCONNECT message with a Cause information element indicating the cause value 18 "no user responding" and enters the Disconnect Indication call state N12.

**L3N\_N03\_V\_007 subclause 5.1.6**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, to indicate that the call may leave an ISDN environment, sends a PROGRESS message and remains in the Outgoing Call Proceeding call state N03.

**L3N\_N03\_V\_008 clause 5**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, to provide additional information, sends an INFORMATION message and remains in the Outgoing Call Proceeding call state N03.

**L3N\_N03\_V\_009 clause 5**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of an INFORMATION message, sends no message and remains in the Outgoing Call Proceeding call state N03.

**L3N\_N03\_V\_010 subclause 5.1.2**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of a PROGRESS message, sends no message and remains in the Outgoing Call Proceeding call state N03.

**L3N\_N03\_V\_011 subclause 5.3.3**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of a DISCONNECT message, sends a RELEASE message and enters the Release Request call state N19.

**L3N\_N03\_V\_012 subclause 5.8.10**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of a STATUS ENQUIRY message, sends a STATUS message with a Call state information element indicating the Outgoing Call Proceeding call state and a Cause information element indicating the cause value 30 "response to STATUS ENQUIRY", 97 "message type non-existent or not implemented" or 98 "message not compatible with call state" and remains in the outgoing call proceeding call state N03.

**L3N\_N03\_V\_v20 subclauses 9.3.1.2 [6] VPNNEW**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, to indicate a progress information, send a PROGRESS message, and remains in the same state.

**L3N\_N03\_V\_v21 subclauses 9.3.1.4 [6] VPNNEW**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, to indicate that the remote user has answered the call without a connected number available, send a CONNECT message with a generated connected number, and enters the Active call state N10.

**Selection:** IUT provides the emulation of Terminating PINX. PICS: Tin2.

**L3N\_N03\_V\_v22 subclauses 9.3.1.4 [6] VPNNEW**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, to indicate that the remote user has answered the call with a connected number available and presentation is allowed, send a CONNECT message with the available connected number, and enters the Active call state N10.

**L3N\_N03\_V\_v23 subclauses 9.3.1.4 [6] VPNNEW**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, to indicate that the remote user has answered the call with a connected number available but presentation is restricted, send a CONNECT message with the complete connected number, and enters the Active call state N10.

**L3N\_N03\_V\_v24 subclauses 9.3.1.4 [6] VPNNEW**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, to indicate that the remote user has answered the call with a connected number and connected subaddress available but presentation is restricted, send a CONNECT message with the complete connected number and connected subaddress, and enters the Active call state N10.

### 5.2.3.2 Inopportune

**L3N\_N03\_I\_001 subclause 5.8**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of a DISCONNECT message delivered in a DL-UNIT-DATA-INDICATION, sends no message and remains in the Outgoing Call Proceeding call state N03 or processes the message as valid.

**L3N\_N03\_I\_002 subclause 5.8.3.1**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of a DISCONNECT message using the dummy call reference, sends no message and remains in the Outgoing Call Proceeding call state N03.

**L3N\_N03\_I\_003 subclause 5.8.3.2 a)**

Ensure that the IUT in the Outgoing Call Proceeding call state N03 for CR1, on receipt of a DISCONNECT message for CR2 which is not recognized as relating to a call, sends a RELEASE or a RELEASE COMPLETE message for CR2 with a Cause information element indicating the cause value 81 "invalid call reference value" and enters the Release Request call state N19 or remains in the Null call state N00 for CR2 and remains in the Outgoing Call Proceeding call state N03 for CR1.

**L3N\_N03\_I\_004 subclause 5.8.3.2 e)**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of a SETUP message with a call reference that is already in use, sends no message and remains in the Outgoing Call Proceeding call state N03.



**L3N\_N03\_I\_005 subclause 5.8.3.2 f)**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of a DISCONNECT message using the global call reference, sends a STATUS message using the global call reference with a Call state information element indicating the call state associated with the global call reference and a Cause information element indicating the cause value 81 "invalid call reference value" and remains in the Outgoing Call Proceeding call state N03.

**L3N\_N03\_I\_006 subclause 5.8.4**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of an inopportune message (CONNECT), sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 101 "message not compatible with call state" or a STATUS ENQUIRY message and remains in the Outgoing Call Proceeding call state N03.

**L3N\_N03\_I\_007 subclause 5.8.4**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of a RELEASE message, sends a RELEASE COMPLETE message and enters the Null call state N00.

**L3N\_N03\_I\_008 subclause 5.8.4**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of a RELEASE COMPLETE message, sends no message and enters the Null call state N00.

**L3N\_N03\_I\_009 subclause 5.8.8**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of a DL-ESTABLISH-INDICATION, sends no message and remains in the Outgoing Call Proceeding call state N03.

**L3N\_N03\_I\_010 subclause 5.8.11**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of a STATUS message with a Call state information element indicating the Null call state, sends no message and enters the Null call state N00.

### 5.2.3.3 Syntactically invalid

**L3N\_N03\_S\_001 subclause 5.8.1**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of a DISCONNECT message with an erroneous protocol discriminator, coded other than '08'H, sends no message and remains in the Outgoing Call Proceeding call state N03.

**L3N\_N03\_S\_002 subclause 5.8.2**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of a message which is too short, sends no message and remains in the Outgoing Call Proceeding call state N03.

**L3N\_N03\_S\_003 subclause 5.8.3.1**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of a DISCONNECT message with an invalid call reference format (octet 1, bits 8 to 5  $\neq$  '0000'B), sends no message and remains in the Outgoing Call Proceeding call state N03.

**L3N\_N03\_S\_004 subclause 5.8.3.1**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of a DISCONNECT message with an invalid call reference format (octet 1, bits 4 to 1, length value too high), sends no message and remains in the Outgoing Call Proceeding call state N03.

**L3N\_N03\_S\_005 subclause 5.8.4**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of a message with an unrecognized message type, sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Outgoing Call Proceeding call state N03.

**L3N\_N03\_S\_006 subclause 5.8.6.1**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of a DISCONNECT message with a mandatory information element missing, sends a RELEASE message with a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Release Request call state N19.

**L3N\_N03\_S\_007 subclause 5.8.6.2**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of a DISCONNECT message with a mandatory information element content error, sends a RELEASE message with a Cause information element indicating the cause value 100 "invalid information element contents" and enters the Release Request call state N19.

**L3N\_N03\_S\_008 subclauses 5.8.7.1, 5.8.6.1**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of a DISCONNECT message with an unrecognized information element (coded comprehension required), sends a RELEASE message with a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Release Request call state N19.

**L3N\_N03\_S\_009 subclause 5.8.7.1**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of a DISCONNECT message with an unrecognized information element (coded comprehension not required), sends a RELEASE message with a Cause information element indicating the cause value 99 "information element non-existent or not implemented" and enters the Release Request call state N19.

**L3N\_N03\_S\_010 subclause 5.8.7.2**

Ensure that the IUT in the Outgoing Call Proceeding call state N03, on receipt of a DISCONNECT message with a non-mandatory information element content error, processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 100 "invalid information element contents".

**5.2.4 Call delivered call state N04****5.2.4.1 Valid****L3N\_N04\_V\_001 subclause 5.1.8**

Ensure that the IUT in the Call Delivered call state N04, to indicate that the remote user has answered the call, sends a CONNECT message and enters the Active call state N10.

**L3N\_N04\_V\_002 subclauses 5.1.8, 5.11.1**

Ensure that the IUT in the Call Delivered call state N04, when fallback to an alternative bearer capability is allowed, to indicate that the remote user has answered the call, sends a CONNECT message with a Bearer capability information element and enters the Active call state N10.

**Selection:** IUT supports procedures for Bearer capability selection at the originating side. PICS: MCn 21.1. [32]

**L3N\_N04\_V\_003 subclauses 5.1.8, 5.12.1**

Ensure that the IUT in the Call Delivered call state N04, when fallback to an alternative high layer compatibility is allowed, to indicate that the remote user has answered the call, sends a CONNECT message with a High layer compatibility information element and enters the Active call state N10.

**Selection:** IUT supports procedures for High layer compatibility selection at the originating side.  
PICS: MCn 22.1. [33]

**L3N\_N04\_V\_004 clause 5**

Ensure that the IUT in the Call Delivered call state N04, to indicate that the remote user has sent an invitation to clear the call, sends a DISCONNECT message and enters the Disconnect Indication call state N12.

**L3N\_N04\_V\_005 subclause 5.1.6**

Ensure that the IUT in the Call Delivered call state N04, to indicate that the call may leave an ISDN environment, sends a PROGRESS message and remains in the Call Delivered call state N04.

**L3N\_N04\_V\_006 clause 5**

Ensure that the IUT in the Call Delivered call state N04, to provide additional information, sends an INFORMATION message and remains in the Call Delivered call state N04.

**L3N\_N04\_V\_007 clause 5**

Ensure that the IUT in the Call Delivered call state N04, on receipt of an INFORMATION message, sends no message and remains in the Call Delivered call state N04.

**L3N\_N04\_V\_008 subclause 5.3.3**

Ensure that the IUT in the Call Delivered call state N04, on receipt of a DISCONNECT message, sends a RELEASE message and enters the Release Request call state N19.

**L3N\_N04\_V\_009 subclause 5.8.10**

Ensure that the IUT in the Call Delivered call state N04, on receipt of a STATUS ENQUIRY message, sends a STATUS message with a Call state information element indicating the Call Delivered call state and a Cause information element indicating the cause value 30 "response to STATUS ENQUIRY", 97 "message type non-existent or not implemented" or 98 "message not compatible with call state" and remains in the Call Delivered call state N04.

**L3N\_N04\_V\_v25 subclauses 9.3.1.2 [6] VPNNEW**

Ensure that the IUT in the call state N04, to indicate a progress information, send a PROGRESS message, and remains in the same state.

**L3N\_N04\_V\_v26 subclauses 9.3.1.4 [6] VPNNEW**

Ensure that the IUT in the Call Delivered call state N04, to indicate that the remote user has answered the call without a connected number available, send a CONNECT message with a generated connected number, and enters the Active call state N10.

**Selection:** IUT provides the emulation of Terminating PINX. PICS: Tin2.

**L3N\_N04\_V\_v27 subclauses 9.3.1.4 [6] VPNNEW**

Ensure that the IUT in the Call Delivered call state N04, to indicate that the remote user has answered the call with a connected number available and presentation is allowed, send a CONNECT message with the available connected number, and enters the Active call state N10.

**L3N\_N04\_V\_v28 subclauses 9.3.1.4 [6] VPNNEW**

Ensure that the IUT in the Call Delivered call state N04, to indicate that the remote user has answered the call with a connected number available but presentation is restricted, send a CONNECT message with the complete connected number, and enters the Active call state N10.

**L3N\_N04\_V\_v29 subclauses 9.3.1.4 [6] VPNNEW**

Ensure that the IUT in the Call Delivered call state N04, to indicate that the remote user has answered the call with a connected number and connected subaddress available but presentation is restricted, send a CONNECT message with the complete connected number and connected subaddress, and enters the Active call state N10.

**5.2.4.2 Inopportune****L3N\_N04\_I\_001 subclause 5.8**

Ensure that the IUT in the Call Delivered call state N04, on receipt of a DISCONNECT message delivered in a DL-UNIT-DATA-INDICATION, sends no message and remains in the Call Delivered call state N04 or processes the message as valid.

**L3N\_N04\_I\_002 subclause 5.8.3.1**

Ensure that the IUT in the Call Delivered call state N04, on receipt of a DISCONNECT message using the dummy call reference, sends no message and remains in the Call Delivered call state N04.

**L3N\_N04\_I\_003 subclause 5.8.3.2 a)**

Ensure that the IUT in the Call Delivered call state N04 for CR1, on receipt of a DISCONNECT message for CR2 which is not recognized as relating to a call, sends a RELEASE or a RELEASE COMPLETE message for CR2 with a Cause information element indicating the cause value 81 "invalid call reference value" and enters the Release Request call state N19 or remains in the Null call state N00 for CR2 and remains in the Call Delivered call state N04 for CR1.

**L3N\_N04\_I\_004 subclause 5.8.3.2 e)**

Ensure that the IUT in the Call Delivered call state N04, on receipt of a SETUP message with a call reference that is already in use, sends no message and remains in the Call Delivered call state N04.

**L3N\_N04\_I\_005 subclause 5.8.3.2**

Ensure that the IUT in the Call Delivered call state N04, on receipt of a DISCONNECT message using the global call reference, sends a STATUS message using the global call reference with a Call state information element indicating the call state associated with the global call reference and a Cause information element indicating the cause value 81 "invalid call reference value" and remains in the Call Delivered call state N04.

**L3N\_N04\_I\_006 subclause 5.8.4**

Ensure that the IUT in the Call Delivered call state N04, on receipt of an inopportune message (CONNECT), sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 101 "message not compatible with call state" or a STATUS ENQUIRY message and remains in the Call Delivered call state N04.

**L3N\_N04\_I\_007 subclause 5.8.4**

Ensure that the IUT in the Call Delivered call state N04, on receipt of a RELEASE message, sends a RELEASE COMPLETE message and enters the Null call state N00.

**L3N\_N04\_I\_008 subclause 5.8.4**

Ensure that the IUT in the Call Delivered call state N04, on receipt of a RELEASE COMPLETE message, sends no message and enters the Null call state N00.

**L3N\_N04\_I\_009 subclause 5.8.8**

Ensure that the IUT in the Call Delivered call state N04, on receipt of a DL-ESTABLISH-INDICATION, sends no message and remains in the Call Delivered call state N04.

**L3N\_N04\_I\_010 subclause 5.8.11**

Ensure that the IUT in the Call Delivered call state N04, on receipt of a STATUS message with a Call state information element indicating the Null call state, sends no message and enters the Null call state N00.

**5.2.4.3 Syntactically invalid****L3N\_N04\_S\_001 subclause 5.8.1**

Ensure that the IUT in the Call Delivered call state N04, on receipt of a DISCONNECT message with an erroneous protocol discriminator, coded other than '08'H, sends no message and remains in the Call Delivered call state N04.

**L3N\_N04\_S\_002 subclause 5.8.2**

Ensure that the IUT in the Call Delivered call state N04, on receipt of a message which is too short, sends no message and remains in the Call Delivered call state N04.

**L3N\_N04\_S\_003 subclause 5.8.3.1**

Ensure that the IUT in the Call Delivered call state N04, on receipt of a DISCONNECT message with an invalid call reference format (octet 1, bits 8 to 5  $\neq$  '0000'B), sends no message and remains in the Call Delivered call state N04.

**L3N\_N04\_S\_004 subclause 5.8.3.1**

Ensure that the IUT in the Call Delivered call state N04, on receipt of a DISCONNECT message with an invalid call reference format (octet 1, bits 4 to 1, length value too high), sends no message and remains in the Call Delivered call state N04.

**L3N\_N04\_S\_005 subclause 5.8.4**

Ensure that the IUT in the Call Delivered call state N04, on receipt of a message with an unrecognized message type, sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Call Delivered call state N04.

