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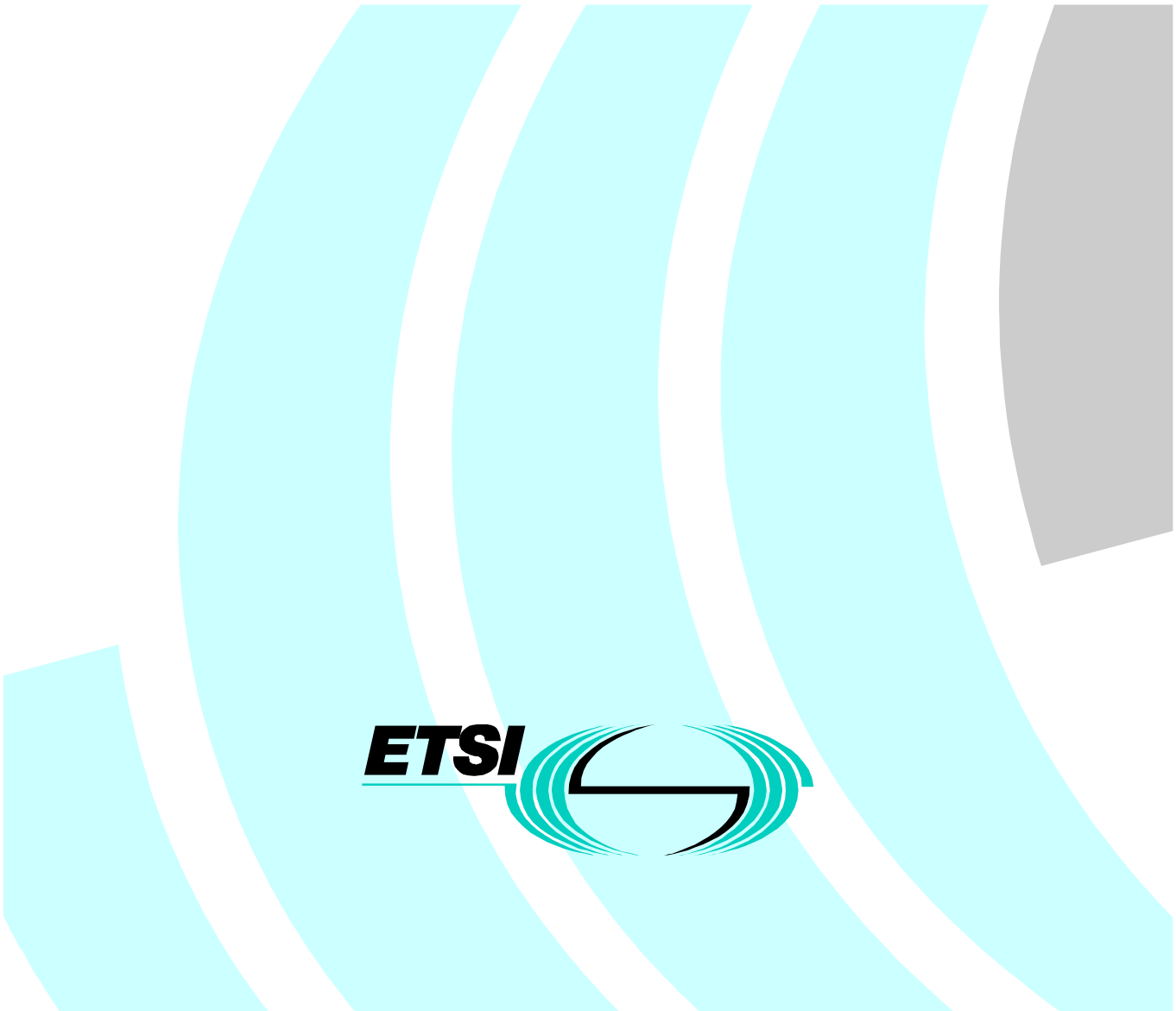
European Standard (Telecommunications series)

Integrated Services Digital Network (ISDN); User Signalling Bearer Service (USBS); Digital Subscriber Signalling System No. one (DSS1) protocol; Part 3: Test Suite Structure and Test Purposes (TSS&TP) specification for the user



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ETSI

Postal address
F-06921 Sophia Antipolis Cedex - FRANCE

Office address
650 Route des Lucioles - Sophia Antipolis
Valbonne - FRANCE
Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16
Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Internet
secretariat@etsi.fr
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Contents

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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 Public Enquiry phase of the ETSI standards Two-step Approval Procedure.

The present document is part 3 of a multi-part standard covering the Digital Subscriber Signalling System No. one (DSS1) protocol specification for the Integrated Services Digital Network (ISDN) User Signalling Bearer Service (USBS), 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".

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

The present document specifies the Test Suite Structure and Test Purposes (TSS&TP) for the User side of the T reference point or coincident S and T reference point (as defined in ITU-T Recommendation I.411 [9]) of implementations conforming to the stage three standard for the User Signalling Bearer Service (USBS) for the pan-European Integrated Services Digital Network (ISDN) by means of the Digital Subscriber Signalling System No. one (DSS1) protocol, EN 301 142-1 [1].

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

Other parts specify the TSS&TP and the ATS and partial PIXIT proforma for the Network side of the T reference point or coincident S and T reference point of implementations conforming to EN 301 142-1 [1].

2 References

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

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

[1] EN 301 142-1 (V1.1): "Integrated Services Digital Network (ISDN); User Signalling Bearer Service (USBS); Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".

[2] EN 301 142-2 (V1.1): "Integrated Services Digital Network (ISDN); User Signalling Bearer Service (USBS); Digital Subscriber Signalling System No. one (DSS1) protocol; Part 2: Protocol Implementation Conformance Statement (PICS) proforma specification".

[3] ISO/IEC 9646-1: "Information Technology - OSI Conformance Testing Methodology and Framework; Part 1: General Concepts".

[4] ISO/IEC 9646-2: "Information Technology - OSI Conformance Testing Methodology and Framework; Part 2: Abstract Test Suite specification".

[5] Void.

[6] EN 300 196-1: "Integrated Services Digital Network (ISDN); Generic functional protocol for the support of supplementary services; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".

[7] EN 300 286-1: "Integrated Services Digital Network (ISDN); User-to-User Signalling (UUS) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".

[8] 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]".

[9] ITU-T Recommendation I.411 (1993): "ISDN user-network interfaces - Reference configurations".

[10] ITU-T Recommendation I.112 (1993): "Vocabulary and terms for ISDNs".

[11] CCITT Recommendation E.164 (1991): "Numbering plan for the ISDN era".

[12] ETS 300 403-4 (1997): "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Signalling network layer for circuit-mode basic call control; Part 4: Test Suite Structure and Test Purposes (TSS & TPs) specification for the user".

3 Definitions and abbreviations

3.1 Definitions

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

3.1.1 Definitions related to conformance testing

Abstract Test Suite (ATS): Refer to ISO/IEC 9646-1 [3].

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

Protocol Implementation Conformance Statement (PICS): Refer to ISO/IEC 9646-1 [3].

PICS proforma: Refer to ISO/IEC 9646-1 [3].

Protocol Implementation eXtra Information for Testing (PIXIT): Refer to ISO/IEC 9646-1 [3].

PIXIT proforma: Refer to ISO/IEC 9646-1 [3].

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

3.1.2 Definitions related to EN 300 142-1

Bearer Service: See CCITT Recommendation I.112 [10], definition 202.

Call Reference (CR): See EN 300 403-1 [8], subclause 4.3.

Component: See EN 300 196-1 [6], subclause 3.1.

Integrated Services Digital Network (ISDN): See ITU-T Recommendation I.112 [10], definition 308.

Invoke component: See EN 300 196-1 [6], subclause 8.2.2.1. Where reference is made to an "xxxx" invoke component, an invoke component is meant with its operation value set to the value of the operation "xxxx".

ISDN number: A number conforming to the numbering and structure specified in CCITT Recommendation E.164 [11].

Network: The DSS1 protocol entity at the Network side of the user-network interface where a T reference point or coincident S and T reference point applies.

Receiving entity: An entity receiving USER INFORMATION messages.

Service Data Unit (SDU): Information whose content is preserved from the sending user to the receiving user; contained in a User-user information element carried by a USER INFORMATION message.

Sending entity: an entity sending USER INFORMATION messages.

Served user: The served user is the user which invokes the USBS.

Service; telecommunication service: See ITU-T Recommendation I.112 [10], definition 201.

User: the DSS1 protocol entity at the user side of the user-network interface when a coincident S and T reference point applies.

3.2 Abbreviations

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

A	Active test case
ATM	Abstract Test Method
ATS	Abstract Test Suite
CR	Call Reference
CR1	CR for the first call in a TP
CR2	CR for the second call in a TP
DSS1	Digital Subscriber Signalling System No. one
I	Inopportune test case
ISDN	Integrated Services Digital Network
IUT	Implementation under test
MSN	Multiple Subscriber Number
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation eXtra Information for Testing
R00	Restart Null call state
S	Syntactically invalid test case
R01	Restart Request call state
SDU	Service Data Unit
TP	Test Purpose
TSS	Test Suite Structure
U00	Null call state
U01	Call Initiated call state
U02	Overlap Sending call state
U03	Outgoing Call Proceeding call state
U04	Call Delivered call state
U06	Call Present call state
U07	Call Received call state
U08	Connect Request call state
U09	Incoming Call Proceeding call state
U10	Active call state
U19	Release Request call state
U25	Overlap Receiving call state
USBS	User Signalling Bearer Service
V	Valid test case

4 Test Suite Structure (TSS)

- Null call state U00
  - Active
  - Valid
  - Inopportune
  - Syntactically invalid
- Call Initiated call state U01
  - Active
  - Valid
  - Inopportune
  - Syntactically invalid
- Overlap sending call state U02
  - Active
  - Valid
  - Inopportune
  - Syntactically invalid
- Outgoing Call Proceeding call state U03
  - Active
  - Valid
  - Inopportune
  - Syntactically invalid
- Call Delivered call state U04
  - Active
  - Valid
  - Inopportune
  - Syntactically invalid
- Call Received call state U07
  - Active
  - Valid
  - Inopportune
  - Syntactically invalid
- Connect Request call state U08
  - Active
  - Valid
  - Inopportune
  - Syntactically invalid
- Incoming Call Proceeding call state U09
  - Active
  - Valid
  - Inopportune
  - Syntactically invalid
- Active call state U10 (Incoming call)
  - Signalling procedures
    - Active
    - Valid
    - Inopportune
    - Syntactically invalid
  - Information transfer
    - Transfer of SDUs
    - Flow Control
    - Congestion Control
- Active call state U10 (Outgoing call)
  - Signalling procedures
    - Active
    - Valid
    - Inopportune
    - Syntactically invalid

        - Information transfer
            - Transfer of SDUs
            - Flow Control
            - Congestion Control
    - Release Request call state U19 (Incoming call)
        - Active
        - Valid
        - Inopportune
        - Syntactically invalid
    - Release Request call state U19 (Outgoing call)
        - Active
        - Valid
        - Inopportune
        - Syntactically invalid
    - Overlap receiving call state U25
        - Active
        - Valid
        - Inopportune
        - Syntactically invalid
    - Restart Null call state R00 (Incoming call)
        - Active
        - Valid
        - Inopportune
        - Syntactically invalid
    - Restart Null call state R00 (Outgoing call)
        - Active
        - Valid
        - Inopportune
        - Syntactically invalid
    - Restart Request call state R01
        - Active
        - Valid
        - Inopportune
        - Syntactically invalid
    - Message segmentation procedures

5 Test Purposes (TP)

5.1 Introduction

For each test requirement a TP is defined.

5.1.1 TP naming convention

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

Table 1: TP identifier naming convention scheme

Identifier: **<service iut>_<state>_<group>_<nnn>**

<service>	=	basic service:	e.g. "USBS"	
<iut>	=	type of IUT:	U	User
			N	Network
<state>	=	call state	e.g. U10 for Active call state	
<group>	=	group	A	Active
			V	Valid
			I	Inopportune
			S	Syntactically Invalid
<nnn>	=	sequential number	(001-999)	

5.1.2 Source of TP definition

The TPs are based on EN 301 142-1 [1].

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 and this is illustrated in table 2. This table should be read in conjunction with any TP, i.e. use a TP as an example to fully understand the table.

Table 2: Structure of a single TP

TP Part	Text	Example
Header	**<Identifier>** *tab* **<paragraph number in base EN>** *tab* **<type of test>** *tab (only in U10 for Information transfer)* **<condition>** *CR. (only in U10 for Information transfer)*	see table 1 **subclause 0.0.0** **valid, invalid, inopportune** **mandatory, optional, conditional**
Stimulus	Ensure that the IUT in the <basic call state for CR1> <trigger> *see below for message structure* *or* <goal>	 Active call state U10 receiving a XXXX message (see note 2) to request a ...
Reaction	<action> <conditions> *if the action is sending* *see below for message structure* <next action>, *etc.* and remains in the same state(s) *or* and (re-)enters state <state>	sends, processes, discards, etc. using en-bloc sending, ...
Message structure	<message type> message *a)* including (*or* without) <information element> information element (*optionally* with *b)* a <field name>) indicating <coding of the field> and *back to a or b,*	SETUP, FACILITY, CONNECT, ... Bearer capability, Facility, ... XXXX invoke component, … the cause value *val*, "*Argument value*", …

NOTE 1: Text in italics will not appear in TPs and text between <> is filled in for each TP and may differ from one TP to the next.

NOTE 2: All messages shall be considered as "valid and compatible" unless otherwise specified in the test purpose.

5.1.4 Test strategy

As the base standard EN 301 142-1 [1] contains no explicit requirements for testing, the TPs were generated as a result of an analysis of the base standard and the PICS specification EN 301 142-2 [2]. The criteria applied include the following:

- only the requirements from the point of view of the T or coincident S and T reference point are considered;
- whether or not a test case can be built from the TP is not considered.

5.1.5 Test of call states.

Many TPs include a reference to the IUT's final 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 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 [8] (referenced in subclause 9.7 of EN 301 142-1 [1]). 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.

5.1.6 Test of inopportune and syntactically invalid behaviour

In the sub-groups for inopportune and syntactically invalid behaviour, the procedures as described in subclause 9.7 of EN 301 142-1 [1] are tested.

Test purposes for inopportune behaviour that is described outside the subclause 9.7 of EN 301 142-1 [1] are found in the valid test groups.

5.1.7 Test purposes from ETS 300 403-4

The TPs of the present document cover (particularly for "Inopportune" and "Syntactically Invalid" sub-groups) specific USBS features (EN 301 142-1 [1]). Following features of the basic call procedure specification (EN 300 403-1 [8]) are not covered:

Valid
See ETS 300 403-4 [12] subclause 6.2.x.1 (x = subclause index for each call state) for relevant TPs.

- Receipt of STATUS ENQUIRY message.

Inopportune
See ETS 300 403-4 [12] subclause 6.2.x.2 (x = subclause index for each call state) for relevant TPs.

- Receipt of messages in DL-UNIT-DATA-INDICATION;
- Receipt of messages with dummy CR, global CR or CR not recognized as related to a call;
- Receipt of SETUP message with CR which is already in use;
- Receipt of inopportune messages;
- Receipt of messages with duplicated information elements (repetition not permitted);
- Receipt of STATUS message.

Syntactically invalid
See ETS 300 403-4 [12] subclause 6.2.x.3 (x = subclause index for each call state) for relevant TPs.

- Receipt of messages with protocol discriminator error;
- Receipt of too short messages;
- Receipt of messages with call reference errors.

Other features
See ETS 300 403-4 [12] subclause 6.2.24 for relevant TPs.

- Segmentation.

NOTE: In the relevant TPs from ETS 300 403-4 [12], replace DISCONNECT messages by RELEASE messages.

Consequently, replace each expected RELEASE message sent by the IUT in response to a DISCONNECT by RELEASE COMPLETE message.

5.2 User TPs for USBS

All PICS items referred to in this subclause are as specified in EN 301 142-2 [2] unless indicated otherwise by another numbered reference.

NOTE: Each call state other than U00, has been reached by initialising the call with a SETUP message containing Bearer Capability and Channel identification USBS coded.

5.2.1 Null call state N00

5.2.1.1 Active

Selection: IUT support outgoing calls. PICS: MCu 1

USBSU_U00_A_001 subclauses 9.1.1
Ensure that the IUT in Null call state U00, to establish a USBS call, when the maximum of USBS calls is not reached,
sends a SETUP including Bearer Capability and Channel identification information elements USBS coded and enters the Call Initiated call state U01.

USBSU_U00_A_002 subclauses 9.1.1
Ensure that the IUT in Null call state U00, to establish a USBS call, when the maximum of USBS calls is reached and the IUT does not know about it,
sends a SETUP including Bearer Capability and Channel identification information elements USBS coded and enters the Call Initiated call state U01.

USBSU_U00_A_003 subclauses 9.1.1
Ensure that the IUT in Null call state U00, to establish a USBS call, when the maximum of USBS calls is reached and the IUT knows about it,
sends nothing and remains in the Null call state U00.

5.2.1.2 Valid

Selection: IUT support incoming calls. PICS: MCu 2

USBSU_U00_V_001 subclauses 9.2.1, 9.2.3, 9.2.4, 9.2.5, 9.2.6
Ensure that the IUT in Null call state U00, on receipt of a SETUP message including a Bearer Capability information element USBS coded and without Sending Complete information element,
sends any of a SETUP ACKNOWLEDGE, CALL PROCEEDING, ALERT or CONNECT message and enters the relevant call state Overlap Receiving U25, Incoming Call Proceeding U09, Call Received U07 or Connect Request U08.

USBSU_U00_V_002 subclauses 9.2.1, 9.2.4, 9.2.5, 9.2.6
Ensure that the IUT in Null call state U00, on receipt of a SETUP message including a Bearer Capability information element USBS coded and including a Sending Complete information element,
sends any of a CALL PROCEEDING, ALERT or CONNECT message and enters the relevant call state Incoming Call Proceeding U09, Call Received U07 or Connect Request U08.

USBSU_U00_V_003 Annex B

Ensure that the IUT in Null call state U00, on receipt of a SETUP message including a Bearer Capability information element USBS coded, without Sending Complete information element and including a Called party Number information element containing mismatching number digits,

sends no message and remains in the Null call state U00.

USBSU_U00_V_004 Annex B

Ensure that the IUT in Null call state U00, on receipt of a SETUP message including a Bearer Capability information element USBS coded, without Sending Complete information element and including a Called subaddress information element containing mismatching number digits,

sends no message and remains in the Null call state U00.

USBSU_U00_V_005 subclause 9.2.4

Ensure that the busy IUT in the Null call state U00, on receipt of a SETUP message including a Bearer Capability information element USBS coded, including a Sending Complete information element,

sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 17 "user busy" and remains in the Null call state U00.

USBSU_U00_V_006 subclause 9.2.4

Ensure that the IUT in the Null call state U00, on receipt of a SETUP message including a Bearer Capability information element USBS coded, including a Sending Complete information element, to refuse the call,

sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 21 "call rejected" and remains in the Null call state U00.

USBSU_U00_V_007 subclauses 9.2.2, 9.2.4, Annex B

Ensure that the IUT in Null call state U00, on receipt of a SETUP message (delivered via the broadcast data link) including an incompatible Bearer Capability information element,

sends no message or sends a RELEASE COMPLETE message including a Cause information element containing the cause value 88 "incompatible destination" and remains in the Null call state U00.

Selection: IUT supports point-to-multipoint configuration. PICS: R 7.2

USBSU_U00_V_008 subclauses 9.2.2, 9.2.4, Annex B

Ensure that the IUT in Null call state U00, on receipt of a SETUP message (delivered via the point-to-point data link) including an incompatible Bearer Capability information element,

sends a RELEASE COMPLETE message including a Cause information element containing the cause value 88 "incompatible destination" and remains in the Null call state U00.

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

USBSU_U00_V_009 subclauses 9.2.2, 9.2.4, Annex B

Ensure that the IUT in Null call state U00, on receipt of a SETUP message (delivered via the broadcast data link) including a Bearer Capability information element USBS coded and including an incompatible High Layer Compatibility information element,

sends no message or sends a RELEASE COMPLETE message including a Cause information element containing the cause value 88 "incompatible destination" and remains in the Null call state U00.

Selection: IUT supports point-to-multipoint configuration. PICS: R 7.2

Selection: IUT supports compatibility checking of the higher Layers. PICS SCu 8.

USBSU_U00_V_010 subclauses 9.2.2, 9.2.4, Annex B

Ensure that the IUT in Null call state U00, on receipt of a SETUP message (delivered via the point-to-point data link) including a Bearer Capability information element USBS coded and including an incompatible High Layer Compatibility information element,

sends a RELEASE COMPLETE message including a Cause information element containing the cause value 88 "incompatible destination" and remains in the Null call state U00.

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

IUT supports compatibility checking of the higher Layers. PICS: SCu 8.

5.2.1.3 Inopportune

Selection: IUT supports incoming calls. PICS: MCu 2

USBSU_U00_I_001 subclause 9.7
Ensure that the IUT in the Null call state U00, on receipt of a RELEASE COMPLETE message,
sends no message and remains in the Null call state U00.

USBSU_U00_I_002 subclause 9.7
Ensure that the IUT in the Null call state U00, on receipt of a DL-ESTABLISH-INDICATION,
sends no message and remains in the Null call state U00.