**L3N\_N04\_S\_006 subclause 5.8.6.1**

Ensure that the IUT in the Call Delivered call state N04, on receipt of a DISCONNECT message with a mandatory information element missing, sends a RELEASE message with a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Release Request call state N19.

**L3N\_N04\_S\_007 subclause 5.8.6.2**

Ensure that the IUT in the Call Delivered call state N04, on receipt of a DISCONNECT message with a mandatory information element content error, sends a RELEASE message with a Cause information element indicating the cause value 100 "invalid information element contents" and enters the Release Request call state N19.

**L3N\_N04\_S\_008 subclauses 5.8.7.1, 5.8.6.1**

Ensure that the IUT in the Call Delivered call state N04, on receipt of a DISCONNECT message with an unrecognized information element (coded comprehension required), sends a RELEASE message with a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Release Request call state N19.

**L3N\_N04\_S\_009 subclause 5.8.7.1**

Ensure that the IUT in the Call Delivered call state N04, on receipt of a DISCONNECT message with an unrecognized information element (coded comprehension not required), sends a RELEASE message with a Cause information element indicating the cause value 99 "information element non-existent or not implemented" and enters the Release Request call state N19.

**L3N\_N04\_S\_010 subclause 5.8.7.2**

Ensure that the IUT in the Call Delivered call state N04, on receipt of a DISCONNECT message with a non-mandatory information element content error, processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 100 "invalid information element contents".

## 5.2.5 Call present call state N06

### 5.2.5.1 Valid

#### 5.2.5.1A Point-to-point configuration

**Selection:** IUT supports the point-to-point configuration. PICS: R 7.1.

**L3N\_N06\_V\_001 subclauses 5.2.3.1 a)1), 5.2.4**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", on receipt of a SETUP ACKNOWLEDGE message without the Channel identification information element, sends no message and enters the Overlap Receiving call state N25.

**L3N\_N06\_V\_002 subclause 5.2.3.1 a)1)**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", on receipt of a SETUP ACKNOWLEDGE message with the Channel identification information element indicating another B-channel than received in the SETUP message and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends a RELEASE message with a Cause information element indicating the cause value 6 "channel unacceptable" and enters the Release Request call state N19.

**L3N\_N06\_V\_003 subclauses 5.2.3.1 a)2), 5.2.4**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "indicated channel is preferred", on receipt of a SETUP ACKNOWLEDGE message with the Channel identification information element indicating another available B-channel and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends no message and enters the Overlap Receiving call state N25.

**L3N\_N06\_V\_004 subclauses 5.2.3.1 a)2), 5.2.4**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "indicated channel is preferred", on receipt of a SETUP ACKNOWLEDGE message without the Channel identification information element, sends no message and enters the Overlap Receiving call state N25.

**L3N\_N06\_V\_005 subclause 5.2.3.1 a)2)**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "indicated channel is preferred", on receipt of a SETUP ACKNOWLEDGE message with the Channel identification information element indicating a B-channel that is not acceptable and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends a RELEASE message with a Cause information element indicating the cause value 6 "channel unacceptable" and enters the Release Request call state N19.

**L3N\_N06\_V\_006 subclauses 5.2.3.1 a)3), 5.2.4**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating in the info channel selection field "any channel", on receipt of a SETUP ACKNOWLEDGE message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends no message and enters the Overlap Receiving call state N25.

**L3N\_N06\_V\_007 subclause 5.2.3.1 a)3)**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating in the info channel selection field "any channel", on receipt of a SETUP ACKNOWLEDGE message with the Channel identification information element indicating a B-channel that is not acceptable and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends a RELEASE message with a Cause information element indicating the cause value 6 "channel unacceptable" and enters the Release Request call state N19.

**L3N\_N06\_V\_008 subclauses 5.2.3.1 a)1), 5.2.5.1**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", on receipt of a CALL PROCEEDING message without the Channel identification information element, sends no message and enters the Incoming Call Proceeding call state N09.

**L3N\_N06\_V\_009 subclause 5.2.3.1 a)1)**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", on receipt of a CALL PROCEEDING message with the Channel identification information element indicating another B-channel than received in the SETUP message and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends a RELEASE message with a Cause information element indicating the cause value 6 "channel unacceptable" and enters the Release Request call state N19.

**L3N\_N06\_V\_010 subclauses 5.2.3.1 a)2), 5.2.5.1**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "indicated channel is preferred", on receipt of a CALL PROCEEDING message with the Channel identification information element indicating another available B-channel and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends no message and enters the Incoming Call Proceeding call state N09.

**L3N\_N06\_V\_011 subclauses 5.2.3.1 a)2), 5.2.5.1**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "indicated channel is preferred", on receipt of a CALL PROCEEDING message without the Channel identification information element, sends no message and enters the Incoming Call Proceeding call state N09.

**L3N\_N06\_V\_012 subclause 5.2.3.1 a)2)**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "indicated channel is preferred", on receipt of a CALL PROCEEDING message with the Channel identification information element indicating a B-channel that is not acceptable and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends a RELEASE message with a Cause information element indicating the cause value 6 "channel unacceptable" and enters the Release Request call state N19.

**L3N\_N06\_V\_013 subclauses 5.2.3.1 a)3), 5.2.5.1**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating in the info channel selection field "any channel", on receipt of a CALL PROCEEDING message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends no message and enters the Incoming Call Proceeding call state N09.

**L3N\_N06\_V\_014 subclause 5.2.3.1 a)3)**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating in the info channel selection field "any channel", on receipt of a CALL PROCEEDING message with the Channel identification information element indicating a B-channel that is not acceptable and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends a RELEASE message with a Cause information element indicating the cause value 6 "channel unacceptable" and enters the Release Request call state N19.

**L3N\_N06\_V\_015 subclauses 5.2.3.1 a)1), 5.2.5.1**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", on receipt of a ALERTING message without the Channel identification information element, sends no message and enters the Call Received call state N07.

**L3N\_N06\_V\_016 subclause 5.2.3.1 a)1)**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", on receipt of a ALERTING message with the Channel identification information element indicating another B-channel than received in the SETUP message and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends a RELEASE message with a Cause information element indicating the cause value 6 "channel unacceptable" and enters the Release Request call state N19.

**L3N\_N06\_V\_017 subclauses 5.2.3.1 a)2), 5.2.5.1**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "indicated channel is preferred", on receipt of a ALERTING message with the Channel identification information element indicating another available B-channel and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends no message and enters the Call Received call state N07.

**L3N\_N06\_V\_018 subclauses 5.2.3.1 a)2), 5.2.5.1**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "indicated channel is preferred", on receipt of a ALERTING message without the Channel identification information element, sends no message and enters the Call Received call state N07.

**L3N\_N06\_V\_019 subclause 5.2.3.1 a)2)**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "indicated channel is preferred", on receipt of a ALERTING message with the Channel identification information element indicating a B-channel that is not acceptable and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends a RELEASE message with a Cause information element indicating the cause value 6 "channel unacceptable" and enters the Release Request call state N19.

**L3N\_N06\_V\_020 subclauses 5.2.3.1 a)3), 5.2.5.1**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating in the info channel selection field "any channel", on receipt of a ALERTING message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends no message and enters the Call Received call state N07.

**L3N\_N06\_V\_021 subclause 5.2.3.1 a)3)**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating in the info channel selection field "any channel", on receipt of a ALERTING message with the Channel identification information element indicating a B-channel that is not acceptable and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends a RELEASE message with a Cause information element indicating the cause value 6 "channel unacceptable" and enters the Release Request call state N19.

**L3N\_N06\_V\_022 subclauses 5.2.3.1 a)1), 5.2.5.1, 5.2.8**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", on receipt of a CONNECT message without the Channel identification information element, sends a CONNECT ACKNOWLEDGE message and enters the Active call state N10.

**L3N\_N06\_V\_023 subclause 5.2.3.1 a)1)**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", on receipt of a CONNECT message with the Channel identification information element indicating another B-channel than received in the SETUP message and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends a RELEASE message with a Cause information element indicating the cause value 6 "channel unacceptable" and enters the Release Request call state N19.

**L3N\_N06\_V\_024 subclauses 5.2.3.1 a)2), 5.2.5.1, 5.2.8**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "indicated channel is preferred", on receipt of a CONNECT message with the Channel identification information element indicating another available B-channel and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends a CONNECT ACKNOWLEDGE message and enters the Active call state N10.

**L3N\_N06\_V\_025 subclauses 5.2.3.1 a)2), 5.2.5.1, 5.2.8**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "indicated channel is preferred", on receipt of a CONNECT message without the Channel identification information element, sends a CONNECT ACKNOWLEDGE message and enters the Active call state N10.

**L3N\_N06\_V\_026 subclause 5.2.3.1 a)2)**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "indicated channel is preferred", on receipt of a CONNECT message with the Channel identification information element indicating a B-channel that is not acceptable and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends a RELEASE message with a Cause information element indicating the cause value 6 "channel unacceptable" and enters the Release Request call state N19.

**L3N\_N06\_V\_027 subclauses 5.2.3.1 a)3), 5.2.5.1, 5.2.8**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating in the info channel selection field "any channel", on receipt of a CONNECT message with the Channel identification information element indicating an available B-channel and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends a CONNECT ACKNOWLEDGE message and enters the Active call state N10.

**L3N\_N06\_V\_028 subclause 5.2.3.1 a)3)**

Ensure that the IUT in the Call Present call state N06, reached by sending a SETUP message with the Channel identification information element indicating in the info channel selection field "any channel", on receipt of a CONNECT message with the Channel identification information element indicating a B-channel that is not acceptable and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", sends a RELEASE message with a Cause information element indicating the cause value 6 "channel unacceptable" and enters the Release Request call state N19.

**L3N\_N06\_V\_029 subclause 5.2.5.3**

Ensure that the IUT in the Call Present call state N06, on receipt of a RELEASE COMPLETE message, sends no message and enters the Null call state N00.

**L3N\_N06\_V\_030 subclause 5.3.4**

Ensure that the IUT in the Call Present call state N06, to indicate that the remote user has sent an invitation to clear the call, sends a DISCONNECT message and enters the Disconnect Indication call state N12.

**L3N\_N06\_V\_031 subclause 5.2.1**

Ensure that the IUT in the Call Present call state N06, on the first expiry of the mandatory timer T303, sends a SETUP message using the point-to-point data link and remains in the Call Present call state N06.

**L3N\_N06\_V\_032 subclauses 5.2.1, 5.2.5.4**

Ensure that the IUT in the Call Present call state N06, on the second expiry of the mandatory timer T303, sends a DISCONNECT message with a Cause information element indicating the cause value 102 "recovery on timer expiry" and enters the Disconnect Indication call state N12.

**L3N\_N06\_V\_033 subclause 5.8.10**

Ensure that the IUT in the Call Present call state N06, on receipt of a STATUS ENQUIRY message, sends a STATUS message with a Call state information element indicating the Call Present call state and a Cause information element indicating the cause value 30 "response to STATUS ENQUIRY", 97 "message type non-existent or not implemented" or 98 "message not compatible with call state" and remains in the Call Present call state N06.

**L3N\_N06\_V\_v30 subclauses 9.3.2.2 [6] VPNNEW**

Ensure that the IUT in the Call Present call state N06, on receipt of an ALERTING, PROGRESS, or CONNECT message, with a progress indication shall transfer the progress indication (resulting in the sending of the progress indication on the originating entity PINX interface).

**Selection:** The IUT does not provide the emulation of an originating PINX. PICS: NOT Tin1.

**Selection:** The IUT does not provide the emulation of an Incoming gateway PINX. PICS: NOT Tin5.

**L3N\_N06\_V\_v31 subclauses 9.3.2.2 [6] VPNNEW**

Ensure that the IUT in the Call Present call state N06, on receipt of an ALERTING, PROGRESS, or CONNECT message, with a progress indication shall transfer the progress indication (resulting in the sending of the progress indication on the initial calling user interface depending on the ability of the calling user to receive such information).

**Selection:** The IUT provides the emulation of an originating PINX. PICS: Tin1.

**L3N\_N06\_V\_v32 subclauses 9.3.2.2 [6] VPNNEW**

Ensure that the IUT in the Call Present call state N06, on receipt of an ALERTING, PROGRESS, or CONNECT message, with a progress indication shall transfer the progress indication (resulting in the sending of the progress indication on the initiate calling network interface if relevant).

**Selection:** The IUT provides the emulation of an Incoming gateway PINX. PICS: Tin5.

**L3N\_N06\_V\_v33 subclauses 9.3.2.4 [6] VPNNEW**

Ensure that the IUT in the Call Present call state N06, on receipt of a CONNECT message with the connected number information element provided, transfers this information element (resulting in the sending of the CONNECT message with the connected number IE on the originating entity PINX interface).

**Selection:** The IUT does not provide the emulation of an originating PINX. PICS: NOT Tin1.

**L3N\_N06\_V\_v34 subclauses 9.3.2.4 [6] VPNNEW**

Ensure that the IUT in the Call Present call state N06, on receipt of a CONNECT message with the connected number information element provided and presentation is allowed, transfers this information element (resulting in the sending of a CONNECT message with the connected number IE on the calling user interface).

**Selection:** The IUT provides the emulation of an originating PINX. PICS: Tin1.

**L3N\_N06\_V\_v35 subclauses 9.3.2.4 [6] VPNNEW**

Ensure that the IUT in the Call Present call state N06, on receipt of a CONNECT message with the connected number information element provided, and presentation is restricted discard the connected number IE (resulting in the sending of a CONNECT message without a complete connected number IE on the calling user interface).

**Selection:** The IUT provides the emulation of an originating PINX. PICS: Tin1.

**5.2.5.2 Inopportune****L3N\_N06\_I\_001 subclause 5.8**

Ensure that the IUT in the Call Present call state N06, on receipt of a CALL PROCEEDING message delivered in a DL-UNIT-DATA-INDICATION, sends no message and remains in the Call Present call state N06 or processes the message as valid.

**L3N\_N06\_I\_002 subclause 5.8.3.1**

Ensure that the IUT in the Call Present call state N06, on receipt of a CALL PROCEEDING message using the dummy call reference, sends no message and remains in the Call Present call state N06.



**L3N\_N06\_I\_003 subclause 5.8.3.2 a)**

Ensure that the IUT in the Call Present call state N06 for CR1, on receipt of a CALL PROCEEDING message for CR2 which is not recognized as relating to a call, sends a RELEASE or a RELEASE COMPLETE message for CR2 with a Cause information element indicating the cause value 81 "invalid call reference value" and enters the Release Request call state N19 or remains in the Null call state N00 for CR2 and remains in the Call Present call state N06 for CR1.

**L3N\_N06\_I\_004 subclause 5.8.3.2 f)**

Ensure that the IUT in the Call Present call state N06, on receipt of a CALL PROCEEDING message using the global call reference, sends a STATUS message using the global call reference with a Call state information element indicating the call state associated with the global call reference and a Cause information element indicating the cause value 81 "invalid call reference value" and remains in the Call Present call state N06.