5.2.1.4 Syntactically invalid.

Selection: IUT supports incoming calls. PICS: MCu 2

USBSU_U00_S_001 subclause 9.7 a)
Ensure that the IUT in the Null call state U00, on receipt of an excluded message DISCONNECT,
sends a RELEASE or a RELEASE COMPLETE message including a Cause information element indicating the cause value 81 "invalid call reference value" and enters the Release Request call state U19 or remains in the Null call state U00.

USBSU_U00_S_002 subclause 9.7 a)
Ensure that the IUT in the Null call state U00, on receipt of an excluded message PROGRESS,
sends a RELEASE or a RELEASE COMPLETE message including a Cause information element indicating the cause value 81 "invalid call reference value" and enters the Release Request call state U19 or remains in the Null call state U00.

USBSU_U00_S_003 subclauses 9.2.1, 9.7 b)
Ensure that the IUT in the Null call state U00, on receipt of a SETUP message including a Bearer Capability information element USBS coded and including a Progress indicator information element,
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

USBSU_U00_S_004 subclauses 9.2.1, 9.7 b)
Ensure that the IUT in the Null call state U00, on receipt of a SETUP message including a Bearer Capability information element USBS code and including a Low Layer compatibility information element,
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

USBSU_U00_S_005 subclauses 9.2.1, 7.1.13
Ensure that the IUT in the Null call state U00, on receipt of a SETUP message including a Bearer Capability information element USBS code and including a Channel identification information element,
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

5.2.2 Call Initiated call state U01

Selection: IUT supports outgoing calls. PICS: MCu 1

5.2.2.1 Active

USBSU_U01_A_001 subclauses 9.2.2, 9.4.2
Ensure that the IUT in the Call Initiated call state U01, to clear the call,
sends a RELEASE message and enters the Release Request call state U19.

5.2.2.2 Valid

USBSU_U01_V_001 subclause 9.1.2
Ensure that the IUT in the Call Initiated call state U01, on receipt of a SETUP ACKNOWLEDGE message,
sends no message and enters the Overlap Sending call state U02.

USBSU_U01_V_002 subclause 9.1.4
Ensure that the IUT in the Call Initiated call state U01, on receipt of a CALL PROCEEDING message,
sends no message and enters the Outgoing Call Proceeding call state U03.

USBSU_U01_V_003 subclauses 9.1.3, 9.1.7, 9.4
Ensure that the IUT in the Call Initiated call state U01, on receipt of a RELEASE COMPLETE message,
sends no message and enters the Null call state U00.

USBSU_U01_V_004 subclauses 9.1.1, 14.2.2
Ensure that the IUT in the Call Initiated call state U01, on the first expiry of the optional timer T303,
sends a SETUP message including Bearer Capability and Channel identification information elements USBS coded and remains in the Call Initiated call state U01.

Selection: IUT supports timer T303. PICS: TMu 3.

USBSU_U01_V_005 subclauses 9.1.1, 14.2.2, 9.4
Ensure that the IUT in the Call Initiated call state U01, on the second expiry of the optional timer T303,
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 102 "recovery on timer expiry" and enters the Null call state U00.

Selection: IUT supports timer T303. PICS: TMu 3.

5.2.2.3 Inopportune

USBSU_U01_I_001 subclause 9.7
Ensure that the IUT in the Call Initiated call state U01, on receipt of a RELEASE message,
sends a RELEASE COMPLETE message and enters the Null call state U00.

USBSU_U01_I_002 subclause 9.7
Ensure that the IUT in the Call Initiated call state U01, on receipt of a USER INFORMATION message,
sends either a STATUS message including 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 Initiated call state U01.

USBSU_U01_I_003 subclauses 9.7, 14.2.2
Ensure that the IUT in the Call Initiated call state U01, on receipt of a DL_ESTABLISH_INDIACTION,
sends no message and remains in the Call Initiated call state U01.

5.2.2.4 Syntactically invalid

USBSU_U01_S_001 subclause 9.7 a)
Ensure that the IUT in the Call Initiated call state U01, on receipt of an excluded message DISCONNECT,
sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Call Initiated call state U01.

USBSU_U01_S_002 subclause 9.7 a)
Ensure that the IUT in the Call Initiated call state U01, on receipt of an excluded message PROGRESS,
sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Call Initiated call state U01.

USBSU_U01_S_ 003 subclauses 9.1.2, 9.7 c)
Ensure that the IUT in the Call Initiated call state U01, on receipt of a SETUP ACKNOWLEDGE message including a Channel identification information element,
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

USBSU_U01_S_004 subclauses 9.1.4, 9.7 c)
Ensure that the IUT in the Call Initiated call state U01, on receipt of a CALL PROCEEDING message including a Progress indicator information element,
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

USBSU_U01_S_005 subclauses 9.1.4, 9.7, 7.1.2
Ensure that the IUT in the Call Initiated call state U01, on receipt of a CALL PROCEEDING message including a Bearer Capability information element (encoded comprehension required),
sends a STATUS message including a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Call Initiated call state U01.

USBSU_U01_S_006 subclauses 9.1.4, 9.7, 7.1.2
Ensure that the IUT in the Call Initiated call state U01, on receipt of a CALL PROCEEDING message including a High Layer Compatibility information element (encoded comprehension not required),
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

USBSU_U01_S_007 subclauses 9.1.4, 9.7 b)
Ensure that the IUT in the Call Initiated call state U01, on receipt of a CALL PROCEEDING message including an excluded information element (Progress Indicator),
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

USBSU_U01_S_008 subclauses 9.1.4, 9.7
Ensure that the IUT in the Call Initiated call state U01, on receipt of a CALL PROCEEDING message including a non-mandatory information element content error ,
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 100 "invalid information element content".

5.2.3 Overlap Sending call state U02

Selection: IUT supports outgoing calls. PICS: MCu 1

5.2.3.1 Active

USBSU_U02_A_001 subclause 9.4.2
Ensure that the IUT in the Overlap Sending call state U02, to clear the call,
sends a RELEASE message and enters the Release Request call state U19.

USBSU_U02_A_002 clause 9
Ensure that the IUT in the Overlap Sending call state U02, to send information,
sends an INFORMATION message and remains in the Overlap Sending call state U02.

5.2.3.2 Valid

USBSU_U02_V_001 subclauses 9.1.2, 9.1.4
Ensure that the IUT in the Overlap Sending call state U02, on receipt of a CALL PROCEEDING message without Bearer Capability, Channel identification and High Layer Compatibility information elements,
sends no message and enters the Outgoing Call Proceeding call state U03.

USBSU_U02_V_002 subclauses 9.1.2, 9.1.5
Ensure that the IUT in the Overlap Sending call state U02, on receipt of an ALERTING message without Bearer Capability, Channel identification and High Layer Compatibility information elements,
sends no message and enters the Call Delivered call state U04.

USBSU_U02_V_003 subclauses 9.1.2, 9.1.6
Ensure that the IUT in the Overlap Sending call state U02, on receipt of a CONNECT message without Bearer Capability, Channel identification and High Layer Compatibility information elements,
sends no message or sends a CONNECT ACKNOWLEDGE message and enters the Active call state U10.

USBSU_U02_V_004 subclause 9.1
Ensure that the IUT in the Overlap Sending call state U02, on receipt of an INFORMATION message,
sends no message and remains in the Overlap Sending call state U02.

USBSU_U02_V_005 subclauses 9.1.2, 9.4.3
Ensure that the IUT in the Overlap Sending call state U02, on receipt of a RELEASE message,
sends a RELEASE COMPLETE message and enters the Null call state U00.

USBSU_U02_V_006 subclauses 9.1.2, 14.2.3
Ensure that the IUT in the Overlap Sending call state U02, on expiry of optional timer T304,
sends a RELEASE message including a Cause information element indicating the cause value 102 "recovery on timer expiry" and enters the Release Request call state U19.

Selection: IUT supports timer T304. PICS: TMu 4

5.2.3.3 Inopportune

USBSU_U02_I_001 subclause 9.7
Ensure that the IUT in the Overlap Sending call state U02, on receipt of a RELEASE COMPLETE message,
sends no message and enters the NULL call state U00.

USBSU_U02_I_002 subclause 9.7
Ensure that the IUT in the Overlap Sending call state U02, on receipt of a USER INFORMATION message,
sends either a STATUS message including 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 U02.

USBSU_U02_I_003 subclauses 9.7, 14.2.3
Ensure that the IUT in the Overlap Sending call state U02, on receipt of a DL-ESTABLISH-INDICATION,
sends a RELEASE message including a Cause information element indicating the cause value 41 "temporary failure" and enters the Release Request call state U19.

5.2.3.4 Syntactically invalid

USBSU_U02_S_001 subclause 9.7 a)
Ensure that the IUT in the Overlap Sending call state U02, on receipt of an excluded message DISCONNECT,
sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Overlap Sending call state U02.

USBSU_U02_S_002 subclause 9.7 a)
Ensure that the IUT in the Overlap Sending call state U02, on receipt of an excluded message PROGRESS,
sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Overlap Sending call state U02.

USBSU_U02_S_003 subclause 9.7 c)
Ensure that the IUT in the Overlap Sending call state U02, on receipt of a CALL PROCEEDING message including a Channel identification information element,
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

USBSU_U02_S_004 subclauses 9.7, 7.1.2
Ensure that the IUT in the Overlap Sending call state U02, on receipt of a CALL PROCEEDING message including a Bearer Capability information element (encoded comprehension required),
sends a STATUS message including a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Overlap Sending call state U02.

USBSU_U02_S_005 subclauses 9.7, 7.1.2
Ensure that the IUT in the Overlap Sending call state U02, on receipt of a CALL PROCEEDING message including a High Layer Compatibility information element (encoded comprehension not required),
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

USBSU_U02_S_006 subclause 9.7 b)
Ensure that the IUT in the Overlap Sending call state U02, on receipt of a CALL PROCEEDING message including an excluded information element (Progress indicator),
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

USBSU_U02_S_007 subclause 9.7
Ensure that the IUT in the Overlap Sending call state U02, on receipt of a CALL PROCEEDING message including a non-mandatory information element content error,
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 100 "invalid information element contents".

USBSU_U02_S_008 subclause 9.7
Ensure that the IUT in the Overlap Sending call state U02, on receipt of a CONNECT message including a non-mandatory information element out of sequence,
processes the message as valid.

USBSU_U02_S_009 subclause 9.7
Ensure that the IUT in the Overlap Sending call state U02, on receipt of a RELEASE message including a mandatory information element (Cause) missing,
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Null call state U00.

USBSU_U02_S_010 subclause 9.7
Ensure that the IUT in the Overlap Sending call state U02, on receipt of a RELEASE message including a mandatory information element (Cause) content error,
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 100 "invalid information element contents" and enters the Null call state U00.

5.2.4 Outgoing Call Proceeding call state U03

Selection: IUT supports outgoing calls. PICS: MCu 1

5.2.4.1 Active

USBSU_U03_A_001 subclause 9.4.2
Ensure that the IUT in the Outgoing Call Proceeding call state U03, to clear the call,
sends a RELEASE message and enters the Release Request call state U19.