**L3N\_N06\_I\_005 subclause 5.8.4**

Ensure that the IUT in the Call Present call state N06, on receipt of an inopportune message (CONNECT ACKNOWLEDGE), sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 101 "message not compatible with call state" or a STATUS ENQUIRY message and remains in the Call Present call state N06.

**L3N\_N06\_I\_006 subclause 5.8.4**

Ensure that the IUT in the Call Present call state N06, on receipt of a RELEASE message, sends a RELEASE COMPLETE message and enters the Null call state N00.

**Selection:** IUT supports the point-to-point configuration. PICS: R 7.1.

**L3N\_N06\_I\_008 subclause 5.8.8**

Ensure that the IUT in the Call Present call state N06, on receipt of a DL-ESTABLISH-INDICATION, sends no message and remains in the Call Present call state N06.

**L3N\_N06\_I\_009 subclause 5.8.11**

Ensure that the IUT in the Call Present call state N06, on receipt of a STATUS message with a Call state information element indicating the Null call state, sends no message and enters the Null call state N00.

### 5.2.5.3 Syntactically invalid

**L3N\_N06\_S\_001 subclause 5.8.1**

Ensure that the IUT in the Call Present call state N06, on receipt of a CALL PROCEEDING message with an erroneous protocol discriminator, coded other than '08'H, sends no message and remains in the Call Present call state N06.

**L3N\_N06\_S\_002 subclause 5.8.2**

Ensure that the IUT in the Call Present call state N06, on receipt of a message which is too short, sends no message and remains in the Call Present call state N06.

**L3N\_N06\_S\_003 subclause 5.8.3.1**

Ensure that the IUT in the Call Present call state N06, on receipt of a CALL PROCEEDING message with an invalid call reference format (octet 1, bits 8 to 5  $\neq$  '0000'B), sends no message and remains in the Call Present call state N06.

**L3N\_N06\_S\_004 subclause 5.8.3.1**

Ensure that the IUT in the Call Present call state N06, on receipt of a CALL PROCEEDING message with an invalid call reference format (octet 1, bits 4 to 1, length value too high), sends no message and remains in the Call Present call state N06.

**L3N\_N06\_S\_005 subclause 5.8.4**

Ensure that the IUT in the Call Present call state N06, on receipt of a message with an unrecognized message type, sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Call Present call state N06.

**L3N\_N06\_S\_006 subclause 5.8.5.1**

Ensure that the IUT in the Call Present call state N06, on receipt of a CALL PROCEEDING message with a non-mandatory information element out of sequence, processes the message as valid.

**L3N\_N06\_S\_009 subclauses 5.8.7.1, 5.8.6.1**

Ensure that the IUT in the Call Present call state N06, on receipt of a CALL PROCEEDING message with an unrecognized information element (coded comprehension required), sends a STATUS message with a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Call Present call state N06.

**L3N\_N06\_S\_010 subclause 5.8.7.1**

Ensure that the IUT in the Call Present call state N06, on receipt of a CALL PROCEEDING message with an unrecognized information element (coded comprehension not required), processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

**L3N\_N06\_S\_011 subclause 5.8.7.2**

Ensure that the IUT in the Call Present call state N06, on receipt of a CALL PROCEEDING message with a non-mandatory information element content error, processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 100 "invalid information element contents".

**5.2.6 Call received call state N07****5.2.6.1 Valid****5.2.6.1A Point-to-point configuration**

**Selection:** IUT supports the point-to-point configuration. PICS: R 7.1.

**L3N\_N07\_V\_001 subclause 5.2.8**

Ensure that the IUT in the Call Received call state N07, on receipt of a CONNECT message, sends a CONNECT ACKNOWLEDGE message and enters the Active call state N10.

**L3N\_N07\_V\_002 clause 5**

Ensure that the IUT in the Call Received call state N07, on receipt of an INFORMATION message, sends no message and remains in the Call Received call state N07.

**L3N\_N07\_V\_003 subclause 5.2.6**

Ensure that the IUT in the Call Received call state N07, on receipt of an PROGRESS message, sends no message and remains in the Call Received call state N07.

**L3N\_N07\_V\_004 subclause 5.3.3**

Ensure that the IUT in the Call Received call state N07, on receipt of a DISCONNECT message, sends a RELEASE message and enters the Release Request call state N19.

**L3N\_N07\_V\_005 subclause 5.3.4**

Ensure that the IUT in the Call Received call state N07, to indicate that the remote user has sent an invitation to clear the call, sends a DISCONNECT message and enters the Disconnect Indication call state N12.

**L3N\_N07\_V\_006 subclause 5.2.5.4**

Ensure that the IUT in the Call Received call state N07, on the expiry of the optional timer T301, sends a DISCONNECT message with a Cause information element indicating the cause value 102 "recovery on timer expiry" and enters the Disconnect Indication call state N12.

**Selection:** IUT supports timer T301. PICS: TMn 1. [34]

**L3N\_N07\_V\_007 clause 5**

Ensure that the IUT in the Call Received call state N07, to provide additional information, sends an INFORMATION message and remains in the Call Received call state N07.

**L3N\_N07\_V\_008 subclause 5.8.10**

Ensure that the IUT in the Call Received call state N07, on receipt of a STATUS ENQUIRY message, sends a STATUS message with a Call state information element indicating the Call Received call state and a Cause information element indicating the cause value 30 "response to STATUS ENQUIRY", 97 "message type non-existent or not implemented" or 98 "message not compatible with call state" and remains in the Call Received call state N07.

**L3N\_N07\_V\_v36 subclauses 9.3.2.4 [6] VPNNEW**

Ensure that the IUT in the Call Received call state N07, on receipt of a CONNECT message with the connected number information element provided, transfers this information element (resulting in the sending of the CONNECT message with the connected number IE on the originating entity PINX interface).

**Selection:** The IUT does not provide the emulation of an originating PINX. PICS: NOT Tin1.

**L3N\_N07\_V\_v37 subclauses 9.3.2.4 [6] VPNNEW**

Ensure that the IUT in the Call Received call state N07, on receipt of a CONNECT message with the connected number information element provided and presentation is allowed, transfers this information element (resulting in the sending of a CONNECT message with the connected number IE on the calling user interface).

**Selection:** The IUT provides the emulation of an originating PINX. PICS: Tin1.

**L3N\_N07\_V\_v38 subclauses 9.3.2.4 [6] VPNNEW**

Ensure that the IUT in the Call Received call state N07, on receipt of a CONNECT message with the connected number information element provided, and presentation is restricted discard the connected number IE (resulting in the sending of a CONNECT message without complete connected number IE on the calling user interface).

**Selection:** The IUT provides the emulation of an originating PINX. PICS: Tin1.

### 5.2.6.2 Inopportune

#### L3N\_N07\_I\_001 subclause 5.8

Ensure that the IUT in the Call Received call state N07, on receipt of a CONNECT message delivered in a DL-UNIT-DATA-INDICATION, sends no message and remains in the Call Received call state N07 or processes the message as valid.

#### L3N\_N07\_I\_002 subclause 5.8.3.1

Ensure that the IUT in the Call Received call state N07, on receipt of a CONNECT message using the dummy call reference, sends no message and remains in the Call Received call state N07.

#### L3N\_N07\_I\_003 subclause 5.8.3.2 a)

Ensure that the IUT in the Call Received call state N07 for CR1, on receipt of a CONNECT message for CR2 which is not recognized as relating to a call, sends a RELEASE or a RELEASE COMPLETE message for CR2 with a Cause information element indicating the cause value 81 "invalid call reference value" and enters the Release Request call state N19 or remains in the Null call state N00 for CR2 and remains in the Call Received call state N07 for CR1.

#### L3N\_N07\_I\_004 subclause 5.8.3.2 f)

Ensure that the IUT in the Call Received call state N07, on receipt of a CONNECT message using the global call reference, sends a STATUS message using the global call reference with a Call state information element indicating the call state associated with the global call reference and a Cause information element indicating the cause value 81 "invalid call reference value" and remains in the Call Received call state N07.

#### L3N\_N07\_I\_005 subclause 5.8.4

Ensure that the IUT in the Call Received call state N07, on receipt of a SETUP ACKNOWLEDGE message, sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 101 "message not compatible with call state" or a STATUS ENQUIRY message and remains in the Call Received call state N07.

**Selection:** IUT supports the point-to-point configuration. PICS: R 7.1.

#### L3N\_N07\_I\_006 subclause 5.8.4

Ensure that the IUT in the Call Received call state N07, on receipt of a CALL PROCEEDING message, sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 101 "message not compatible with call state" or a STATUS ENQUIRY message and remains in the Call Received call state N07.

**Selection:** IUT supports the point-to-point configuration. PICS: R 7.1.

#### L3N\_N07\_I\_007 subclause 5.8.4

Ensure that the IUT in the Call Received call state N07, on receipt of an ALERTING message, sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 101 "message not compatible with call state" or a STATUS ENQUIRY message and remains in the Call Received call state N07.

**Selection:** IUT supports the point-to-point configuration. PICS: R 7.1.

#### L3N\_N07\_I\_011 subclause 5.8.4

Ensure that the IUT in the Call Received call state N07, on receipt of a RELEASE message, sends a RELEASE COMPLETE message and enters the Null call state N00.

**Selection:** IUT supports the point-to-point configuration. PICS: R 7.1.

#### L3N\_N07\_I\_015 subclause 5.8.4

Ensure that the IUT in the Call Received call state N07, on receipt of a RELEASE COMPLETE message, sends no message and enters the Null call state N00.

**Selection:** IUT supports the point-to-point configuration. PICS: R 7.1.

#### L3N\_N07\_I\_020 subclause 5.8.8

Ensure that the IUT in the Call Received call state N07, on receipt of a DL-ESTABLISH-INDICATION, sends no message and remains in the Call Received call state N07.

#### L3N\_N07\_I\_021 subclause 5.8.11

Ensure that the IUT in the Call Received call state N07, on receipt of a STATUS message with a Call state information element indicating the Null call state, sends no message and enters the Null call state N00.

### 5.2.6.3 Syntactically invalid

#### L3N\_N07\_S\_001 subclause 5.8.1

Ensure that the IUT in the Call Received call state N07, on receipt of a CONNECT message with an erroneous protocol discriminator, coded other than '08'H, sends no message and remains in the Call Received call state N07.

**L3N\_N07\_S\_002 subclause 5.8.2**

Ensure that the IUT in the Call Received call state N07, on receipt of a message which is too short, sends no message and remains in the Call Received call state N07.

**L3N\_N07\_S\_003 subclause 5.8.3.1**

Ensure that the IUT in the Call Received call state N07, on receipt of a CONNECT message with an invalid call reference format (octet 1, bits 8 to 5 ≠ '0000'B), sends no message and remains in the Call Received call state N07.

**L3N\_N07\_S\_004 subclause 5.8.3.1**

Ensure that the IUT in the Call Received call state N07, on receipt of a CONNECT message with an invalid call reference format (octet 1, bits 4 to 1, length value too high), sends no message and remains in the Call Received call state N07.

**L3N\_N07\_S\_005 subclause 5.8.4**

Ensure that the IUT in the Call Received call state N07, on receipt of a message with an unrecognized message type, sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Call Received call state N07.

**L3N\_N07\_S\_006 subclause 5.8.5.1**

Ensure that the IUT in the Call Received call state N07, on receipt of a CONNECT message with a non-mandatory information element out of sequence, processes the message as valid.

**L3N\_N07\_S\_007 subclause 5.8.6.1**

Ensure that the IUT in the Call Received call state N07, on receipt of a DISCONNECT message with a mandatory information element missing, sends a RELEASE message with a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Release Request call state N19.

**L3N\_N07\_S\_008 subclause 5.8.6.2**

Ensure that the IUT in the Call Received call state N07, on receipt of a DISCONNECT message with a mandatory information element content error, sends a RELEASE message with a Cause information element indicating the cause value 100 "invalid information element contents" and enters the Release Request call state N19.

**L3N\_N07\_S\_009 subclauses 5.8.7.1, 5.8.6.1**

Ensure that the IUT in the Call Received call state N07, on receipt of a CONNECT message with an unrecognized information element (coded comprehension required), sends a STATUS message with a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Call Received call state N07.

**L3N\_N07\_S\_010 subclause 5.8.7.1**

Ensure that the IUT in the Call Received call state N07, on receipt of a CONNECT message with an unrecognized information element (coded comprehension not required), processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

**L3N\_N07\_S\_011 subclause 5.8.7.2**

Ensure that the IUT in the Call Received call state N07, on receipt of a CONNECT message with a non-mandatory information element content error, processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 100 "invalid information element contents".

## 5.2.7 Incoming call proceeding call state N09

### 5.2.7.1 Valid

#### 5.2.7.1A Point-to-point configuration

**Selection:** IUT supports the point-to-point configuration. PICS: R 7.1.

**L3N\_N09\_V\_001 subclause 5.2.5.1**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of an ALERTING message, sends no message and enters the Call Received call state N07.

**L3N\_N09\_V\_002 subclauses 5.2.5.1, 5.2.8**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of a CONNECT message, sends a CONNECT ACKNOWLEDGE message and enters the Active call state N10.

**L3N\_N09\_V\_003 clause 5**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of an INFORMATION message, sends no message and remains in the Incoming Call Proceeding call state N09.

**L3N\_N09\_V\_004 subclause 5.2.6**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of an PROGRESS message, sends no message and remains in the Incoming Call Proceeding call state N09.

**L3N\_N09\_V\_005 subclause 5.3.3**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of a DISCONNECT message, sends a RELEASE message and enters the Release Request call state N19.

**L3N\_N09\_V\_006 subclause 5.3.4**

Ensure that the IUT in the Incoming Call Proceeding call state N09, to indicate that the remote user has sent an invitation to clear the call, sends a DISCONNECT message and enters the Disconnect Indication call state N12.

**L3N\_N09\_V\_007 subclause 5.2.5.4**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on the expiry of the mandatory timer T310, sends a DISCONNECT message with a Cause information element indicating the cause value 102 "recovery on timer expiry" and enters the Disconnect Indication call state N12.

**L3N\_N09\_V\_008 clause 5**

Ensure that the IUT in the Incoming Call Proceeding call state N09, to provide additional information, sends an INFORMATION message and remains in the Incoming Call Proceeding call state N09.

**L3N\_N09\_V\_009 subclause 5.8.10**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of a STATUS ENQUIRY message, sends a STATUS message with a Call state information element indicating the Incoming Call Proceeding call state and a Cause information element indicating the cause value 30 "response to STATUS ENQUIRY", 97 "message type non-existent or not implemented" or 98 "message not compatible with call state" and remains in the incoming call proceeding call state N09.

**L3N\_N09\_V\_v39 subclauses 9.3.2.4 [6] VPNNEW**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of a CONNECT message with the connected number information element provided, transfers this information element (resulting in the sending of the CONNECT message with the connected number IE on the originating entity PINX interface).