USBSU_U03_A_002 clause 9
Ensure that the IUT in the Outgoing Call Proceeding call state U03, to send information,
sends an INFORMATION message and remains in the Outgoing Call Proceeding call state U03.

5.2.4.2 Valid

USBSU_U03_V_001 subclauses 9.1.4, 9.1.5
Ensure that the IUT in the Outgoing Call Proceeding call state U03, on receipt of an ALERTING message without Bearer Capability, Channel identification and High Layer Compatibility information elements,
sends no message and enters the Call Delivered call state U04.

USBSU_U03_V_002 subclauses 9.1.4, 9.1.6
Ensure that the IUT in the Outgoing Call Proceeding call state U03, on receipt of a CONNECT message without Bearer Capability, Channel identification and High Layer Compatibility information elements,
sends no message or sends a CONNECT ACKNOWLEDGE message and enters the Active call state U10.

USBSU_U03_V_003 subclause 9.1
Ensure that the IUT in the Outgoing Call Proceeding call state U03, on receipt of an INFORMATION message, sends no message and remains in the Outgoing Call Proceeding call state U03.

USBSU_U03_V_004 subclauses 9.1.4, 9.4.3
Ensure that the IUT in the Outgoing Call Proceeding call state U03, on receipt of a RELEASE message, sends a RELEASE COMPLETE message and enters the Null call state U00.

5.2.4.3 Inopportune

USBSU_U03_I_001 subclause 9.7
Ensure that the IUT in the Outgoing Call Proceeding call state U03, on receipt of a RELEASE COMPLETE message, sends no message and enters the NULL call state U00.

USBSU_U03_I_002 subclause 9.7
Ensure that the IUT in the Outgoing Call Proceeding call state U03, on receipt of a USER INFORMATION message, sends either a STATUS message including 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 U03.

USBSU_U03_I_003 subclauses 9.7, 14.2.4
Ensure that the IUT in the Outgoing Call Proceeding call state U03, on receipt of a DL-ESTABLISH-INDICATION, sends no message and remains in the Outgoing Call Proceeding call state U03.

5.2.4.4 Syntactically invalid

USBSU_U03_S_001 subclause 9.7 a)
Ensure that the IUT in the Outgoing Call Proceeding call state U03, on receipt of an excluded message DISCONNECT, sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Outgoing Call Proceeding call state U03.

USBSU_U03_S_002 subclause 9.7 a)
Ensure that the IUT in the Outgoing Call Proceeding call state U03, on receipt of an excluded message PROGRESS, sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Outgoing Call Proceeding call state U03.

USBSU_U03_S_003 subclause 9.7 c)
Ensure that the IUT in the Outgoing Call Proceeding call state U03, on receipt of an ALERTING message including a Channel identification information element,
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

USBSU_U03_S_004 subclauses 9.7, 7.1.1
Ensure that the IUT in the Outgoing Call Proceeding call state U03, on receipt of an ALERTING message including a Bearer Capability information element (encoded comprehension required),
sends a STATUS message including a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Outgoing Call Proceeding call state U03.

USBSU_U03_S_005 subclauses 9.7, 7.1.1
Ensure that the IUT in the Outgoing Call Proceeding call state U03, on receipt of an ALERTING message including a High Layer Compatibility information element (encoded comprehension not required),
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

USBSU_U03_S_006 subclause 9.7 b)
Ensure that the IUT in the Outgoing Call Proceeding call state U03, on receipt of an ALERTING message including an excluded information element (Progress indicator),
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

USBSU_U03_S_007 subclause 9.7
Ensure that the IUT in the Outgoing Call Proceeding call state U03, on receipt of an ALERTING message including a non-mandatory information element content error,
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 100 "invalid information element contents".

USBSU_U03_S_008 subclause 9.7
Ensure that the IUT in the Outgoing Call Proceeding call state U03, on receipt of a CONNECT message including a non-mandatory information element out of sequence,
processes the message as valid.

USBSU_U03_S_009 subclause 9.7
Ensure that the IUT in the Outgoing Call Proceeding call state U03, on receipt of a RELEASE message including a mandatory information element (Cause) missing,
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Null call state U00.

USBSU_U03_S_010 subclause 9.7
Ensure that the IUT in the Outgoing Call Proceeding call state U03, on receipt of a RELEASE message including a mandatory information element (Cause) content error,
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 100 "invalid information element contents" and enters the Null call state U00.

5.2.5 Call Delivered call state U04

Selection: IUT supports outgoing calls. PICS: MCu 1

5.2.5.1 Active

USBSU_U04_A_001 subclause 9.4.2
Ensure that the IUT in the Call Delivered call state U04, to clear the call,
sends a RELEASE message and enters the Release Request call state U19.

USBSU_U04_A_002 clause 9
Ensure that the IUT in the Call Delivered call state U04, to send information,
sends an INFORMATION message and remains in the Call Delivered call state U04.

5.2.5.2 Valid

USBSU_U04_V_001 subclauses 9.1.5, 9.1.6
Ensure that the IUT in the Call Delivered call state U04, on receipt of a CONNECT message without Bearer Capability, Channel identification and High Layer Compatibility information elements,
sends no message or sends a CONNECT ACKNOWLEDGE message and enters the Active call state U10.

USBSU_U04_V_002 subclause 9.1
Ensure that the IUT in the Call Delivered call state U04, on receipt of an INFORMATION message,
sends no message and remains in the Call Delivered call state U04.

USBSU_U04_V_003 subclauses 9.1.4, 9.4.3
Ensure that the IUT in the Call Delivered call state U04, on receipt of a RELEASE message,
sends a RELEASE COMPLETE message and enters the Null call state U00.

5.2.5.3 Inopportune

USBSU_U04_I_001 subclause 9.7
Ensure that the IUT in the Call Delivered call state U04, on receipt of a RELEASE COMPLETE message,
sends no message and enters the NULL call state U00.

USBSU_U04_I_002 subclause 9.7
Ensure that the IUT in the Call Delivered call state U04, on receipt of a USER INFORMATION message,
sends either a STATUS message including 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 U04.

USBSU_U04_I_003 subclauses 9.7, 14.2.5
Ensure that the IUT in the Call Delivered call state U04, on receipt of a DL-ESTABLISH-INDICATION,
sends no message and remains in the Call Delivered call state U04.

5.2.5.4 Syntactically invalid

USBSU_U04_S_001 subclause 9.7 a)
Ensure that the IUT in the Call Delivered call state U04, on receipt of an excluded message DISCONNECT,
sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Call Delivered call state U04.

USBSU_U04_S_002 subclause 9.7 a)
Ensure that the IUT in the Call Delivered call state U04, on receipt of an excluded message PROGRESS,
sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Call Delivered call state U04.

USBSU_U04_S_003 subclause 9.7 c)
Ensure that the IUT in the Call Delivered call state U04, on receipt of a CONNECT message including a Channel identification information element,
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

USBSU_U04_S_004 subclauses 9.7, 7.1.3
Ensure that the IUT in the Call Delivered call state U04, on receipt of a CONNECT message including a Bearer Capability information element (encoded comprehension required),
sends a STATUS message including a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Call Delivered call state U04.

USBSU_U04_S_005 subclauses 9.7, 7.1.3
Ensure that the IUT in the Call Delivered call state U04, on receipt of a CONNECT message including a High Layer Compatibility information element (encoded comprehension not required),
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

USBSU_U04_S_006 subclause 9.7 b)
Ensure that the IUT in the Call Delivered call state U04, on receipt of a CONNECT message including an excluded information element (Progress indicator),
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

USBSU_U04_S_007 subclause 9.7
Ensure that the IUT in the Call Delivered call state U04, on receipt of a CONNECT message including a non-mandatory information element content error,
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 100 "invalid information element contents".

USBSU_U04_S_008 subclause 9.7
Ensure that the IUT in the Call Delivered call state U04, on receipt of a CONNECT message including a non-mandatory information element out of sequence,
processes the message as valid.

USBSU_U04_S_009 subclause 9.7
Ensure that the IUT in the Call Delivered call state U04, on receipt of a RELEASE message including a mandatory information element (Cause) missing,
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Null call state U00.

USBSU_U04_S_010 subclause 9.7
Ensure that the IUT in the Call Delivered call state U04, on receipt of a RELEASE message including a mandatory information element (Cause) content error,
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 100 "invalid information element contents" and enters the Null call state U00.

5.2.6 Call Received call state U07

Selection: IUT supports incoming calls. PICS: MCu 2

5.2.6.1 Active

USBSU_U07_A_001 subclauses 9.2.5, 9.2.6, 7.1.3
Ensure that the IUT in the Call Received call state U07, to accept the call,
sends a CONNECT message without Bearer Capability, Channel Identification and High Layer Compatibility information elements and enters the Connect Request call state U08.

USBSU_U07_A_002 subclause 9.4.2
Ensure that the IUT in the Call Received call state U07, to clear the call,
sends a RELEASE message and enters the Release Request call state U19.

USBSU_U07_A_003 clause 9
Ensure that the IUT in the Call Received call state U07, to send information,
sends an INFORMATION message and remains in the Call Received call state U07.

5.2.6.2 Valid

USBSU_U07_V_001 subclause 9.2
Ensure that the IUT in the Call Received call state U07, on receipt of an INFORMATION message,
sends no message and remains in the Call Received call state U07.

USBSU_U07_V_002 subclauses 9.2.5, 9.4.3
Ensure that the IUT in the Call Received call state U07, on receipt of a RELEASE message,
sends a RELEASE COMPLETE message and enters the Null call state U00.

5.2.6.3 Inopportune

USBSU_U07_I_001 subclause 9.7
Ensure that the IUT in the Call Received call state U07, on receipt of a RELEASE COMPLETE message,
sends no message and enters the NULL call state U00.

USBSU_U07_I_002 subclause 9.7
Ensure that the IUT in the Call Received call state U07, on receipt of a USER INFORMATION message,
sends either a STATUS message including 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 U07.

USBSU_U07_I_003 subclauses 9.7, 14.2.7
Ensure that the IUT in the Call Received call state U07, on receipt of a DL-ESTABLISH-INDICATION,
sends no message and remains in the Call Received call state U07.

5.2.6.4 Syntactically invalid

USBSU_U07_S_001 subclause 9.7 a)
Ensure that the IUT in the Call Received call state U07, on receipt of an excluded message DISCONNECT,
sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Call Received call state U07.

USBSU_U07_S_002 subclause 9.7 a)
Ensure that the IUT in the Call Received call state U07, on receipt of an excluded message PROGRESS,
sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Call Received call state U07.

USBSU_U07_S_003 subclause 9.7
Ensure that the IUT in the Call Received call state U07, on receipt of a RELEASE message including a mandatory information element (Cause) missing,
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Null call state U00.

USBSU_U07_S_004 subclause 9.7
Ensure that the IUT in the Call Received call state U07, on receipt of a RELEASE message including a mandatory information element (Cause) content error,
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 100 "invalid information element contents" and enters the Null call state U00.