**Selection:** The IUT does not provide the emulation of an originating PINX. PICS: NOT Tin1.

**L3N\_N09\_V\_v40 subclauses 9.3.2.4 [6] VPNNEW**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of a CONNECT message with the connected number information element provided and presentation is allowed, transfers this information element (resulting in the sending of a CONNECT message with the connected number IE on the calling user interface).

**Selection:** The IUT provides the emulation of an originating PINX. PICS: Tin1.

**L3N\_N09\_V\_v41 subclauses 9.3.2.4 [6] VPNNEW**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of a CONNECT message with the connected number information element provided, and presentation is restricted discard the connected number IE (resulting in the sending of a CONNECT message without complete connected number IE on the calling user interface).

**Selection:** The IUT provides the emulation of an originating PINX. PICS: Tin1.

## 5.2.7.2 Inopportune

**L3N\_N09\_I\_001 subclause 5.8**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of an ALERTING message delivered in a DL-UNIT-DATA-INDICATION, sends no message and remains in the Incoming Call Proceeding call state N09 or processes the message as valid.

**L3N\_N09\_I\_002 subclause 5.8.3.1**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of an ALERTING message using the dummy call reference, sends no message and remains in the Incoming Call Proceeding call state N09.

**L3N\_N09\_I\_003 subclause 5.8.3.2 a)**

Ensure that the IUT in the Incoming Call Proceeding call state N09 for CR1, on receipt of an ALERTING message for CR2 which is not recognized as relating to a call, sends a RELEASE or a RELEASE COMPLETE message for CR2 with a Cause information element indicating the cause value 81 "invalid call reference value" and enters the Release Request call state N19 or remains in the Null call state N00 for CR2 and remains in the Incoming Call Proceeding call state N09 for CR1.

**L3N\_N09\_I\_004 subclause 5.8.3.2 f)**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of an ALERTING message using the global call reference, sends a STATUS message using the global call reference with a Call state information element indicating the call state associated with the global call reference and a Cause information element indicating the cause value 81 "invalid call reference value" and remains in the Incoming Call Proceeding call state N09.

**L3N\_N09\_I\_005 subclause 5.8.4**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of a SETUP ACKNOWLEDGE message, sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 101 "message not compatible with call state" or a STATUS ENQUIRY message and remains in the Incoming Call Proceeding call state N09.

**Selection:** IUT supports the point-to-point configuration. PICS: R 7.1.

**L3N\_N09\_I\_006 subclause 5.8.4**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of a CALL PROCEEDING message, sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 101 "message not compatible with call state" or a STATUS ENQUIRY message and remains in the Incoming Call Proceeding call state N09.

**Selection:** IUT supports the point-to-point configuration. PICS: R 7.1.

**L3N\_N09\_I\_010 subclause 5.8.4**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of a RELEASE message, sends a RELEASE COMPLETE message and enters the Null call state N00.

**Selection:** IUT supports the point-to-point configuration. PICS: R 7.1.

**L3N\_N09\_I\_014 subclause 5.8.4**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of a RELEASE COMPLETE message, sends no message and enters the Null call state N00.

**Selection:** IUT supports the point-to-point configuration. PICS: R 7.1.

**L3N\_N09\_I\_019 subclause 5.8.8**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of a DL-ESTABLISH-INDICATION, sends no message and remains in the Incoming Call Proceeding call state N09.

**L3N\_N09\_I\_020 subclause 5.8.11**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of a STATUS message with a Call state information element indicating the Null call state, sends no message and enters the Null call state N00.

**5.2.7.3 Syntactically invalid****L3N\_N09\_S\_001 subclause 5.8.1**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of an ALERTING message with an erroneous protocol discriminator, coded other than '08'H, sends no message and remains in the Incoming Call Proceeding call state N09.

**L3N\_N09\_S\_002 subclause 5.8.2**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of a message which is too short, sends no message and remains in the Incoming Call Proceeding call state N09.

**L3N\_N09\_S\_003 subclause 5.8.3.1**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of an ALERTING message with an invalid call reference format (octet 1, bits 8 to 5  $\neq$  '0000'B), sends no message and remains in the Incoming Call Proceeding call state N09.

**L3N\_N09\_S\_004 subclause 5.8.3.1**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of an ALERTING message with an invalid call reference format (octet 1, bits 4 to 1, length value too high), sends no message and remains in the Incoming Call Proceeding call state N09.

**L3N\_N09\_S\_005 subclause 5.8.4**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of a message with an unrecognized message type, sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Incoming Call Proceeding call state N09.

**L3N\_N09\_S\_006 subclause 5.8.5.1**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of an ALERTING message with a non-mandatory information element out of sequence, processes the message as valid.

**L3N\_N09\_S\_007 subclause 5.8.6.1**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of a DISCONNECT message with a mandatory information element missing, sends a RELEASE message with a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Release Request call state N19.

**L3N\_N09\_S\_008 subclause 5.8.6.2**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of a DISCONNECT message with a mandatory information element content error, sends a RELEASE message with a Cause information element indicating the cause value 100 "invalid information element contents" and enters the Release Request call state N19.

**L3N\_N09\_S\_009 subclauses 5.8.7.1, 5.8.6.1**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of an ALERTING message with an unrecognized information element (coded comprehension required), sends a STATUS message with a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Incoming Call Proceeding call state N09.

**L3N\_N09\_S\_010 subclause 5.8.7.1**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of an ALERTING message with an unrecognized information element (coded comprehension not required), processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

**L3N\_N09\_S\_011 subclause 5.8.7.2**

Ensure that the IUT in the Incoming Call Proceeding call state N09, on receipt of an ALERTING message with a non-mandatory information element content error, processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 100 "invalid information element contents".

## 5.2.8 Active call state N10 (incoming call)

### 5.2.8.1 Valid

**L3N\_N10I\_V\_007 subclause 5.1.8**

Ensure that the IUT in the Active call state N10, on receipt of a CONNECT ACKNOWLEDGE message, sends no message and remains in the Active call state N10.

**L3N\_N10I\_V\_008 subclauses 5.6.2, 5.6.4, 5.9**

Ensure that the IUT in the Active call state N10, on receipt of a NOTIFY message, sends no message and remains in the Active call state N10.

**L3N\_N10I\_V\_009 clause 5**

Ensure that the IUT in the Active call state N10, on receipt of an INFORMATION message, sends no message and remains in the Active call state N10.

**L3N\_N10I\_V\_010 subclause 5.3.3**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message, sends a RELEASE message and enters the Release Request call state N19.

**L3N\_N10I\_V\_011 subclauses 5.6.2, 5.6.4, 5.9**

Ensure that the IUT in the Active call state N10, to pass notifications to the user, sends a NOTIFY message and remains in the Active call state N10.

**L3N\_N10I\_V\_012 clause 5**

Ensure that the IUT in the Active call state N10, to provide additional information, sends an INFORMATION message and remains in the Active call state N10.

**L3N\_N10I\_V\_013 subclause 5.3.4**

Ensure that the IUT in the Active call state N10, to indicate that the remote user has sent an invitation to clear the call, sends a DISCONNECT message and enters the Disconnect Indication call state N12.

**L3N\_N10I\_V\_014 subclause 5.8.10**

Ensure that the IUT in the Active call state N10, on the first expiry of the mandatory timer T322, sends a STATUS ENQUIRY message and remains in the Active call state N10.

**L3N\_N10I\_V\_015 subclause 5.8.10**

Ensure that the IUT in the Active call state N10, on expiry of the mandatory timer T322 after the maximum number of retransmissions of STATUS ENQUIRY messages, sends a RELEASE message with a Cause information element indicating the cause value 41 "temporary failure" and enters the Release Request call state N19.

**L3N\_N10I\_V\_016 subclause 5.8.10**

Ensure that the IUT in the Active call state N10, on receipt of a STATUS ENQUIRY message, sends a STATUS message with a Call state information element indicating the Active call state and a Cause information element indicating the cause value 30 "response to STATUS ENQUIRY", 97 "message type non-existent or not implemented" or 98 "message not compatible with call state" and remains in the Active call state N10.

**L3N\_N10I\_V\_017 subclauses 2, 5.1**

Ensure that the IUT in the Active call state N10 for CR1 and in the Null call state N00 for CR2, on receipt of a SETUP message with the Sending complete information element for CR2, sends a CALL PROCEEDING message using CR2, enters the Outgoing Call Proceeding call state N03 for CR2 and remains in the Active call state N10 for CR1.

**L3N\_N10I\_V\_018 subclauses 2, 5.1**

Ensure that the IUT in the Active call state N10 for CR1 and in the Call Delivered call state N04, to indicate that the remote user has answered the call, sends a CONNECT message using CR2, enters the Active call state N10 for CR2 and remains in the Active call state N10 for CR1.

**L3N\_N10I\_V\_019 subclauses 2, 5.2**

Ensure that the IUT in the Active call state N10 for CR1 and in the Null call state N00 for CR2, to deliver a call, sends a SETUP message using CR2, enters the Call Present call state N06 for CR2 and remains in the Active call state N10 for CR1.

**L3N\_N10I\_V\_020 subclauses 2, 5.2**

Ensure that the IUT in the Active call state N10 for CR1 and in the Call Received call state N07 for CR2, on receipt of a CONNECT message for CR2, sends a CONNECT ACKNOWLEDGE message using CR2, enters the Active call state N10 for CR2 and remains in the Active call state N10 for CR1.

**L3N\_N10I\_V\_021 subclauses 2, 5.1**

Ensure that the IUT in the Active call state N10, on receipt of a SETUP message using the same call reference value with the Sending complete information element, accepts the outgoing call and remains in the Active call state N10 for the incoming call.

### 5.2.8.2 Inopportune

**L3N\_N10I\_I\_001 subclause 5.8**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message delivered in a DL-UNIT-DATA-INDICATION, sends no message and remains in the Active call state N10 or processes the message as valid.

**L3N\_N10I\_I\_002 subclause 5.8.3.1**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message using the dummy call reference, sends no message and remains in the Active call state N10.

**L3N\_N10I\_I\_003 subclause 5.8.3.2 a)**

Ensure that the IUT in the Active call state N10 for CR1, on receipt of a DISCONNECT message for CR2 which is not recognized as relating to a call, sends a RELEASE or a RELEASE COMPLETE message for CR2 with a Cause information element indicating the cause value 81 "invalid call reference value" and enters the Release Request call state N19 or remains in the Null call state N00 for CR2 and remains in the Active call state N10 for CR1.

**L3N\_N10I\_I\_004 subclause 5.8.3.2 f)**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message using the global call reference, sends a STATUS message using the global call reference with a Call state information element indicating the call state associated with the global call reference and a Cause information element indicating the cause value 81 "invalid call reference value" and remains in the Active call state N10.

**L3N\_N10I\_I\_005 subclause 5.8.4**

Ensure that the IUT in the Active call state N10, on receipt of an inopportune message (CONNECT), sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 101 "message not compatible with call state" or a STATUS ENQUIRY message and remains in the Active call state N10.

**L3N\_N10I\_I\_006 subclause 5.8.4**

Ensure that the IUT in the Active call state N10, on receipt of a RELEASE message, sends a RELEASE COMPLETE message and enters the Null call state N00.

**L3N\_N10I\_I\_007 subclause 5.8.4**

Ensure that the IUT in the Active call state N10, on receipt of a RELEASE COMPLETE message, sends no message and enters the Null call state N00.

**L3N\_N10I\_I\_008 subclause 5.8.5.2**

Ensure that the IUT in the Active call state N10, on receipt of a NOTIFY message with a duplicated Notification indicator information element (repetition not permitted), ignores the second occurrence of that information element and processes the remaining contents of the message as valid.

**L3N\_N10I\_I\_009 subclauses 5.8.8, 5.8.10**

Ensure that the IUT in the Active call state N10, on receipt of a DL-ESTABLISH-INDICATION, sends a STATUS ENQUIRY message and remains in the Active call state N10.

**L3N\_N10I\_I\_010 subclause 5.8.9**

Ensure that the IUT in the Active call state N10, after having sent a DL-ESTABLISH-REQUEST in response to a DL-RELEASE-INDICATION, on receipt of a DL-ESTABLISH-CONFIRM, sends a STATUS message with a Cause information element indicating the cause value 31 "normal, unspecified" or a STATUS ENQUIRY message and remains in the Active call state N10.



**L3N\_N10I\_I\_011 subclause 5.8.11**

Ensure that the IUT in the Active call state N10, on receipt of a STATUS message with a Call state information element indicating the Null call state, sends no message and enters the Null call state N00.

**5.2.8.3 Syntactically invalid****L3N\_N10I\_S\_001 subclause 5.8.1**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message with an erroneous protocol discriminator, coded other than '08'H, sends no message and remains in the Active call state N10.

**L3N\_N10I\_S\_002 subclause 5.8.2**

Ensure that the IUT in the Active call state N10, on receipt of a message which is too short, sends no message and remains in the Active call state N10.

**L3N\_N10I\_S\_003 subclause 5.8.3.1**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message with an invalid call reference format (octet 1, bits 8 to 5  $\neq$  '0000'B), sends no message and remains in the Active call state N10.

**L3N\_N10I\_S\_004 subclause 5.8.3.1**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message with an invalid call reference format (octet 1, bits 4 to 1, length value too high), sends no message and remains in the Active call state N10.

**L3N\_N10I\_S\_005 subclause 5.8.4**

Ensure that the IUT in the Active call state N10, on receipt of a message with an unrecognized message type, sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Active call state N10.

**L3N\_N10I\_S\_006 subclause 5.8.6.1**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message with a mandatory information element missing, sends a RELEASE message with a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Release Request call state N19.

**L3N\_N10I\_S\_007 subclause 5.8.6.2**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message with a mandatory information element content error, sends a RELEASE message with a Cause information element indicating the cause value 100 "invalid information element contents" and enters the Release Request call state N19.

**L3N\_N10I\_S\_008 subclauses 5.8.7.1, 5.8.6.1**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message with an unrecognized information element (coded comprehension required), sends a RELEASE message with a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Release Request call state N19.

**L3N\_N10I\_S\_009 subclause 5.8.7.1**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message with an unrecognized information element (coded comprehension not required), sends a RELEASE message with a Cause information element indicating the cause value 99 "information element non-existent or not implemented" and enters the Release Request call state N19.

**L3N\_N10I\_S\_010 subclause 5.8.7.2**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message with a non-mandatory information element content error, processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 100 "invalid information element contents".

**5.2.9 Active call state N10 (outgoing call)****5.2.9.1 Valid****L3N\_N10O\_V\_007 subclause 5.1.8**

Ensure that the IUT in the Active call state N10, on receipt of a CONNECT ACKNOWLEDGE message, sends no message and remains in the Active call state N10.

**L3N\_N10O\_V\_008 subclauses 5.6.2, 5.6.4, 5.9**

Ensure that the IUT in the Active call state N10, on receipt of a NOTIFY message, sends no message and remains in the Active call state N10.

**L3N\_N10O\_V\_009 clause 5**

Ensure that the IUT in the Active call state N10, on receipt of an INFORMATION message, sends no message and remains in the Active call state N10.

**L3N\_N10O\_V\_010 subclause 5.3.3**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message, sends a RELEASE message and enters the Release Request call state N19.

**L3N\_N100\_V\_011 subclauses 5.6.2, 5.6.4, 5.9**

Ensure that the IUT in the Active call state N10, to pass notifications to the user, sends a NOTIFY message and remains in the Active call state N10.

**L3N\_N100\_V\_012 clause 5**

Ensure that the IUT in the Active call state N10, to provide additional information, sends an INFORMATION message and remains in the Active call state N10.

**L3N\_N100\_V\_013 subclause 5.3.4**

Ensure that the IUT in the Active call state N10, to indicate that the remote user has sent an invitation to clear the call, sends a DISCONNECT message and enters the Disconnect Indication call state N12.

**L3N\_N100\_V\_014 subclause 5.8.10**

Ensure that the IUT in the Active call state N10, on the first expiry of the mandatory timer T322, sends a STATUS ENQUIRY message and remains in the Active call state N10.

**L3N\_N100\_V\_015 subclause 5.8.10**

Ensure that the IUT in the Active call state N10, on expiry of the mandatory timer T322 after the maximum number of retransmissions of STATUS ENQUIRY messages, sends a RELEASE message with a Cause information element indicating the cause value 41 "temporary failure" and enters the Release Request call state N19.

**L3N\_N100\_V\_016 subclause 5.8.10**

Ensure that the IUT in the Active call state N10, on receipt of a STATUS ENQUIRY message, sends a STATUS message with a Call state information element indicating the Active call state and a Cause information element indicating the cause value 30 "response to STATUS ENQUIRY", 97 "message type non-existent or not implemented" or 98 "message not compatible with call state" and remains in the Active call state N10.

**L3N\_N100\_V\_017 subclauses 2, 5.1**

Ensure that the IUT in the Active call state N10 for CR1 and in the Null call state N00 for CR2, on receipt of a SETUP message with the Sending complete information element for CR2, sends a CALL PROCEEDING message using CR2, enters the Outgoing Call Proceeding call state N03 for CR2 and remains in the Active call state N10 for CR1.

**L3N\_N100\_V\_018 subclauses 2, 5.1**

Ensure that the IUT in the Active call state N10 for CR1 and in the Call Delivered call state N04, to indicate that the remote user has answered the call, sends a CONNECT message using CR2, enters the Active call state N10 for CR2 and remains in the Active call state N10 for CR1.

**L3N\_N100\_V\_019 subclauses 2, 5.2**

Ensure that the IUT in the Active call state N10 for CR1 and in the Null call state N00 for CR2, to deliver a call, sends a SETUP message using CR2, enters the Call Present call state N06 for CR2 and remains in the Active call state N10 for CR1.

**L3N\_N100\_V\_020 subclauses 2, 5.2**

Ensure that the IUT in the Active call state N10 for CR1 and in the Call Received call state N07 for CR2, on receipt of a CONNECT message for CR2, sends a CONNECT ACKNOWLEDGE message using CR2, enters the Active call state N10 for CR2 and remains in the Active call state N10 for CR1.

**5.2.9.2 Inopportune****L3N\_N100\_I\_001 subclause 5.8**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message delivered in a DL-UNIT-DATA-INDICATION, sends no message and remains in the Active call state N10 or processes the message as valid.

**L3N\_N100\_I\_002 subclause 5.8.3.1**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message using the dummy call reference, sends no message and remains in the Active call state N10.

**L3N\_N100\_I\_003 subclause 5.8.3.2 a)**

Ensure that the IUT in the Active call state N10 for CR1, on receipt of a DISCONNECT message for CR2 which is not recognized as relating to a call, sends a RELEASE or a RELEASE COMPLETE message for CR2 with a Cause information element indicating the cause value 81 "invalid call reference value" and enters the Release Request call state N19 or remains in the Null call state N00 for CR2 and remains in the Active call state N10 for CR1.

**L3N\_N100\_I\_004 subclause 5.8.3.2 e)**

Ensure that the IUT in the Active call state N10, on receipt of a SETUP message with a call reference that is already in use, sends no message and remains in the Active call state N10.

**L3N\_N100\_I\_005 subclause 5.8.3.2 f)**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message using the global call reference, sends a STATUS message using the global call reference with a Call state information element indicating the call state associated with the global call reference and a Cause information element indicating the cause value 81 "invalid call reference value" and remains in the Active call state N10.

**L3N\_N100\_I\_006 subclause 5.8.4**

Ensure that the IUT in the Active call state N10, on receipt of an inopportune message (CONNECT), sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 101 "message not compatible with call state" or a STATUS ENQUIRY message and remains in the Active call state N10.

**L3N\_N100\_I\_007 subclause 5.8.4**

Ensure that the IUT in the Active call state N10, on receipt of a RELEASE message, sends a RELEASE COMPLETE message and enters the Null call state N00.

**L3N\_N100\_I\_008 subclause 5.8.4**

Ensure that the IUT in the Active call state N10, on receipt of a RELEASE COMPLETE message, sends no message and enters the Null call state N00.

**L3N\_N100\_I\_009 subclause 5.8.5.2**

Ensure that the IUT in the Active call state N10, on receipt of a NOTIFY message with a duplicated Notification indicator information element (repetition not permitted), ignores the second occurrence of that information element and processes the remaining contents of the message as valid.

**L3N\_N100\_I\_010 subclause 5.8.8**

Ensure that the IUT in the Active call state N10, on receipt of a DL-ESTABLISH-INDICATION, sends a STATUS ENQUIRY message and remains in the Active call state N10.

**L3N\_N100\_I\_011 subclause 5.8.9**

Ensure that the IUT in the Active call state N10, after having sent a DL-ESTABLISH-REQUEST in response to a DL-RELEASE-INDICATION, on receipt of a DL-ESTABLISH-CONFIRM, sends a STATUS message with a Cause information element indicating the cause value 31 "normal, unspecified" or a STATUS ENQUIRY message and remains in the Active call state N10.

**L3N\_N100\_I\_012 subclause 5.8.11**

Ensure that the IUT in the Active call state N10, on receipt of a STATUS message with a Call state information element indicating the Null call state, sends no message and enters the Null call state N00.

### 5.2.9.3 Syntactically invalid

**L3N\_N100\_S\_001 subclause 5.8.1**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message with an erroneous protocol discriminator, coded other than '08'H, sends no message and remains in the Active call state N10.

**L3N\_N100\_S\_002 subclause 5.8.2**

Ensure that the IUT in the Active call state N10, on receipt of a message which is too short, sends no message and remains in the Active call state N10.

**L3N\_N100\_S\_003 subclause 5.8.3.1**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message with an invalid call reference format (octet 1, bits 8 to 5  $\neq$  '0000'B), sends no message and remains in the Active call state N10.

**L3N\_N100\_S\_004 subclause 5.8.3.1**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message with an invalid call reference format (octet 1, bits 4 to 1, length value too high), sends no message and remains in the Active call state N10.

**L3N\_N100\_S\_005 subclause 5.8.4**

Ensure that the IUT in the Active call state N10, on receipt of a message with an unrecognized message type, sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Active call state N10.

**L3N\_N100\_S\_006 subclause 5.8.6.1**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message with a mandatory information element missing, sends a RELEASE message with a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Release Request call state N19.

**L3N\_N100\_S\_007 subclause 5.8.6.2**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message with a mandatory information element content error, sends a RELEASE message with a Cause information element indicating the cause value 100 "invalid information element contents" and enters the Release Request call state N19.

**L3N\_N100\_S\_008 subclauses 5.8.7.1, 5.8.6.1**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message with an unrecognized information element (coded comprehension required), sends a RELEASE message with a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Release Request call state N19.

**L3N\_N100\_S\_009 subclause 5.8.7.1**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message with an unrecognized information element (coded comprehension not required), sends a RELEASE message with a Cause information element indicating the cause value 99 "information element non-existent or not implemented" and enters the Release Request call state N19.

**L3N\_N100\_S\_010 subclause 5.8.7.2**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message with a non-mandatory information element content error, processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 100 "invalid information element contents".

**5.2.10 Disconnect indication call state N12 (incoming call)****5.2.10.1 Valid****L3N\_N12I\_V\_001 subclause 5.3.4**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a RELEASE message, sends a RELEASE COMPLETE message and enters the Null call state N00.

**L3N\_N12I\_V\_002 subclause 5.3.6**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a DISCONNECT message, sends a RELEASE message and enters the Release Request call state N19.

**L3N\_N12I\_V\_003 clause 5**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of an INFORMATION message, sends no message and remains in the Disconnect Indication call state N12.

**L3N\_N12I\_V\_004 clause 5**

Ensure that the IUT in the Disconnect Indication call state N12, to provide additional information, sends an INFORMATION message and remains in the Disconnect Indication call state N12.

**L3N\_N12I\_V\_005 subclause 5.3.5**

Ensure that the IUT in the Disconnect Indication call state N12, having sent a DISCONNECT message without a Progress indicator information element, on expiry of the mandatory timer T305, sends a RELEASE message and enters the Release Request call state N19.

**L3N\_N12I\_V\_006 subclause 5.3.5**

Ensure that the IUT in the Disconnect Indication call state N12, having sent a DISCONNECT message with a Progress indicator information element indicating in the progress description the value 8 "in-band information or appropriate pattern now available", on expiry of timer T306, sends a RELEASE message and enters the Release Request call state N19.

**L3N\_N12I\_V\_007 subclause 5.8.10**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a STATUS ENQUIRY message, sends a STATUS message with a Call state information element indicating the Disconnect Indication call state and a Cause information element indicating the cause value 30 "response to STATUS ENQUIRY", 97 "message type non-existent or not implemented" or 98 "message not compatible with call state" and remains in the Disconnect Indication call state N12.

**5.2.10.2 Inopportune****L3N\_N12I\_I\_001 subclause 5.8**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a RELEASE message delivered in a DL-UNIT-DATA-INDICATION, sends no message and remains in the Disconnect Indication call state N12 or processes the message as valid.

**L3N\_N12I\_I\_002 subclause 5.8.3.1**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a RELEASE message using the dummy call reference, sends no message and remains in the Disconnect Indication call state N12.

**L3N\_N12I\_I\_003 subclause 5.8.3.2 a)**

Ensure that the IUT in the Disconnect Indication call state N12 for CR1, on receipt of a RELEASE message for CR2 which is not recognized as relating to a call, sends a RELEASE COMPLETE message for CR2 with a Cause information element indicating the cause value 81 "invalid call reference value" and remains in the Null call state N00 for CR2 and remains in the Disconnect Indication call state N12 for CR1.

**L3N\_N12I\_I\_005 subclause 5.8.3.2 f)**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a RELEASE message using the global call reference, sends a STATUS message using the global call reference with a Call state information element indicating the call state associated with the global call reference and a Cause information element indicating the cause value 81 "invalid call reference value" and remains in the Disconnect Indication call state N12.

**L3N\_N12I\_I\_006 subclause 5.8.4**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of an inopportune message (CONNECT), sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 101 "message not compatible with call state" or a STATUS ENQUIRY message and remains in the Disconnect Indication call state N12.

**L3N\_N12I\_I\_008 subclause 5.8.4**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a RELEASE COMPLETE message, sends no message and enters the Null call state N00.

**L3N\_N12I\_I\_009 subclause 5.8.8**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a DL-ESTABLISH-INDICATION, sends no message and remains in the Disconnect Indication call state N12.

**L3N\_N12I\_I\_010 subclause 5.8.11**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a STATUS message with a call state information element indicating the Null call state, sends no message and enters the Null call state N00.

**5.2.10.3 Syntactically invalid****L3N\_N12I\_S\_001 subclause 5.8.1**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a RELEASE message with an erroneous protocol discriminator, coded other than '08'H, sends no message and remains in the Disconnect Indication call state N12.

**L3N\_N12I\_S\_002 subclause 5.8.2**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a message which is too short, sends no message and remains in the Disconnect Indication call state N12.

**L3N\_N12I\_S\_003 subclause 5.8.3.1**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a RELEASE message with an invalid call reference format (octet 1, bits 8 to 5  $\neq$  '0000'B), sends no message and remains in the Disconnect Indication call state N12.

**L3N\_N12I\_S\_004 subclause 5.8.3.1**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a RELEASE message with an invalid call reference format (octet 1, bits 4 to 1, length value too high), sends no message and remains in the Disconnect Indication call state N12.

**L3N\_N12I\_S\_005 subclause 5.8.4**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a message with an unrecognized message type, sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Disconnect Indication call state N12.

**L3N\_N12I\_S\_006 subclauses 5.8.7.1, 5.8.6.1**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a RELEASE message with an unrecognized information element (coded comprehension required), sends a RELEASE COMPLETE message with a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Null call state N00.

**L3N\_N12I\_S\_007 subclause 5.8.7.1**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a RELEASE message with an unrecognized information element (coded comprehension not required), sends a RELEASE COMPLETE message with a Cause information element indicating the cause value 99 "information element non-existent or not implemented" and enters the Null call state N00.

**L3N\_N12I\_S\_008 subclause 5.8.7.2**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a RELEASE message with a non-mandatory information element content error, processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 100 "invalid information element contents".

**5.2.11 Disconnect indication call state N12 (outgoing call)****5.2.11.1 Valid****L3N\_N12O\_V\_001 subclause 5.3.4**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a RELEASE message, sends a RELEASE COMPLETE message and enters the Null call state N00.

**L3N\_N12O\_V\_002 subclause 5.3.6**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a DISCONNECT message, sends a RELEASE message and enters the Release Request call state N19.

**L3N\_N12O\_V\_003 clause 5**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of an INFORMATION message, sends no message and remains in the Disconnect Indication call state N12.

**L3N\_N12O\_V\_004 clause 5**

Ensure that the IUT in the Disconnect Indication call state N12, to provide additional information, sends an INFORMATION message and remains in the Disconnect Indication call state N12.

**L3N\_N12O\_V\_005 subclause 5.3.5**

Ensure that the IUT in the Disconnect Indication call state N12, having sent a DISCONNECT message without a Progress indicator information element, on expiry of the mandatory timer T305, sends a RELEASE message and enters the Release Request call state N19.

**L3N\_N12O\_V\_006 subclause 5.3.5**

Ensure that the IUT in the Disconnect Indication call state N12, having sent a DISCONNECT message with a Progress indicator information element indicating in the progress description the value 8 "in-band information or appropriate pattern now available", on expiry of timer T306, sends a RELEASE message and enters the Release Request call state N19.

**L3N\_N12O\_V\_007 subclause 5.8.10**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a STATUS ENQUIRY message, sends a STATUS message with a Call state information element indicating the Disconnect Indication call state and a Cause information element indicating the cause value 30 "response to STATUS ENQUIRY", 97 "message type non-existent or not implemented" or 98 "message not compatible with call state" and remains in the Disconnect Indication call state N12.

## 5.2.11.2 Inopportune

**L3N\_N12O\_I\_001 subclause 5.8**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a RELEASE message delivered in a DL-UNIT-DATA-INDICATION, sends no message and remains in the Disconnect Indication call state N12 or processes the message as valid.