USBSU_U07_S_005 subclause 9.7
Ensure that the IUT in the Call Received call state U07, on receipt of a RELEASE message including an unrecognized information element (encoded comprehension required),
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Null call state U00.

USBSU_U07_S_006 subclause 9.7
Ensure that the IUT in the Call Received call state U07, on receipt of a RELEASE message including an unrecognized information element (encoded comprehension not required),
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 99 "information element non-existent or not implemented" and enters the Null call state U00.

USBSU_U07_S_007 subclause 9.7
Ensure that the IUT in the Call Received call state U07, on receipt of a RELEASE message including a non-mandatory information element content error,
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 100 "invalid information element contents".

5.2.7 Connect Request call state U08

Selection: IUT supports incoming calls. PICS: MCu 2

5.2.7.1 Active

USBSU_U08_A_001 subclause 9.4.2
Ensure that the IUT in the Connect Request call state U08, to clear the call,
sends a RELEASE message and enters the Release Request call state U19.

USBSU_U08_A_002 clause 9
Ensure that the IUT in the Connect Request call state U08, to send information,
sends an INFORMATION message and remains in the Connect Request call state U08.

5.2.7.2 Valid

USBSU_U08_V_001 subclause 9.2.6
Ensure that the IUT in the Connect Request call state U08, on receipt of a CONNECT ACKNOWLEDGE message,
sends no message and enters the Active call state U10.

USBSU_U08_V_002 subclause 9.2
Ensure that the IUT in the Connect Request call state U08, on receipt of an INFORMATION message,
sends no message and remains in the Connect Request call state U08.

USBSU_U08_V_003 subclauses 9.2.6 b), 9.3
Ensure that the IUT in the Connect Request call state U08, on receipt of a USER INFORMATION message including a User-user information element,
accepts the message, sends no message and remains in the Connect Request call state U08.

Selection: IUT supports transfer of SDUs. PICS: MCn 3

USBSU_U08_V_004 subclauses 9.2.6, 9.4.3
Ensure that the IUT in the Connect Request call state U08, on receipt of a RELEASE message,
sends a RELEASE COMPLETE message and enters the Null call state U00.

USBSU_U08_V_005 subclauses 9.2.6, 9.4, 14.2.8
Ensure that the IUT in the Connect Request call state U08, on expiry of mandatory timer T313,
sends a RELEASE message including a Cause information element indicating the cause value 102 "recovery on timer expiry" and enters the Release Request call state U19.

5.2.7.3 Inopportune

USBSU_U08_I_001 subclause 9.7
Ensure that the IUT in the Connect Request call state U08, on receipt of a RELEASE COMPLETE message,
sends no message and enters the NULL call state U00.

USBSU_U08_I_002 subclauses 9.7, 14.2.8
Ensure that the IUT in the Connect Request call state U08, on receipt of a DL-ESTABLISH-INDICATION,
sends no message and remains in the Connect Request call state U08.

5.2.7.4 Syntactically invalid

USBSU_U08_S_001 subclause 9.7 a)
Ensure that the IUT in the Connect Request call state U08, on receipt of an excluded message DISCONNECT,
sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Connect Request call state U08.

USBSU_U08_S_002 subclause 9.7 a)
Ensure that the IUT in the Connect Request call state U08, on receipt of an excluded message PROGRESS,
sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Connect Request call state U08.

USBSU_U08_S_003 subclause 9.7
Ensure that the IUT in the Connect Request call state U08, on receipt of a RELEASE message including a mandatory information element (Cause) missing,
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Null call state U00.

USBSU_U08_S_004 subclause 9.7
Ensure that the IUT in the Connect Request call state U08, on receipt of a RELEASE message including a mandatory information element (Cause) content error,
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 100 "invalid information element contents" and enters the Null call state U00.

USBSU_U08_S_005 subclause 9.7
Ensure that the IUT in the Connect Request call state U08, on receipt of a RELEASE message including an unrecognized information element (encoded comprehension required),
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Null call state U00.

USBSU_U08_S_006 subclause 9.7
Ensure that the IUT in the Connect Request call state U08, on receipt of a RELEASE message including an unrecognized information element (encoded comprehension not required),
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 99 "information element non-existent or not implemented" and enters the Null call state U00.

USBSU_U08_S_007 subclause 9.7
Ensure that the IUT in the Connect Request call state U08, on receipt of a RELEASE message including a non-mandatory information element content error,
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 100 "invalid information element contents".

5.2.8 Incoming Call Proceeding call state U09

Selection: IUT supports incoming calls. PICS: MCu 2

5.2.8.1 Active

USBSU_U09_A_001 subclauses 9.2.4, 9.2.5, 7.1.1
Ensure that the IUT in the Incoming Call Proceeding call state U09, to indicate that the alerting phase has started,
sends an ALERTING message without Bearer Capability, Channel Identification and High Layer Compatibility information elements and enters the Call Received call state U07.

USBSU_U09_A_002 subclauses 9.2.4, 9.2.6, 7.1.3
Ensure that the IUT in the Incoming Call proceeding call state U09, to accept the call,
sends a CONNECT message without Bearer Capability, Channel Identification and High Layer Compatibility information elements and enters the Connect Request call state U08.

USBSU_U09_A_003 subclause 9.4.2
Ensure that the IUT in the Incoming Call Proceeding call state U09, to clear the call,
sends a RELEASE message and enters the Release Request call state U19.

USBSU_U09_A_004 clause 9
Ensure that the IUT in the Incoming Call Proceeding call state U09, to send information,
sends an INFORMATION message and remains in the Incoming Call Proceeding call state U09.

5.2.8.2 Valid

USBSU_U09_V_001 subclause 9.2
Ensure that the IUT in the Incoming Call Proceeding call state U09, on receipt of an INFORMATION message,
sends no message and remains in the Incoming Call Proceeding call state U09.

USBSU_U09_V_002 subclauses 9.2.4, 9.4.3
Ensure that the IUT in the Incoming Call Proceeding call state U09, on receipt of a RELEASE message,
sends a RELEASE COMPLETE message and enters the Null call state U00.

5.2.8.3 Inopportune

USBSU_U09_I_001 subclause 9.7
Ensure that the IUT in the Incoming Call Proceeding call state U09, on receipt of a RELEASE COMPLETE message,
sends no message and enters the NULL call state U00.

USBSU_U09_I_002 subclause 9.7
Ensure that the IUT in the Incoming Call Proceeding call state U09, on receipt of a USER INFORMATION message, sends either a STATUS message including 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 U09.

USBSU_U09_I_003 subclauses 9.7, 14.2.9
Ensure that the IUT in the Incoming Call Proceeding call state U09, on receipt of a DL-ESTABLISH-INDICATION, sends no message and remains in the Incoming Call Proceeding call state U09.

5.2.8.4 Syntactically invalid

USBSU_U09_S_001 subclause 9.7 a)
Ensure that the IUT in the Incoming Call Proceeding call state U09, on receipt of an excluded message DISCONNECT, sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Incoming Call Proceeding call state U09.

USBSU_U09_S_002 subclause 9.7 a)
Ensure that the IUT in the Incoming Call Proceeding call state U09, on receipt of an excluded message PROGRESS, sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Incoming Call Proceeding call state U09.

USBSU_U09_S_003 subclause 9.7
Ensure that the IUT in the Incoming Call Proceeding call state U09, on receipt of a RELEASE message including a mandatory information element (Cause) missing,
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Null call state U00.

USBSU_U09_S_004 subclause 9.7
Ensure that the IUT in the Incoming Call proceeding call state U09, on receipt of a RELEASE message including a mandatory information element (Cause) content error,
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 100 "invalid information element contents" and enters the Null call state U00.

USBSU_U09_S_005 subclause 9.7
Ensure that the IUT in the Incoming Call Proceeding call state U09, on receipt of a RELEASE message including an unrecognized information element (encoded comprehension required),
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Null call state U00.

USBSU_U09_S_006 subclause 9.7
Ensure that the IUT in the Incoming Call Proceeding call state U09, on receipt of a RELEASE message including an unrecognized information element (encoded comprehension not required),
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 99 "information element non-existent or not implemented" and enters the Null call state U00.

USBSU_U09_S_007 subclause 9.7
Ensure that the IUT in the Incoming Call proceeding call state U09, on receipt of a RELEASE message including a non-mandatory information element content error,
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 100 "invalid information element contents".

5.2.9 Active call state U10 (Incoming call)

Selection: IUT supports incoming calls. PICS: MCu 2

5.2.9.1 Signalling procedures

5.2.9.1.1 Active

USBSU_U10I_A_001 subclause 9.4.2
Ensure that the IUT in the Active call state U10, to clear the call,
sends a RELEASE message and enters the Release Request call state U19.

USBSU_U10I_A_002 clause 9
Ensure that the IUT in the Active call state U10I, to send information,
sends an INFORMATION message and remains in the Active call state U10I.

USBSU_U10I_A_003 clause 9.1.1
Ensure that the IUT in the Active call state U10 for CR1 and in the Null call state for CR2, to establish a USBS call,
sends a SETUP message including Bearer Capability and Channel identification information elements USBS coded for CR2, and remains in the Active call state U10 for CR1 and enters the Call Initiated call state U01 for CR2.

Selection: IUT supports outgoing calls. PICS: MCu 1

5.2.9.1.2 Valid

USBSU_U10I_V_001 subclause 9.4.3
Ensure that the IUT in the Active call state U10, on receipt of a RELEASE message,
sends a RELEASE COMPLETE message and enters the Null call state U00.

USBSU_U10I_V_002 clause 9
Ensure that the IUT in the Active call state U10, on receipt of an INFORMATION message,
sends no message and remains in the Active call state U10.

USBSU_U10I_V_003 clause 9.2.1
Ensure that the IUT in the Active call state U10 for CR1 and in Null call state for CR2, on receipt of a SETUP message including a Bearer Capability information element USBS coded, without Channel identification information element and including a Sending complete information element for CR2,
sends any of a CALL PROCEEDING, ALERTING or CONNECT message without Bearer Capability, Channel identification and High Layer Compatibility information elements using CR2, and remains in the Active call state U10 for CR1 and enters the relevant call state Incoming Call Proceeding U09, Call Received U07 or Connect Request U08 for CR2.

USBSU_U10I_V_004 clause 9.2.6
Ensure that the IUT in the Active call state U10 for CR1 and in the Connect Request U08 call state for CR2, on receipt of a CONNECT ACKNOWLEDGE message for CR2,
sends no message for CR2, and remains in the Active call state U10 for CR1 and enters the Active call state U10 for CR2.

USBSU_U10I_V_005 clause 9.1.6
Ensure that the IUT in the Active call state U10 for CR1 and in the Call Delivered U04 call state for CR2, on receipt of a CONNECT message without Bearer Capability, Channel identification and High Layer Compatibility information elements for CR2,
sends no message or sends a CONNECT ACKNOWLEDGE message for CR2, and remains in the Active call state U10 for CR1 and enters the Active call state U10 for CR2.