**L3N\_N12O\_I\_002 subclause 5.8.3.1**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a RELEASE message using the dummy call reference, sends no message and remains in the Disconnect Indication call state N12.

**L3N\_N12O\_I\_003 subclause 5.8.3.2 a)**

Ensure that the IUT in the Disconnect Indication call state N12 for CR1, on receipt of a RELEASE message for CR2 which is not recognized as relating to a call, sends a RELEASE COMPLETE message for CR2 with a Cause information element indicating the cause value 81 "invalid call reference value" and remains in the Null call state N00 for CR2 and remains in the Disconnect Indication call state N12 for CR1.

**L3N\_N12O\_I\_004 subclause 5.8.3.2 e)**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a SETUP message with a call reference that is already in use, sends no message and remains in the Disconnect Indication call state N12.

**L3N\_N12O\_I\_004 subclause 5.8.3.2 f)**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a RELEASE message using the global call reference, sends a STATUS message using the global call reference with a Call state information element indicating the call state associated with the global call reference and a Cause information element indicating the cause value 81 "invalid call reference value" and remains in the Disconnect Indication call state N12.

**L3N\_N12O\_I\_005 subclause 5.8.4**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of an inopportune message (CONNECT), sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 101 "message not compatible with call state" or a STATUS ENQUIRY message and remains in the Disconnect Indication call state N12.

**L3N\_N12O\_I\_007 subclause 5.8.4**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a RELEASE COMPLETE message, sends no message and enters the Null call state N00.

**L3N\_N12O\_I\_008 subclause 5.8.8**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a DL-ESTABLISH-INDICATION, sends no message and remains in the Disconnect Indication call state N12.

**L3N\_N12O\_I\_009 subclause 5.8.11**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a STATUS message with a Call state information element indicating the Null call state, sends no message and enters the Null call state N00.

### 5.2.11.3 Syntactically invalid

#### **L3N\_N12O\_S\_001 subclause 5.8.1**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a RELEASE message with an erroneous protocol discriminator, coded other than '08'H, sends no message and remains in the Disconnect Indication call state N12.

#### **L3N\_N12O\_S\_002 subclause 5.8.2**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a message which is too short, sends no message and remains in the Disconnect Indication call state N12.

#### **L3N\_N12O\_S\_003 subclause 5.8.3.1**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a RELEASE message with an invalid call reference format (octet 1, bits 8 to 5  $\neq$  '0000'B), sends no message and remains in the Disconnect Indication call state N12.

#### **L3N\_N12O\_S\_004 subclause 5.8.3.1**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a RELEASE message with an invalid call reference format (octet 1, bits 4 to 1, length value too high), sends no message and remains in the Disconnect Indication call state N12.

#### **L3N\_N12O\_S\_005 subclause 5.8.4**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a message with an unrecognized message type, sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Disconnect Indication call state N12.

#### **L3N\_N12O\_S\_006 subclauses 5.8.7.1, 5.8.6.1**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a RELEASE message with an unrecognized information element (coded comprehension required), sends a RELEASE COMPLETE message with a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Null call state N00.

#### **L3N\_N12O\_S\_007 subclause 5.8.7.1**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a RELEASE message with an unrecognized information element (coded comprehension not required), sends a RELEASE COMPLETE message with a Cause information element indicating the cause value 99 "information element non-existent or not implemented" and enters the Null call state N00.

#### **L3N\_N12O\_S\_008 subclause 5.8.7.2**

Ensure that the IUT in the Disconnect Indication call state N12, on receipt of a RELEASE message with a non-mandatory information element content error, processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 100 "invalid information element contents".

## 5.2.12 Release request call state N19 (incoming call)

### 5.2.12.1 Valid

#### **L3N\_N19I\_V\_001 subclause 5.3.3**

Ensure that the IUT in the Release Request call state N19, on receipt of a RELEASE COMPLETE message, sends no message and enters the Null call state N00.

#### **L3N\_N19I\_V\_002 subclause 5.3.6**

Ensure that the IUT in the Release Request call state N19, on receipt of a RELEASE message, sends no message and enters the Null call state N00.

#### **L3N\_N19I\_V\_003 subclauses 5.3.6, 5.8.4**

Ensure that the IUT in the Release Request call state N19, on receipt of a DISCONNECT message, sends no message and remains in the Release Request call state N19.

#### **L3N\_N19I\_V\_004 subclause 5.3.5**

Ensure that the IUT in the Release Request call state N19, on the first expiry of the mandatory timer T308, sends a RELEASE message and remains in the Release Request call state N19.

#### **L3N\_N19I\_V\_005 subclause 5.3.5**

Ensure that the IUT in the Release Request call state N19, on the second expiry of the mandatory timer T308, sends no message and enters the Null call state N00.

**L3N\_N19I\_V\_006 subclause 5.8.10**

Ensure that the IUT in the Release Request call state N19, on receipt of a STATUS ENQUIRY message, sends a STATUS message with a Call state information element indicating the Release Request call state and a Cause information element indicating the cause value 30 "response to STATUS ENQUIRY", 97 "message type non-existent or not implemented" or 98 "message not compatible with call state" and remains in the Release Request call state N19.

**5.2.12.2 Inopportune****L3N\_N19I\_I\_001 subclause 5.8**

Ensure that the IUT in the Release Request call state N19, on receipt of a RELEASE COMPLETE message delivered in a DL-UNIT-DATA-INDICATION, sends no message and remains in the Release Request call state N19 or processes the message as valid.

**L3N\_N19I\_I\_002 subclause 5.8.3.1**

Ensure that the IUT in the Release Request call state N19, on receipt of a RELEASE COMPLETE message using the dummy call reference, sends no message and remains in the Release Request call state N19.

**L3N\_N19I\_I\_003 subclause 5.8.3.2 a)**

Ensure that the IUT in the Release Request call state N19 for CR1, on receipt of a RELEASE COMPLETE message for CR2 which is not recognized as relating to a call, sends no message for CR2 and remains in the Null call state N00 for CR2 and remains in the Release Request call state N19 for CR1.

**L3N\_N19I\_I\_005 subclause 5.8.3.2 f)**

Ensure that the IUT in the Release Request call state N19, on receipt of a RELEASE COMPLETE message using the global call reference, sends a STATUS message using the global call reference with a Call state information element indicating the call state associated with the global call reference and a Cause information element indicating the cause value 81 "invalid call reference value" and remains in the Release Request call state N19.

**L3N\_N19I\_I\_006 subclause 5.8.4**

Ensure that the IUT in the Release Request call state N19, on receipt of an inopportune message (CONNECT), sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 101 "message not compatible with call state" or a STATUS ENQUIRY message and remains in the Release Request call state N19.

**L3N\_N19I\_I\_008 subclause 5.8.8**

Ensure that the IUT in the Release Request call state N19, on receipt of a DL-ESTABLISH-INDICATION, sends no message and remains in the Release Request call state N19.

**L3N\_N19I\_I\_009 subclause 5.8.11**

Ensure that the IUT in the Release Request call state N19, on receipt of a STATUS message with a Call state information element indicating the Null call state, sends no message and enters the Null call state N00.

**L3N\_N19I\_I\_010 subclause 5.8.11**

Ensure that the IUT in the Release Request call state N19, on receipt of a STATUS message with a Call state information element indicating a call state other than the Null call state, sends no message and remains in the Release Request call state N19.

**5.2.12.3 Syntactically invalid****L3N\_N19I\_S\_001 subclause 5.8.1**

Ensure that the IUT in the Release Request call state N19, on receipt of a RELEASE COMPLETE message with an erroneous protocol discriminator, coded other than '08'H, sends no message and remains in the Release Request call state N19.

**L3N\_N19I\_S\_002 subclause 5.8.2**

Ensure that the IUT in the Release Request call state N19, on receipt of a message which is too short, sends no message and remains in the Release Request call state N19.

**L3N\_N19I\_S\_003 subclause 5.8.3.1**

Ensure that the IUT in the Release Request call state N19, on receipt of a RELEASE COMPLETE message with an invalid call reference format (octet 1, bits 8 to 5  $\neq$  '0000'B), sends no message and remains in the Release Request call state N19.

**L3N\_N19I\_S\_004 subclause 5.8.3.1**

Ensure that the IUT in the Release Request call state N19, on receipt of a RELEASE COMPLETE message with an invalid call reference format (octet 1, bits 4 to 1, length value too high), sends no message and remains in the Release Request call state N19.



**L3N\_N19I\_S\_005 subclause 5.8.4**

Ensure that the IUT in the Release Request call state N19, on receipt of a message with an unrecognized message type, sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Release Request call state N19.

**L3N\_N19I\_S\_006 subclauses 5.8.7.1, 5.8.6.1**

Ensure that the IUT in the Release Request call state N19, on receipt of a RELEASE COMPLETE message with an unrecognized information element (coded comprehension required), sends no message and enters the Null call state N00.

**L3N\_N19I\_S\_007 subclause 5.8.7.1**

Ensure that the IUT in the Release Request call state N19, on receipt of a RELEASE COMPLETE message with an unrecognized information element (coded comprehension not required), sends no message and enters the Null call state N00.

**L3N\_N19I\_S\_008 subclause 5.8.7.2**

Ensure that the IUT in the Release Request call state N19, on receipt of a RELEASE COMPLETE message with a non-mandatory information element content error, processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 100 "invalid information element contents".

## 5.2.13 Release request call state N19 (outgoing call)

### 5.2.13.1 Valid

**L3N\_N19O\_V\_001 subclause 5.3.3**

Ensure that the IUT in the Release Request call state N19, on receipt of a RELEASE COMPLETE message, sends no message and enters the Null call state N00.

**L3N\_N19O\_V\_002 subclause 5.3.6**

Ensure that the IUT in the Release Request call state N19, on receipt of a RELEASE message, sends no message and enters the Null call state N00.

**L3N\_N19O\_V\_003 subclauses 5.3.6, 5.8.4**

Ensure that the IUT in the Release Request call state N19, on receipt of a DISCONNECT message, sends no message and remains in the Release Request call state N19.

**L3N\_N19O\_V\_004 subclause 5.3.5**

Ensure that the IUT in the Release Request call state N19, on the first expiry of the mandatory timer T308, sends a RELEASE message and remains in the Release Request call state N19.

**L3N\_N19O\_V\_005 subclause 5.3.5**

Ensure that the IUT in the Release Request call state N19, on the second expiry of the mandatory timer T308, sends no message and enters the Null call state N00.

**L3N\_N19O\_V\_006 subclause 5.8.10**

Ensure that the IUT in the Release Request call state N19, on receipt of a STATUS ENQUIRY message, sends a STATUS message with a Call state information element indicating the Release Request call state and a Cause information element indicating the cause value 30 "response to STATUS ENQUIRY", 97 "message type non-existent or not implemented" or 98 "message not compatible with call state" and remains in the Release Request call state N19.

### 5.2.13.2 Inopportune

**L3N\_N19O\_I\_001 subclause 5.8**

Ensure that the IUT in the Release Request call state N19, on receipt of a RELEASE COMPLETE message delivered in a DL-UNIT-DATA-INDICATION, sends no message and remains in the Release Request call state N19 or processes the message as valid.

**L3N\_N19O\_I\_002 subclause 5.8.3.1**

Ensure that the IUT in the Release Request call state N19, on receipt of a RELEASE COMPLETE message using the dummy call reference, sends no message and remains in the Release Request call state N19.

**L3N\_N19O\_I\_003 subclause 5.8.3.2 a)**

Ensure that the IUT in the Release Request call state N19 for CR1, on receipt of a RELEASE COMPLETE message for CR2 which is not recognized as relating to a call, sends no message for CR2 and remains in the Null call state N00 for CR2 and remains in the Release Request call state N19 for CR1.

**L3N\_N19O\_I\_004 subclause 5.8.3.2 e)**

Ensure that the IUT in the Release Request call state N19 (outgoing call), on receipt of a SETUP message with a call reference that is already in use, sends no message and remains in the Release Request call state N19.

**L3N\_N190\_I\_005 subclause 5.8.3.2 f)**

Ensure that the IUT in the Release Request call state N19, on receipt of a RELEASE COMPLETE message using the global call reference, sends a STATUS message using the global call reference with a Call state information element indicating the call state associated with the global call reference and a Cause information element indicating the cause value 81 "invalid call reference value" and remains in the Release Request call state N19.

**L3N\_N190\_I\_006 subclause 5.8.4**

Ensure that the IUT in the Release Request call state N19, on receipt of an inopportune message (CONNECT), sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 101 "message not compatible with call state" or a STATUS ENQUIRY message and remains in the Release Request call state N19.

**L3N\_N190\_I\_008 subclause 5.8.8**

Ensure that the IUT in the Release Request call state N19, on receipt of a DL-ESTABLISH-INDICATION, sends no message and remains in the Release Request call state N19.

**L3N\_N190\_I\_009 subclause 5.8.11**

Ensure that the IUT in the Release Request call state N19, on receipt of a STATUS message with a Call state information element indicating the Null call state, sends no message and enters the Null call state N00.

**L3N\_N190\_I\_010 subclause 5.8.11**

Ensure that the IUT in the Release Request call state N19, on receipt of a STATUS message with a Call state information element indicating a call state other than the Null call state, sends no message and remains in the Release Request call state N19.

**5.2.13.3 Syntactically invalid****L3N\_N190\_S\_001 subclause 5.8.1**

Ensure that the IUT in the Release Request call state N19, on receipt of a RELEASE COMPLETE message with an erroneous protocol discriminator, coded other than '08'H, sends no message and remains in the Release Request call state N19.

**L3N\_N190\_S\_002 subclause 5.8.2**

Ensure that the IUT in the Release Request call state N19, on receipt of a message which is too short, sends no message and remains in the Release Request call state N19.

**L3N\_N190\_S\_003 subclause 5.8.3.1**

Ensure that the IUT in the Release Request call state N19, on receipt of a RELEASE COMPLETE message with an invalid call reference format (octet 1, bits 8 to 5  $\neq$  '0000'B), sends no message and remains in the Release Request call state N19.

**L3N\_N190\_S\_004 subclause 5.8.3.1**

Ensure that the IUT in the Release Request call state N19, on receipt of a RELEASE COMPLETE message with an invalid call reference format (octet 1, bits 4 to 1, length value too high), sends no message and remains in the Release Request call state N19.

**L3N\_N190\_S\_005 subclause 5.8.4**

Ensure that the IUT in the Release Request call state N19, on receipt of a message with an unrecognized message type, sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Release Request call state N19.

**L3N\_N190\_S\_006 subclauses 5.8.7.1, 5.8.6.1**

Ensure that the IUT in the Release Request call state N19, on receipt of a RELEASE COMPLETE message with an unrecognized information element (coded comprehension required), sends no message and enters the Null call state N00.

**L3N\_N190\_S\_007 subclause 5.8.7.1**

Ensure that the IUT in the Release Request call state N19, on receipt of a RELEASE COMPLETE message with an unrecognized information element (coded comprehension not required), sends no message and enters the Null call state N00.

**L3N\_N190\_S\_008 subclause 5.8.7.2**

Ensure that the IUT in the Release Request call state N19, on receipt of a RELEASE COMPLETE message with a non-mandatory information element content error, processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 100 "invalid information element contents".

## 5.2.14 Overlap receiving call state N25

**Selection:** IUT supports overlap receiving (from the user's point of view) procedures. PICS: MCn 2.2. [35]

### 5.2.14.1 Valid

#### 5.2.14.1A Point-to-point configuration

**Selection:** IUT supports the point-to-point configuration. PICS: R 7.1.

##### **L3N\_N25\_V\_001 subclause 5.2.5.1**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of a CALL PROCEEDING message, sends no message and enters the Incoming Call Proceeding call state N09.

##### **L3N\_N25\_V\_002 subclause 5.2.5.1**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of an ALERTING message, sends no message and enters the Call Received call state N07.

##### **L3N\_N25\_V\_003 subclauses 5.2.5.1, 5.2.8**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of a CONNECT message, sends a CONNECT ACKNOWLEDGE message and enters the Active call state N10.

##### **L3N\_N25\_V\_004 clause 5**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of an INFORMATION message, sends no message and remains in the Overlap Receiving call state N25.

##### **L3N\_N25\_V\_005 subclause 5.2.6**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of an PROGRESS message, sends no message and remains in the Overlap Receiving call state N25.

##### **L3N\_N25\_V\_006 subclause 5.3.3**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of a DISCONNECT message, sends a RELEASE message and enters the Release Request call state N19.

##### **L3N\_N25\_V\_007 subclause 5.3.4**

Ensure that the IUT in the Overlap Receiving call state N25, to indicate that the remote user has sent an invitation to clear the call, sends a DISCONNECT message and enters the Disconnect Indication call state N12.

##### **L3N\_N25\_V\_008 subclause 5.2.4**

Ensure that the IUT in the Overlap Receiving call state N25, on the expiry of the mandatory (if overlap receiving is implemented) timer T304, sends a DISCONNECT message with a Cause information element indicating the cause value 102 "recovery on timer expiry" and enters the Disconnect Indication call state N12.

##### **L3N\_N25\_V\_009 subclause 5.2.4**

Ensure that the IUT in the Overlap Receiving call state N25, to provide the remainder of the call information, sends an INFORMATION message and remains in the Overlap Receiving call state N25.

##### **L3N\_N25\_V\_010 subclause 5.8.10**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of a STATUS ENQUIRY message, sends a STATUS message with a Call state information element indicating the Overlap Receiving call state and a Cause information element indicating the cause value 30 "response to STATUS ENQUIRY", 97 "message type non-existent or not implemented" or 98 "message not compatible with call state" and remains in the Overlap Receiving call state N25.

### 5.2.14.2 Inopportune

##### **L3N\_N25\_I\_001 subclause 5.8**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of an CALL PROCEEDING message delivered in a DL-UNIT-DATA-INDICATION, sends no message and remains in the Overlap Receiving call state N25 or processes the message as valid.

##### **L3N\_N25\_I\_002 subclause 5.8.3.1**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of an CALL PROCEEDING message using the dummy call reference, sends no message and remains in the Overlap Receiving call state N25.

##### **L3N\_N25\_I\_003 subclause 5.8.3.2 a)**

Ensure that the IUT in the Overlap Receiving call state N25 for CR1, on receipt of a CALL PROCEEDING message for CR2 which is not recognized as relating to a call, sends a RELEASE or a RELEASE COMPLETE message for CR2 with a Cause information element indicating the cause value 81 "invalid call reference value" and enters the Release Request call state N19 or remains in the Null call state N00 for CR2 and remains in the Overlap Receiving call state N25 for CR1.

**L3N\_N25\_I\_004 subclause 5.8.3.2 f)**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of an CALL PROCEEDING message using the global call reference, sends a STATUS message using the global call reference with a Call state information element indicating the call state associated with the global call reference and a Cause information element indicating the cause value 81 "invalid call reference value" and remains in the Overlap Receiving call state N25.

**L3N\_N25\_I\_005 subclause 5.8.4**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of a SETUP ACKNOWLEDGE message, sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 101 "message not compatible with call state" or a STATUS ENQUIRY message and remains in the Overlap Receiving call state N25.

**Selection:** IUT supports the point-to-point configuration. PICS: R 7.1.

**L3N\_N25\_I\_009 subclause 5.8.4**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of a RELEASE message, sends a RELEASE COMPLETE message and enters the Null call state N00.

**Selection:** IUT supports the point-to-point configuration. PICS: R 7.1.

**L3N\_N25\_I\_013 subclause 5.8.4**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of a RELEASE COMPLETE message, sends no message and enters the Null call state N00.

**Selection:** IUT supports the point-to-point configuration. PICS: R 7.1.

**L3N\_N25\_I\_018 subclause 5.8.8 a)**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of a DL-ESTABLISH-INDICATION, sends a DISCONNECT message with a Cause information element indicating the cause value 41 "temporary failure" and enters the Disconnect Indication call state N12.

**Selection:** IUT supports the point-to-point configuration. PICS: R 7.1.

**L3N\_N25\_I\_019 subclause 5.8.11**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of a STATUS message with a Call state information element indicating the Null call state, sends no message and enters the Null call state N00.

**5.2.14.3 Syntactically invalid****L3N\_N25\_S\_001 subclause 5.8.1**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of an CALL PROCEEDING message with an erroneous protocol discriminator, coded other than '08'H, sends no message and remains in the Overlap Receiving call state N25.

**L3N\_N25\_S\_002 subclause 5.8.2**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of a message which is too short, sends no message and remains in the Overlap Receiving call state N25.

**L3N\_N25\_S\_003 subclause 5.8.3.1**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of an CALL PROCEEDING message with an invalid call reference format (octet 1, bits 8 to 5  $\neq$  '0000'B), sends no message and remains in the Overlap Receiving call state N25.

**L3N\_N25\_S\_004 subclause 5.8.3.1**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of an CALL PROCEEDING message with an invalid call reference format (octet 1, bits 4 to 1, length value too high), sends no message and remains in the Overlap Receiving call state N25.

**L3N\_N25\_S\_005 subclause 5.8.4**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of a message with an unrecognized message type, sends either a STATUS message with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Overlap Receiving call state N25.

**L3N\_N25\_S\_006 subclause 5.8.5.1**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of an CALL PROCEEDING message with a non-mandatory information element out of sequence, processes the message as valid.

**L3N\_N25\_S\_007 subclause 5.8.6.1**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of a DISCONNECT message with a mandatory information element missing, sends a RELEASE message with a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Release Request call state N19.

**L3N\_N25\_S\_008 subclause 5.8.6.2**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of a DISCONNECT message with a mandatory information element content error, sends a RELEASE message with a Cause information element indicating the cause value 100 "invalid information element contents" and enters the Release Request call state N19.

**L3N\_N25\_S\_009 subclauses 5.8.7.1, 5.8.6.1**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of an CALL PROCEEDING message with an unrecognized information element (coded comprehension required), sends a STATUS message with a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Overlap Receiving call state N25.

**L3N\_N25\_S\_010 subclause 5.8.7.1**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of an CALL PROCEEDING message with an unrecognized information element (coded comprehension not required), processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

**L3N\_N25\_S\_011 subclause 5.8.7.2**

Ensure that the IUT in the Overlap Receiving call state N25, on receipt of an CALL PROCEEDING message with a non-mandatory information element content error, processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 100 "invalid information element contents".

## 5.2.15 Restart null call state R00 (incoming call)

**Selection:** IUT supports restart procedure (incoming RESTART message). PICS: MCn 5.1. [36]

### 5.2.15.1 Valid

**L3N\_R00I\_V\_001 subclause 5.5.1**

Ensure that the IUT in the Restart Null call state R00, to return channels to an idle condition, sends a RESTART message and enters the Restart Request call state R01.

**L3N\_R00I\_V\_002 subclause 5.5.2**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message, sends a RESTART ACKNOWLEDGE message and re-enters the Restart Null call state R00 and enters the Null call state N00.

**L3N\_R00I\_V\_003 subclause 5.5.2**

Ensure that the IUT in the Restart Null call state R00, on receipt of a RESTART message with the Restart indicator information element indicating "All interfaces", sends a RESTART ACKNOWLEDGE message with the Restart indicator information element indicating "All interfaces" and re-enters the Restart Null call state R00.

**L3N\_R00I\_V\_004 subclause 5.5.2**

Ensure that the IUT in the Restart Null call state R00, on receipt of a RESTART message with the Restart indicator information element indicating "Single interfaces", sends a RESTART ACKNOWLEDGE message with the Restart indicator information element indicating "Single interfaces" and re-enters the Restart Null call state R00.

**L3N\_R00I\_V\_005 subclause 5.5.2**

Ensure that the IUT in the Restart Null call state R00, on receipt of a RESTART message with the Restart indicator information element indicating "Indicated channels" and the Channel identification information element indicating a single B-channel, sends a RESTART ACKNOWLEDGE message with the Restart indicator information element indicating "Indicated channels" and the Channel identification information element indicating the same B-channel and re-enters the Restart Null call state R00.

**L3N\_R00I\_V\_006 subclause 5.5.2**

Ensure that the IUT in the Restart Null call state R00, on receipt of a RESTART message with the Restart indicator information element indicating "Indicated channels" and the Channel identification information element indicating two B-channels, sends a RESTART ACKNOWLEDGE message with the Restart indicator information element indicating "Indicated channels" and indicating two B-channels in one or two Channel identification information elements and re-enters the Restart Null call state R00.

**Selection:** IUT supports the primary rate access. PICS: R 6.2.

**L3N\_R00I\_V\_007 subclause 5.5.2**

Ensure that the IUT in the Restart Null call state R00, on receipt of a RESTART message with the Restart indicator information element indicating "Indicated channels" and indicating two B-channels in two Channel identification information elements, sends a RESTART ACKNOWLEDGE message with the Restart indicator information element indicating "Indicated channels" and indicating two B-channels in one or two Channel identification information elements and re-enters the Restart Null call state R00.

**Selection:** IUT supports the primary rate access. PICS: R 6.2.

**L3N\_R00I\_V\_008 subclause 5.5.3**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART ACKNOWLEDGE message, sends no message and remains in the Restart Null call state R00 and the Active call state N10.

**5.2.15.2 Inopportune****L3N\_R00I\_I\_001 subclause 5.8**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message delivered in a DL-UNIT-DATA-INDICATION, sends no message and remains in the Restart Null call state R00 and the Active call state N10 or processes the message as valid.

**L3N\_R00I\_I\_002 subclause 5.8.3.1**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message using the dummy call reference, sends no message and remains in the Restart Null call state R00 and the Active call state N10.

**L3N\_R00I\_I\_003 subclause 5.8.5.2**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message with a duplicated Restart indicator information element (repetition not permitted), ignores the second occurrence of that information element and processes the remaining contents of the message as valid.

**5.2.15.3 Syntactically invalid****L3N\_R00I\_S\_001 subclause 5.8.1**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message with an erroneous protocol discriminator, coded other than '08'H, sends no message and remains in the Restart Null call state R00 and the Active call state N10.

**L3N\_R00I\_S\_002 subclause 5.8.2**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a message using the global call reference which is too short, sends no message and remains in the Restart Null call state R00 and the Active call state N10.

**L3N\_R00I\_S\_003 subclause 5.8.3.1**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message with an invalid call reference format (octet 1, bits 8 to 5  $\neq$  '0000'B), sends no message and remains in the Restart Null call state R00 and the Active call state N10.

**L3N\_R00I\_S\_004 subclause 5.8.3.1**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message with an invalid call reference format (octet 1, bits 4 to 1, length value too high), sends no message and remains in the Restart Null call state R00 and the Active call state N10.

**L3N\_R00I\_S\_005 subclause 5.8.3.2 f)**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a message using the global call reference with an unrecognized message type, sends a STATUS message using the global call reference with a Call state information element indicating the Restart null call state associated with the global call reference and a Cause information element indicating the cause value 81 "invalid call reference value" and remains in the Restart Null call state R00 and the Active call state N10.

**L3N\_R00I\_S\_006 subclause 5.8.6.1**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message with a mandatory information element (Restart indicator) missing, sends a STATUS message with a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Restart Null call state R00 and the Active call state N10.

**L3N\_R00I\_S\_007 subclauses 5.5.2, 5.8.6.1**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message with a mandatory information element (Channel identification, Restart indicator indicating "indicated channel") missing, sends a STATUS message with a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Restart Null call state R00 and the Active call state N10.

**L3N\_R00I\_S\_008 subclause 5.8.6.2**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message with a mandatory information element (Restart indicator) content error, sends a STATUS message with a Cause information element indicating the cause value 100 "invalid information element contents" and remains in the Restart Null call state R00 and the Active call state N10.

**L3N\_R00I\_S\_009 subclause 5.8.6.2**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message with a mandatory information element (Channel identification, Restart indicator indicating "indicated channel") content error, sends a STATUS message with a Cause information element indicating the cause value 100 "invalid information element contents" and remains in the Restart Null call state R00 and the Active call state N10.

**L3N\_R00I\_S\_010 subclauses 5.8.7.1, 5.8.6.1**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message with an unrecognized information element (encoded comprehension required), sends a STATUS message with a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Restart Null call state R00 and the Active call state N10.

**L3N\_R00I\_S\_011 subclause 5.8.7.1**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message with an unrecognized information element (encoded comprehension not required), processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

**L3N\_R00I\_S\_012 subclauses 5.5.2, 5.8.7.3, 5.8.7.1**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message with an information element (Channel identification, Restart indicator indicating "all interfaces") that is not defined to be contained in that message, processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 100 "invalid information element contents".

## 5.2.16 Restart null call state R00 (outgoing call)

**Selection:** IUT supports restart procedure (incoming RESTART message). PICS: MCn 5.1. [37]

### 5.2.16.1 Valid

**L3N\_R00O\_V\_001 subclause 5.5.1**

Ensure that the IUT in the Restart Null call state R00, to return channels to an idle condition, sends a RESTART message and enters the Restart Request call state R01.

**L3N\_R00O\_V\_002 subclause 5.5.2**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message, sends a RESTART ACKNOWLEDGE message and re-enters the Restart Null call state R00 and enters the Null call state N00.

**L3N\_R00O\_V\_003 subclause 5.5.2**

Ensure that the IUT in the Restart Null call state R00, on receipt of a RESTART message with the Restart indicator information element indicating "All interfaces", sends a RESTART ACKNOWLEDGE message with the Restart indicator information element indicating "All interfaces" and re-enters the Restart Null call state R00.

**L3N\_R00O\_V\_004 subclause 5.5.2**

Ensure that the IUT in the Restart Null call state R00, on receipt of a RESTART message with the Restart indicator information element indicating "Single interfaces", sends a RESTART ACKNOWLEDGE message with the Restart indicator information element indicating "Single interfaces" and re-enters the Restart Null call state R00.

**L3N\_R00O\_V\_005 subclause 5.5.2**

Ensure that the IUT in the Restart Null call state R00, on receipt of a RESTART message with the Restart indicator information element indicating "Indicated channels" and the Channel identification information element indicating a single B-channel, sends a RESTART ACKNOWLEDGE message with the Restart indicator information element indicating "Indicated channels" and the Channel identification information element indicating the same B-channel and re-enters the Restart Null call state R00.