Selection: IUT supports outgoing calls. PICS: MCu 1

5.2.9.1.3 Inopportune

USBSU_U10I_I_001 subclause 9.7
Ensure that the IUT in the Active call state U10, on receipt of a RELEASE COMPLETE message,
sends no message and enters the NULL call state U00.

USBSU_U10I_I_002 subclauses 9.7, 14.2.10
Ensure that the IUT in the Active call state U10I, on receipt of a DL-ESTABLISH-INDICATION,
sends no message and remains in the Active call state U10I.

5.2.9.1.4 Syntactically invalid

USBSU_U10I_S_001 subclause 9.7 a)
Ensure that the IUT in the Active call state U10, on receipt of an excluded message SUSPEND,
sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Active call state U10.

USBSU_U10I_S_002 subclause 9.7 a)
Ensure that the IUT in the Active call state U10, on receipt of an excluded message DISCONNECT,
sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Active call state U10.

USBSU_U10I_S_003 subclause 9.7
Ensure that the IUT in the Active call state U10, on receipt of a RELEASE message including a mandatory information element (Cause) missing,
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Null call state U00.

USBSU_U10I_S_004 subclause 9.7
Ensure that the IUT in the Active call state U10, on receipt of a RELEASE message including a mandatory information element (Cause) content error,
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 100 "invalid information element contents" and enters the Null call state U00.

USBSU_U10I_S_005 subclause 9.7
Ensure that the IUT in the Active call state U10, on receipt of a RELEASE message including an unrecognized information element (encoded comprehension required),
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Null call state U00.

USBSU_U10I_S_006 subclause 9.7
Ensure that the IUT in the Active call state U10, on receipt of a RELEASE message including an unrecognized information element (encoded comprehension not required),
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 99 "information element non-existent or not implemented" and enters the Null call state U00.

USBSU_U10I_S_007 subclause 9.7
Ensure that the IUT in the Active call state U10, on receipt of a RELEASE message including a non-mandatory information element content error,
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 100 "invalid information element contents".

5.2.9.2 Information transfer

Selection: IUT supports transfer of SDUs. PICS: MCu 3

5.2.9.2.1 Transfer of SDUs - subclause 9.3.1

USBSU_U10I_T_001 subclause 9.3.1.1 valid mandatory
Ensure that the IUT in the Active call state U10, to transfer information,
sends a USER INFORMATION message including a User-user information element and remains in the Active call state U10.

USBSU_U10I_T_002 subclause 9.3.1.1 valid mandatory
Ensure that the IUT in the Active call state U10, to transfer information and to indicate that information belonging to the same block will follow,
sends a USER INFORMATION message including a User-user information element and a More data information element and remains in the Active call state U10.

USBSU_U10I_T_003 subclause 9.3.1.1 valid mandatory
Ensure that the IUT in the Active call state U10, on receipt of a USER INFORMATION message including a User-user information element and no More data information element,
accepts the message, sends no message and remains in the Active call state U10.

USBSU_U10I_T_004 subclause 9.3.1.1 valid mandatory
Ensure that the IUT in the Active call state U10, on receipt of a USER INFORMATION message including a User-user information element and a More data information element,
accepts the message, sends no message and remains in the Active call state U10.

5.2.9.2.2 Flow control - subclause 9.3.2

Selection: IUT supports flow control. PICS: MCu 3.1

USBSU_U10I_TF_001 subclause 9.3.2.1 valid mandatory
Ensure that the IUT in the Active call state U10, on receipt of a FACILITY message including a Facility information element with a FlowControl invoke component indicating "FlowRestricted",
sends no message and remains in the Active call state U10.

USBSU_U10I_TF_002 subclause 9.3.2.1 valid mandatory
Ensure that the IUT in the Active call state U10, on receipt of a FACILITY message including a Facility information element with a FlowControl invoke component indicating "FlowUnrestricted",
sends no message and remains in the Active call state U10.

USBSU_U10I_TF_003 subclause 9.3.2.1 valid mandatory
Ensure that the IUT in the Active call state U10, having received a FACILITY message including a Facility information element with a FlowControl invoke component indicating "FlowRestricted", to transfer information,
sends no message and remains in the Active call state U10.

USBSU_U10I_TF_004 subclause 9.3.2.1 valid mandatory
Ensure that the IUT in the Active call state U10, having received a FACILITY message including a Facility information element with a FlowControl invoke component indicating "FlowUnrestricted", to transfer information,
sends a USER INFORMATION message including a User-user information element and a More data information element and remains in the Active call state U10.

5.2.9.2.3 Congestion control - subclause 9.3.3

Selection: IUT supports congestion control. PICS: MCu 3.2

USBSU_U10I_TC_001 subclause 9.3.3.1 valid mandatory
Ensure that the IUT in the Active call state U10, to indicate that local congestion has been encountered,
sends a FACILITY message including a Facility information element with a CongestionControl invoke component indicating "Congestion" and remains in the Active call state U10.

USBSU_U10I_TC_002 subclause 9.3.3.1 valid mandatory
Ensure that the IUT in the Active call state U10, having sent a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", to transfer information,
sends a USER INFORMATION message including a User-user information element and remains in the Active call state U10.

USBSU_U10I_TC_003 subclause 9.3.3.1 valid mandatory
Ensure that the IUT in the Active call state U10, to indicate recovering of local congestion,
sends a FACILITY message including a Facility information element with a CongestionControl invoke component indicating "CongestionRecovered" and remains in the Active call state U10.

USBSU_U10I_TC_004 subclause 9.3.3.1 valid mandatory
Ensure that the IUT in the Active call state U10, on receipt of a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion",
sends no message and remains in the Active call state U10.

USBSU_U10I_TC_005 subclause 9.3.3.1 valid mandatory
Ensure that the IUT in the Active call state U10, having received a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", on receipt of a USER INFORMATION message including a User-user information element,
accepts the message, sends no message and remains in the Active call state U10.

USBSU_U10I_TC_006 subclause 9.3.3.1 valid mandatory
Ensure that the IUT in the Active call state U10, having received a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", on receipt of a FACILITY message including a facility information element with a CongestionControl invoke component indicating "CongestionRecovered",
sends no message and remains in the Active call state U10.

USBSU_U10I_TC_007 subclause 9.3.3.1 valid mandatory
Ensure that the IUT in the Active call state U10, having received no message, on receipt of a FACILITY message including a facility information element with a CongestionControl invoke component indicating "CongestionRecovered",
sends no message and remains in the Active call state U10.

USBSU_U10I_TC_008 subclause 9.3.3.1 valid mandatory
Ensure that the IUT in the Active call state U10, having sent a FACILITY message including a facility information element with a CongestionControl invoke component indicating "CongestionRecovered", on receipt of a USER INFORMATION message before expiry of timer T1-USBS,
accepts the message, sends no message and remains in the Active call state U10.

USBSU_U10I_TC_009 subclause 9.3.3.1 valid mandatory
Ensure that the IUT in the Active call state U10, having sent a FACILITY message including a facility information element with a CongestionControl invoke component indicating "CongestionRecovered", on expiry of timer T1-USBS,
sends no message and remains in the Active call state U10.

USBSU_U10I_TC_010 subclause 9.3.3.2 valid mandatory
Ensure that the IUT in the Active call state U10, having sent a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", on receipt of a USER INFORMATION message within the period T1-USBS,
discards the message, sends a FACILITY message including a Facility information element with a CongestionControl invoke component indicating "Congestion" and remains in the Active call state U10.

USBSU_U10I_TC_011 subclause 9.3.3.2 valid mandatory
Ensure that the IUT in the Active call state U10, having sent a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", and having received a USER INFORMATION message, on receipt of a USER INFORMATION message within the period T1-USBS,
discards the message, sends no message and remains in the Active call state U10.

USBSU_U10I_TC_012 subclause 9.3.3.2 valid mandatory
Ensure that the IUT in the Active call state U10, having sent a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", on expiry of timer T1-USBS,
sends no message and remains in the Active call state U10.

USBSU_U10I_TC_013 subclause 9.3.3.2 valid mandatory
Ensure that the IUT in the Active call state U10, having sent a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", and having received a USER INFORMATION message, on receipt of a USER INFORMATION message after expiry of timer T1-USBS,
discards the message, sends a FACILITY message including a Facility information element with a CongestionControl invoke component indicating "Congestion" and remains in the Active call state U10.

USBSU_U10I_TC_014 subclause 9.3.3.2 valid mandatory
Ensure that the IUT in the Active call state U10, having sent a FACILITY message including a facility information element with a CongestionControl invoke component indicating "CongestionRecovered", on receipt of a USER INFORMATION message after expiry of T1-USBS,
accepts the message, sends a FACILITY message including a Facility information element with a CongestionControl invoke component indicating "CongestionRecovered" and remains in the Active call state U10.

USBSU_U10I_TC_015 subclause 9.3.3.2 valid mandatory
Ensure that the IUT in the Active call state U10, having received a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", on expiry of timer T2-USBS,
sends no message and remains in the Active call state U10.

USBSU_U10I_TC_016 subclause 9.3.3.2 valid mandatory
Ensure that the IUT in the Active call state U10, having received a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", to indicate information transfer within the period T2-USBS,
sends no message and remains in the Active call state U10.

USBSU_U10I_TC_017 subclause 9.3.3.2 valid mandatory
Ensure that the IUT in the Active call state U10, having received a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", to indicate information transfer within the period T2-USBS,
sends a USER INFORMATION message and remains in the Active call state U10.

USBSU_U10I_TC_018 subclause 9.3.3.1 valid mandatory
Ensure that the IUT in the Active call state U10, having sent a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", on receipt of a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion",
sends no message and remains in the Active call state U10.

USBSU_U10I_TC_019 subclause 9.3.3.1 valid mandatory
Ensure that the IUT in the Active call state U10, having received a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", to indicate that local congestion has been encountered,
sends a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion" and remains in the Active call state U10.

5.2.9.2.4 Combined Flow control - Congestion control - subclauses 9.3.2 and 9.3.3

No combined TPs for the User side

5.2.10 Active call state U10 (outgoing call)

Selection: IUT supports outgoing calls. PICS: MCu 2

5.2.10.1 Signalling procedures

5.2.10.1.1 Active

USBSU_U10O_A_001 subclause 9.4.2
Ensure that the IUT in the Active call state U10, to clear the call,
sends a RELEASE message and enters the Release Request call state U19.

USBSU_U10O_A_002 clause 9
Ensure that the IUT in the Active call state U10I, to send information,
sends an INFORMATION message and remains in the Active call state U10I.

USBSU_U10O_A_003 clause 9.1.1
Ensure that the IUT in the Active call state U10 for CR1 and in the Null call state for CR2, to establish a USBS call,
sends a SETUP message including Bearer Capability and Channel identification information elements USBS coded for CR2, and remains in the Active call state U10 for CR1 and enters the Call Initiated call state U01 for CR2.