**L3N\_R00O\_V\_006 subclause 5.5.2**

Ensure that the IUT in the Restart Null call state R00, on receipt of a RESTART message with the Restart indicator information element indicating "Indicated channels" and the Channel identification information element indicating two B-channels, sends a RESTART ACKNOWLEDGE message with the Restart indicator information element indicating "Indicated channels" and indicating two B-channels in one or two Channel identification information elements and re-enters the Restart Null call state R00.

**L3N\_R00O\_V\_007 subclause 5.5.2**

Ensure that the IUT in the Restart Null call state R00, on receipt of a RESTART message with the Restart indicator information element indicating "Indicated channels" and indicating two B-channels in two Channel identification information elements, sends a RESTART ACKNOWLEDGE message with the Restart indicator information element indicating "Indicated channels" and indicating two B-channels in one or two Channel identification information elements and re-enters the Restart Null call state R00.

**L3N\_R000\_V\_008 subclause 5.5.3**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART ACKNOWLEDGE message, sends no message and remains in the Restart Null call state R00 and the Active call state N10.

**5.2.16.2 Inopportune****L3N\_R000\_I\_001 subclause 5.8**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message delivered in a DL-UNIT-DATA-INDICATION, sends no message and remains in the Restart Null call state R00 and the Active call state N10 or processes the message as valid.

**L3N\_R000\_I\_002 subclause 5.8.3.1**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message using the dummy call reference, sends no message and remains in the Restart Null call state R00 and the Active call state N10.

**L3N\_R000\_I\_003 subclause 5.8.5.2**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message with a duplicated Restart indicator information element (repetition not permitted), ignores the second occurrence of that information element and processes the remaining contents of the message as valid.

**5.2.16.3 Syntactically invalid****L3N\_R000\_S\_001 subclause 5.8.1**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message with an erroneous protocol discriminator, coded other than '08'H, sends no message and remains in the Restart Null call state R00 and the Active call state N10.

**L3N\_R000\_S\_002 subclause 5.8.2**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a message using the global call reference which is too short, sends no message and remains in the Restart Null call state R00 and the Active call state N10.

**L3N\_R000\_S\_003 subclause 5.8.3.1**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message with an invalid call reference format (octet 1, bits 8 to 5  $\neq$  '0000'B), sends no message and remains in the Restart Null call state R00 and the Active call state N10.

**L3N\_R000\_S\_004 subclause 5.8.3.1**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message with an invalid call reference format (octet 1, bits 4 to 1, length value too high), sends no message and remains in the Restart Null call state R00 and the Active call state N10.

**L3N\_R000\_S\_005 subclause 5.8.3.2 f)**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a message using the global call reference with an unrecognized message type, sends a STATUS message using the global call reference with a Call state information element indicating the Restart null call state associated with the global call reference and a Cause information element indicating the cause value 81 "invalid call reference value" and remains in the Restart Null call state R00 and the Active call state N10.

**L3N\_R000\_S\_006 subclause 5.8.6.1**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message with a mandatory information element (Restart indicator) missing, sends a STATUS message with a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Restart Null call state R00 and the Active call state N10.

**L3N\_R000\_S\_007 subclauses 5.5.2, 5.8.6.1**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message with a mandatory information element (Channel identification, Restart indicator indicating "indicated channel") missing, sends a STATUS message with a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Restart Null call state R00 and the Active call state N10.

**L3N\_R000\_S\_008 subclause 5.8.6.2**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message with a mandatory information element (Restart indicator) content error, sends a STATUS message with a Cause information element indicating the cause value 100 "invalid information element contents" and remains in the Restart Null call state R00 and the Active call state N10.



**L3N\_R000\_S\_009 subclause 5.8.6.2**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message with a mandatory information element (Channel identification, Restart indicator indicating "indicated channel") content error, sends a STATUS message with a Cause information element indicating the cause value 100 "invalid information element contents" and remains in the Restart Null call state R00 and the Active call state N10.

**L3N\_R000\_S\_010 subclauses 5.8.7.1, 5.8.6.1**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message with an unrecognized information element (encoded comprehension required), sends a STATUS message with a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Restart Null call state R00 and the Active call state N10.

**L3N\_R000\_S\_011 subclause 5.8.7.1**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message with an unrecognized information element (encoded comprehension not required), processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

**L3N\_R000\_S\_012 subclauses 5.5.2, 5.8.7.3, 5.8.7.1**

Ensure that the IUT in the Restart Null call state R00 and the Active call state N10, on receipt of a RESTART message with an information element (Channel identification, Restart indicator indicating "all interfaces") that is not defined to be contained in that message, processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 100 "invalid information element contents".

## 5.2.17 Restart request call state R01

**Selection:** IUT supports initiation of restart procedure. PICS: MCn 5.2. [38]

### 5.2.17.1 Valid

**L3N\_R01\_V\_001 subclause 5.5.1**

Ensure that the IUT in the Restart Request call state R01, on receipt of a RESTART ACKNOWLEDGE message, sends no message, returns the channels / interfaces to an idle condition and enters the Restart Null call state R00.

**L3N\_R01\_V\_002 subclause 5.5.1**

Ensure that the IUT in the Restart Request call state R01, on receipt of a SETUP message with the Channel identification information element indicating a B-channel and indicating in the preferred / exclusive bit "exclusive: only the indicated channel is acceptable", when that B-channel is not in an idle condition, sends a RELEASE COMPLETE message and remains in the Restart Request call state R01.

**L3N\_R01\_V\_003 subclause 5.5.1**

Ensure that the IUT in the Restart Request call state R01, on the first expiry of the mandatory (if restart procedures are implemented) timer T316, sends a RESTART message and remains in the Restart Request call state R01.

### 5.2.17.2 Inopportune

**L3N\_R01\_I\_001 subclauses 5.5.3, 5.8.4**

Ensure that the IUT in the Restart Request call state R01, on receipt of a RESTART message, sends a STATUS message using the global call reference with a Cause information element indicating the cause value 98 "message type not compatible with call state or message type non-existent or not implemented" or 101 "message not compatible with call state" and remains in the Restart Request call state R01.

**L3N\_R01\_I\_002 subclause 5.8**

Ensure that the IUT in the Restart Request call state R01, on receipt of a RESTART ACKNOWLEDGE message delivered in a DL-UNIT-DATA-INDICATION, sends no message and remains in the Restart Request call state R01 or processes the message as valid.

**L3N\_R01\_I\_003 subclause 5.8.3.1**

Ensure that the IUT in the Restart Request call state R01, on receipt of a RESTART ACKNOWLEDGE message using the dummy call reference, sends no message and remains in the Restart Request call state R01.

**L3N\_R01\_I\_004 subclause 5.8.3.2 f**

Ensure that the IUT in the Restart Request call state R01, on receipt of an INFORMATION message using the global call reference, sends a STATUS message using the global call reference with a Call state information element indicating the Restart Request call state associated with the global call reference and a Cause information element indicating the cause value 81 "invalid call reference value" and remains in the Restart Request call state R01.

**L3N\_R01\_I\_005 subclause 5.8.5.2**

Ensure that the IUT in the Restart Request call state R01, on receipt of a RESTART ACKNOWLEDGE message with a duplicated Restart indicator information element (repetition not permitted), ignores the second occurrence of that information element and processes the remaining contents of the message as valid.

**L3N\_R01\_I\_006 subclause 5.8.11**

Ensure that the IUT in the Restart Request call state R01, on receipt of a STATUS message using the global call reference with a Call state information element indicating a call state that is incompatible with the Restart Request call state, sends no message and remains in the Restart Request call state R01.

**5.2.17.3 Syntactically invalid****L3N\_R01\_S\_001 subclause 5.8.1**

Ensure that the IUT in the Restart Request call state R01, on receipt of a RESTART ACKNOWLEDGE message with an erroneous protocol discriminator, coded other than '08'H, sends no message and remains in the Restart Request call state R01.

**L3N\_R01\_S\_002 subclause 5.8.2**

Ensure that the IUT in the Restart Request call state R01, on receipt of a message using the global call reference which is too short, sends no message and remains in the Restart Request call state R01.

**L3N\_R01\_S\_003 subclause 5.8.3.1**

Ensure that the IUT in the Restart Request call state R01, on receipt of a RESTART ACKNOWLEDGE message with an invalid call reference format (octet 1, bits 8 to 5 ≠ '0000'B), sends no message and remains in the Restart Request call state R01.

**L3N\_R01\_S\_004 subclause 5.8.3.1**

Ensure that the IUT in the Restart Request call state R01, on receipt of a RESTART ACKNOWLEDGE message with an invalid call reference format (octet 1, bits 4 to 1, length value too high), sends no message and remains in the Restart Request call state R01.

**L3N\_R01\_S\_005 subclause 5.8.3.2 f)**

Ensure that the IUT in the Restart Request call state R01, on receipt of a message using the global call reference with an unrecognized message type, sends a STATUS message using the global call reference with a Call state information element indicating the Restart Request call state associated with the global call reference and a Cause information element indicating the cause value 81 "invalid call reference value" and remains in the Restart Request call state R01.

**L3N\_R01\_S\_006 subclause 5.8.6.1**

Ensure that the IUT in the Restart Request call state R01, on receipt of a RESTART ACKNOWLEDGE message with a mandatory information element (Restart indicator) missing, sends a STATUS message with a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Restart Request call state R01.

**L3N\_R01\_S\_007 subclause 5.8.6.1**

Ensure that the IUT in the Restart Request call state R01, on receipt of a RESTART ACKNOWLEDGE message with a mandatory information element (Channel identification, Restart indicator indicating "indicated channel") missing, sends a STATUS message with a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Restart Request call state R01.

**L3N\_R01\_S\_008 subclause 5.8.6.2**

Ensure that the IUT in the Restart Request call state R01, on receipt of a RESTART ACKNOWLEDGE message with a mandatory information element (Restart indicator) content error, sends a STATUS message with a Cause information element indicating the cause value 100 "invalid information element contents" and remains in the Restart Request call state R01.

**L3N\_R01\_S\_009 subclause 5.8.6.2**

Ensure that the IUT in the Restart Request call state R01, on receipt of a RESTART ACKNOWLEDGE message with a mandatory information element (Channel identification, Restart indicator indicating "indicated channel") content error, sends a STATUS message with a Cause information element indicating the cause value 100 "invalid information element contents" and remains in the Restart Request call state R01.

**L3N\_R01\_S\_010 subclauses 5.8.7.1, 5.8.6.1**

Ensure that the IUT in the Restart Request call state R01, on receipt of a RESTART ACKNOWLEDGE message with an unrecognized information element (encoded comprehension required), sends a STATUS message with a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Restart Request call state R01.

**L3N\_R01\_S\_011 subclause 5.8.7.1**

Ensure that the IUT in the Restart Request call state R01, on receipt of a RESTART ACKNOWLEDGE message with an unrecognized information element (encoded comprehension not required), processes the message as valid and optionally sends a STATUS message with a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

## 5.2.18 Message segmentation procedure

**NOTE:** The following TPs are used to test the behaviour of the IUT when using the message segmentation procedures. As an example these procedures are tested in the Active call state N10. It is for further study, if TPs covering the remaining call states are necessary.

**Selection:** IUT supports message segmentation procedures. PICS: MCn 13. [39]

### 5.2.18.1 Valid

#### **L3N\_SEG\_V\_001 clause H.2**

Ensure that the IUT in the Active call state N10, to send a DISCONNECT message with a message length exceeding N201, send this DISCONNECT message in two or more subsequent SEGMENT messages and enters the Disconnect Indication call state N12.

#### **L3N\_SEG\_V\_002 clause H.3 a), b), c)**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message that is segmented and sent in two subsequent SEGMENT messages, sends a RELEASE message and enters the Release Request call state N19.

### 5.2.18.2 Inopportune

#### **L3N\_SEG\_I\_001 clause H.3 d), f)**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message that is segmented and sent in two subsequent SEGMENT messages with a time delay between the two SEGMENT messages that is greater than T314, sends no message and remains in the Active call state N10.

#### **L3N\_SEG\_I\_002 clause H.3 e)**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message that is segmented and sent in nine subsequent SEGMENT messages, sends no message and remains in the Active call state N10.

#### **L3N\_SEG\_I\_003 clause H.3 g)**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message that is segmented and sent in three subsequent SEGMENT messages where the second SEGMENT message indicates in the Segmented message information element that two remaining segments within the message are to be sent, sends no message and remains in the Active call state N10.

#### **L3N\_SEG\_I\_004 clause H.3 h)**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message that is segmented and sent in two subsequent SEGMENT messages where a DL-ESTABLISH-INDICATION primitive is received between the SEGMENT messages, sends no message and remains in the Active call state N10.

#### **L3N\_SEG\_I\_005 clause H.3 i)**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message that is segmented and sent in two subsequent SEGMENT messages where the first SEGMENT message indicates in the First segment indicator field of the Segmented message information element the value 0 "subsequent segment to first segment", sends no message and remains in the Active call state N10.

#### **L3N\_SEG\_I\_006 clause H.3 j)**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message that is segmented and sent in three subsequent SEGMENT messages where the second SEGMENT message contains no Segmented message information element, sends no message and remains in the Active call state N10.

#### **L3N\_SEG\_I\_007 clause H.3 k)**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message that is segmented and sent in three subsequent SEGMENT messages where the second SEGMENT message contains no octets of the segmented message, sends no message and remains in the Active call state N10.

### 5.2.18.3 Syntactically invalid

#### **L3N\_SEG\_S\_001 clause H.3 f)**

Ensure that the IUT in the Active call state N10, on receipt of a DISCONNECT message that is segmented and sent in two subsequent SEGMENT messages where the first SEGMENT message does not contain a call reference, sends no message and remains in the Active call state N10.

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## 6 Compliance

An ATS which complies with this TSS&TP specification shall:

- a) consist of a set of test cases corresponding to the set or to a subset of the TPs specified in clause 5;
- b) use a TSS which is an appropriate subset of the whole of the TSS specified in clause 4;
- c) use the same naming conventions for the test groups and test cases;
- d) maintain the relationship specified in clause 6 between the test groups and TPs and the entries in the PICS proforma to be used for test case deselection;
- e) comply with ISO/IEC 9646-2 [9].

In the case of a) or b) above, a subset shall be used only where a particular Abstract Test Method (ATM) makes some TPs untestable. All testable TPs from clause 6 shall be included in a compliant ATS.

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## 7 Requirements for a comprehensive testing service

As a minimum the Remote test method, as specified in ISO/IEC 9646-2 [9], shall be used by any organization claiming to provide a comprehensive testing service for user equipment claiming conformance to EN 300 403-1 [3] and ETS 300 403-2 [4].

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## History

<b>Document history</b>				
V1.1.1	April 1998	Public Enquiry	PE 9833:	1998-04-17 to 1998-08-14
V1.1.2	September 1998	Vote	V 9846:	1998-09-15 to 1998-11-13