5.2.10.1.2 Valid

USBSU_U10O_V_001 subclause 9.4.3
Ensure that the IUT in the Active call state U10, on receipt of a RELEASE message,
sends a RELEASE COMPLETE message and enters the Null call state U00.

USBSU_U10O_V_002 clause 9
Ensure that the IUT in the Active call state U10, on receipt of an INFORMATION message,
sends no message and remains in the Active call state U10.

USBSU_U10O_V_003 clause 9.2.1
Ensure that the IUT in the Active call state U10 for CR1 and in Null call state for CR2, on receipt of a SETUP message including a Bearer Capability information element USBS coded, without Channel identification information element and including a Sending complete information element for CR2,
sends any of a CALL PROCEEDING, ALERTING or CONNECT message without Bearer Capability, Channel identification and High Layer Compatibility information elements using CR2, and remains in the Active call state U10 for CR1 and enters the relevant call state Incoming Call Proceeding U09, Call Received U07 or Connect Request U08 for CR2

Selection: IUT supports incoming calls. PICS: MCu 2

USBSU_U10O_V_004 clause 9.2.6
Ensure that the IUT in the Active call state U10 for CR1 and in the Connect Request U08 call state for CR2, on receipt of a CONNECT ACKNOWLEDGE message for CR2,
sends no message for CR2, and remains in the Active call state U10 for CR1 and enters the Active call state U10 for CR2.

Selection: IUT supports incoming calls. PICS: MCu 2

USBSU_U10O_V_005 clause 9.1.6
Ensure that the IUT in the Active call state U10 for CR1 and in the Call Delivered U04 call state for CR2, on receipt of a CONNECT message without Bearer Capability, Channel identification and High Layer Compatibility information elements for CR2,
sends no message or sends a CONNECT ACKNOWLEDGE message for CR2, and remains in the Active call state U10 for CR1 and enters the Active call state U10 for CR2.

5.2.10.1.3 Inopportune

USBSU_U10O_I_001 subclause 9.7
Ensure that the IUT in the Active call state U10, on receipt of a RELEASE COMPLETE message,
sends no message and enters the NULL call state U00.

USBSU_U10O_I_002 subclauses 9.7, 14.2.10
Ensure that the IUT in the Active call state U10I, on receipt of a DL-ESTABLISH-INDICATION,
sends no message and remains in the Active call state U10I.

5.2.10.1.4 Syntactically invalid

USBSU_U10O_S_001 subclause 9.7 a)
Ensure that the IUT in the Active call state U10, on receipt of an excluded message SUSPEND,
sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Active call state U10.

USBSU_U10O_S_002 subclause 9.7 a)
Ensure that the IUT in the Active call state U10, on receipt of an excluded message DISCONNECT,
sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Active call state U10.

USBSU_U10O_S_003 subclause 9.7
Ensure that the IUT in the Active call state U10, on receipt of a RELEASE message including a mandatory information element (Cause) missing,
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Null call state U00.

USBSU_U10O_S_004 subclause 9.7
Ensure that the IUT in the Active call state U10, on receipt of a RELEASE message including a mandatory information element (Cause) content error,
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 100 "invalid information element contents" and enters the Null call state U00.

USBSU_U10O_S_005 subclause 9.7
Ensure that the IUT in the Active call state U10, on receipt of a RELEASE message including an unrecognized information element (encoded comprehension required),
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Null call state U00.

USBSU_U10O_S_006 subclause 9.7
Ensure that the IUT in the Active call state U10, on receipt of a RELEASE message including an unrecognized information element (encoded comprehension not required),
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 99 "information element non-existent or not implemented" and enters the Null call state U00.

USBSU_U10O_S_007 subclause 9.7
Ensure that the IUT in the Active call state U10, on receipt of a RELEASE message including a non-mandatory information element content error,
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 100 "invalid information element contents".

5.2.10.2 Information transfer

Selection: IUT supports transfer of SDUs. PICS: MCu 3

5.2.10.2.1 Transfer of SDUs - subclause 9.3.1

USBSU_U10O_T_001 subclause 9.3.1.1 valid mandatory
Ensure that the IUT in the Active call state U10, to transfer information,
sends a USER INFORMATION message including a User-user information element and remains in the Active call state U10.

USBSU_U10O_T_002 subclause 9.3.1.1 valid mandatory
Ensure that the IUT in the Active call state U10, to transfer information and to indicate that information belonging to the same block will follow,
sends a USER INFORMATION message including a User-user information element and a More data information element and remains in the Active call state U10.

USBSU_U10O_T_003 subclause 9.3.1.1 valid mandatory
Ensure that the IUT in the Active call state U10, on receipt of a USER INFORMATION message including a User-user information element and no More data information element,
accepts the message, sends no message and remains in the Active call state U10.

USBSU_U10O_T_004 subclause 9.3.1.1 valid mandatory
Ensure that the IUT in the Active call state U10, on receipt of a USER INFORMATION message including a User-user information element and a More data information element,
accepts the message, sends no message and remains in the Active call state U10.

5.2.10.2.2 Flow control - subclause 9.3.2

Selection: IUT supports flow control. PICS: MCu 3.1

USBSU_U10O_TF_001 subclause 9.3.2.1 valid mandatory
Ensure that the IUT in the Active call state U10, on receipt of a FACILITY message including a Facility information element with a FlowControl invoke component indicating "FlowRestricted",
sends no message and remains in the Active call state U10.

USBSU_U10O_TF_002 subclause 9.3.2.1 valid mandatory
Ensure that the IUT in the Active call state U10, on receipt of a FACILITY message including a Facility information element with a FlowControl invoke component indicating "FlowUnrestricted",
sends no message and remains in the Active call state U10.

USBSU_U10O_TF_003 subclause 9.3.2.1 valid mandatory
Ensure that the IUT in the Active call state U10, having received a FACILITY message including a Facility information element with a FlowControl invoke component indicating "FlowRestricted", to transfer information,
sends no message and remains in the Active call state U10.

USBSU_U10O_TF_004 subclause 9.3.2.1 valid mandatory
Ensure that the IUT in the Active call state U10, having received a FACILITY message including a Facility information element with a FlowControl invoke component indicating "FlowUnrestricted", to transfer information,
sends a USER INFORMATION message including a User-user information element and a More data information element and remains in the Active call state U10.

5.2.10.2.3 Congestion control - subclause 9.3.3

Selection: IUT supports congestion control. PICS: MCu 3.2

USBSU_U10O_TC_001 subclause 9.3.3.1 valid mandatory
Ensure that the IUT in the Active call state U10, to indicate that local congestion has been encountered,
sends a FACILITY message including a Facility information element with a CongestionControl invoke component indicating "Congestion" and remains in the Active call state U10.

USBSU_U10O_TC_002 subclause 9.3.3.1 valid mandatory
Ensure that the IUT in the Active call state U10, having sent a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", to transfer information,
sends a USER INFORMATION message including a User-user information element and remains in the Active call state U10.

USBSU_U10O_TC_003 subclause 9.3.3.1 valid mandatory
Ensure that the IUT in the Active call state U10, to indicate recovering of local congestion,
sends a FACILITY message including a Facility information element with a CongestionControl invoke component indicating "CongestionRecovered" and remains in the Active call state U10.

USBSU_U10O_TC_004 subclause 9.3.3.1 valid mandatory
Ensure that the IUT in the Active call state U10, on receipt of a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion",
sends no message and remains in the Active call state U10.

USBSU_U10O_TC_005 subclause 9.3.3.1 valid mandatory
Ensure that the IUT in the Active call state U10, having received a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", on receipt of a USER INFORMATION message including a User-user information element,
accepts the message, sends no message and remains in the Active call state U10.

USBSU_U10O_TC_006 subclause 9.3.3.1 valid mandatory
Ensure that the IUT in the Active call state U10, having received a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", on receipt of a FACILITY message including a facility information element with a CongestionControl invoke component indicating "CongestionRecovered",
sends no message and remains in the Active call state U10.

USBSU_U10O_TC_007 subclause 9.3.3.1 valid mandatory
Ensure that the IUT in the Active call state U10, having received no message, on receipt of a FACILITY message including a facility information element with a CongestionControl invoke component indicating "CongestionRecovered",
sends no message and remains in the Active call state U10.

USBSU_U10O_TC_008 subclause 9.3.3.1 valid mandatory
Ensure that the IUT in the Active call state U10, having sent a FACILITY message including a facility information element with a CongestionControl invoke component indicating "CongestionRecovered", on receipt of a USER INFORMATION message before expiry of timer T1-USBS,
accepts the message, sends no message and remains in the Active call state U10.

USBSU_U10O_TC_009 subclause 9.3.3.1 valid mandatory
Ensure that the IUT in the Active call state U10, having sent a FACILITY message including a facility information element with a CongestionControl invoke component indicating "CongestionRecovered", on expiry of timer T1-USBS,
sends no message and remains in the Active call state U10.

USBSU_U10O_TC_010 subclause 9.3.3.2 valid mandatory
Ensure that the IUT in the Active call state U10, having sent a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", on receipt of a USER INFORMATION message within the period T1-USBS,
discards the message, sends a FACILITY message including a Facility information element with a CongestionControl invoke component indicating "Congestion" and remains in the Active call state U10.

USBSU_U10O_TC_011 subclause 9.3.3.2 valid mandatory
Ensure that the IUT in the Active call state U10, having sent a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", and having received a USER INFORMATION message, on receipt of a USER INFORMATION message within the period T1-USBS,
discards the message, sends no message and remains in the Active call state U10.

USBSU_U10O_TC_012 subclause 9.3.3.2 valid mandatory
Ensure that the IUT in the Active call state U10, having sent a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", on expiry of timer T1-USBS,
sends no message and remains in the Active call state U10.

USBSU_U10O_TC_013 subclause 9.3.3.2 valid mandatory
Ensure that the IUT in the Active call state U10, having sent a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", and having received a USER INFORMATION message, on receipt of a USER INFORMATION message after expiry of timer T1-USBS,
discards the message, sends a FACILITY message including a Facility information element with a CongestionControl invoke component indicating "Congestion" and remains in the Active call state U10.

USBSU_U10O_TC_014 subclause 9.3.3.2 valid mandatory
Ensure that the IUT in the Active call state U10, having sent a FACILITY message including a facility information element with a CongestionControl invoke component indicating "CongestionRecovered", on receipt of a USER INFORMATION message after expiry of T1-USBS,
accepts the message, sends a FACILITY message including a Facility information element with a CongestionControl invoke component indicating "CongestionRecovered" and remains in the Active call state U10.

USBSU_U10O_TC_015 subclause 9.3.3.2 valid mandatory
Ensure that the IUT in the Active call state U10, having received a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", on expiry of timer T2-USBS,
sends no message and remains in the Active call state U10.

USBSU_U10O_TC_016 subclause 9.3.3.2 valid mandatory
Ensure that the IUT in the Active call state U10, having received a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", to indicate information transfer within the period T2-USBS,
sends no message and remains in the Active call state U10.

USBSU_U10O_TC_017 subclause 9.3.3.2 valid mandatory
Ensure that the IUT in the Active call state U10, having received a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", to indicate information transfer within the period T2-USBS,
sends a USER INFORMATION message and remains in the Active call state U10.

USBSU_U10O_TC_018 subclause 9.3.3.1 valid mandatory
Ensure that the IUT in the Active call state U10, having sent a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", on receipt of a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion",
sends no message and remains in the Active call state U10.

USBSU_U10O_TC_019 subclause 9.3.3.1 valid mandatory
Ensure that the IUT in the Active call state U10, having received a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion", to indicate that local congestion has been encountered,
sends a FACILITY message including a facility information element with a CongestionControl invoke component indicating "Congestion" and remains in the Active call state U10.

5.2.10.2.4 Combined Flow control - Congestion control - subclauses 9.3.2 and 9.3.3

No combined TPs for the User side

5.2.11 Release Request call state U19 (Incoming call)

Selection: IUT supports incoming calls. PICS: MCu 1

5.2.11.1 Active

No Active TPs for this call state.

5.2.11.2 Valid

USBSU_U19I_V_001 subclause 9.4.2
Ensure that the IUT in the Release Request call state U19, on receipt of a RELEASE COMPLETE message,
sends no message and enters the Null call state U00.

USBSU_U19I_V_002 subclause 9.4.2
Ensure that the IUT in the Release Request call state U19, on receipt of a RELEASE message,
sends no message and remains in the Release Request call state U19.

USBSU_U19I_V_003 subclause 9.4.4
Ensure that the IUT in the Release Request call state U19, on the first expiry of the mandatory timer T308,
sends a RELEASE message and remains in the Release Request call state U19.

USBSU_U19I_V_004 subclause 9.4.4
Ensure that the IUT in the Release Request call state U19, on the second expiry of the mandatory timer T308,
sends no message and enters the Null call state U00.

5.2.11.3 Inopportune

USBSU_U19I_S_001 subclause 9.7
Ensure that the IUT in the Release Request call state U19, on receipt of a USER INFORMATION message,
sends either a STATUS message including 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 U19.

USBSU_U19I_S_002 subclauses 9.7, 14.2.11
Ensure that the IUT in the Release Request call state U19, on receipt of a DL-ESTABLISH-INDICATION,
sends no message and remains in the Release Request call state U19.

5.2.11.4 Syntactically invalid

USBSU_U19I_S_001 subclause 9.7 a)
Ensure that the IUT in the Release Request call state U19, on receipt of an excluded message DISCONNECT,
sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Release Request call state U19.

USBSU_U19I_S_002 subclause 9.7 a)
Ensure that the IUT in the Release Request call state U19, on receipt of an excluded message PROGRESS,
sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Release Request call state U19.

USBSU_U19I_S_003 subclause 9.7
Ensure that the IUT in the Release Request call state U19, on receipt of a RELEASE COMPLETE message including an unrecognized information element (encoded comprehension required),
sends no message and enters the Null call state U00.

USBSU_U19I_S_004 subclause 9.7
Ensure that the IUT in the Release Request call state U19, on receipt of a RELEASE COMPLETE message including an unrecognized information element (encoded comprehension not required),
sends no message and enters the Null call state U00.

USBSU_U19I_S_005 subclause 9.7
Ensure that the IUT in the Release Request call state U19, on receipt of a RELEASE COMPLETE message including a non-mandatory information element content error,
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 100 "invalid information element contents".

5.2.12 Release Request call state U19 (Outgoing call)

Selection: IUT supports outgoing calls. PICS: MCu 2

5.2.12.1 Active

No Active TPs for this call state.

5.2.12.2 Valid

USBSU_U19O_V_001 subclause 9.4.2
Ensure that the IUT in the Release Request call state U19, on receipt of a RELEASE COMPLETE message,
sends no message and enters the Null call state U00.

USBSU_U19O_V_002 subclause 9.4.2
Ensure that the IUT in the Release Request call state U19, on receipt of a RELEASE message,
sends no message and remains in the Release Request call state U19.

USBSU_U19O_V_003 subclause 9.4.4
Ensure that the IUT in the Release Request call state U19, on the first expiry of the mandatory timer T308,
sends a RELEASE message and remains in the Release Request call state U19.

USBSU_U19O_V_004 subclause 9.4.4
Ensure that the IUT in the Release Request call state U19, on the second expiry of the mandatory timer T308,
sends no message and enters the Null call state U00.

5.2.12.3 Inopportune

USBSU_U19O_I_001 subclause 9.7
Ensure that the IUT in the Release Request call state U19, on receipt of a USER INFORMATION message,
sends either a STATUS message including 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 U19.

USBSU_U19O_I_002 subclauses 9.7, 14.2.11
Ensure that the IUT in the Release Request call state U19, on receipt of a DL-ESTABLISH-INDICATION,
sends no message and remains in the Release Request call state U19.

5.2.12.4 Syntactically invalid

USBSU_U19O_S_001 subclause 9.7 a)
Ensure that the IUT in the Release Request call state U19, on receipt of an excluded message DISCONNECT,
sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Release Request call state U19.

USBSU_U19O_S_002 subclause 9.7 a)
Ensure that the IUT in the Release Request call state U19, on receipt of an excluded message PROGRESS,
sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Release Request call state U19.

USBSU_U19O_S_003 subclause 9.7
Ensure that the IUT in the Release Request call state U19, on receipt of a RELEASE COMPLETE message including an unrecognized information element (encoded comprehension required),
sends no message and enters the Null call state U00.

USBSU_U19O_S_004 subclause 9.7
Ensure that the IUT in the Release Request call state U19, on receipt of a RELEASE COMPLETE message including an unrecognized information element (encoded comprehension not required),
sends no message and enters the Null call state U00.

USBSU_U19O_S_005 subclause 9.7
Ensure that the IUT in the Release Request call state U19, on receipt of a RELEASE COMPLETE message including a non-mandatory information element content error,
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 100 "invalid information element contents".

5.2.13 Overlap Receiving call state U25

Selection: IUT supports incoming calls. PICS: MCu 2

IUT supports overlap receiving. PICS: MCu 2.2

5.2.13.1 Active

USBSU_U25_A_001 subclause 9.4.2
Ensure that the IUT in the Overlap Receiving call state U25, to clear the call,
sends a RELEASE message and enters the Release Request call state U19.

USBSU_U25_A_002 clause 9
Ensure that the IUT in the Overlap Receiving call state U25, to send information,
sends an INFORMATION message and remains in the Overlap Receiving call state U25.

5.2.13.2 Valid

USBSU_U25_V_001 subclause 9.2.3
Ensure that the IUT in the Overlap Receiving call state U25, on receipt of an INFORMATION message without sufficient called party information,
sends no message and remains in the Overlap Receiving call state U25.

USBSU_U25_V_002 subclauses 9.2.3, 9.2.4, 9.2.5, 9.2.6
Ensure that the IUT in the Overlap Receiving call state U25, on receipt of an INFORMATION message providing sufficient called party information,
sends any of a CALL PROCEEDING, ALERTING, CONNECT without Bearer Capability, Channel identification and High Layer Compatibility information elements and enters the relevant call state Incoming Call proceeding U09, Call Received U07 or Connect Request U08.

USBSU_U25_V_003 subclauses 9.2.3, 9.4.3
Ensure that the IUT in the Overlap Receiving call state U25, on receipt of a RELEASE message,
sends a RELEASE COMPLETE message and enters the Null call state U00.

USBSU_U25_V_004 subclauses 9.2.3, 9.4, 14.2.12
Ensure that the IUT in the Overlap Receiving call state U25, on expiry of the mandatory timer T302,
sends any of a CALL PROCEEDING, ALERTING, CONNECT without Bearer Capability, Channel identification and High Layer Compatibility information elements and enters the relevant call state Incoming Call proceeding U09, Call Received U07 or Connect Request U08 or sends a RELEASE message including a Cause information element indicating the cause value 28 "invalid number format (incomplete number)" and enters the Release Request call state U19.

5.2.13.3 Inopportune

USBSU_U25_I_001 subclause 9.7
Ensure that the IUT in the Overlap Receiving call state U25, on receipt of a RELEASE COMPLETE message,
sends no message and enters the NULL call state U00.

USBSU_U25_I_002 subclause 9.7
Ensure that the IUT in the Overlap Receiving call state U25, on receipt of a USER INFORMATION message,
sends either a STATUS message including 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 U25.

USBSU_U25_I_003 subclauses 9.7, 14.2.12
Ensure that the IUT in the Overlap Receiving call state U25, on receipt of a DL-ESTABLISH-INDICATION,
sends a RELEASE message including a Cause information element indicating the cause value 41 "temporary failure" and enters the Release Request call state U25.

5.2.13.4 Syntactically invalid

USBSU_U25_S_001 subclause 9.7 a)
Ensure that the IUT in the Overlap Receiving call state U25, on receipt of an excluded message DISCONNECT,
sends either a STATUS message including a Cause information element indicating the cause value 97 "message type non-existent or not implemented" or a STATUS ENQUIRY message and remains in the Overlap Receiving call state U25.

USBSU_U25_S_002 subclause 9.7
Ensure that the IUT in the Overlap Receiving call state U25, on receipt of a RELEASE message including a mandatory information element (Cause) missing,
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Null call state U00.

USBSU_U25_S_003 subclause 9.7
Ensure that the IUT in the Overlap Receiving call state U25, on receipt of a RELEASE message including a mandatory information element (Cause) content error,
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 100 "invalid information element contents" and enters the Null call state U00.

USBSU_U25_S_004 subclause 9.7
Ensure that the IUT in the Overlap Receiving call state U25, on receipt of a RELEASE message including an unrecognized information element (encoded comprehension required),
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 96 "mandatory information element missing" and enters the Null call state U00.

USBSU_U25_S_005 subclause 9.7
Ensure that the IUT in the Overlap Receiving call state U25, on receipt of a RELEASE message including an unrecognized information element (encoded comprehension not required),
sends a RELEASE COMPLETE message including a Cause information element indicating the cause value 99 "information element non-existent or not implemented" and enters the Null call state U00.

USBSU_U25_S_006 subclause 9.7
Ensure that the IUT in the Overlap Receiving call state U25, on receipt of a RELEASE message including a non-mandatory information element content error,
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 100 "invalid information element contents".

5.2.14 Restart Null call state R00 (Incoming call)

Selection: IUT supports incoming calls. PICS: MCu 2

5.2.14.1 Active

Selection: IUT supports initiation of restart procedure. PICS: MCu 5.2

USBSU_R00I_A_001 subclause 9.5.1
Ensure that the IUT in the Restart Null call state R00, to return interface to the idle condition,
sends a RESTART message including a Restart indicator information element indicating "single interface" or "all interfaces" and enters the Restart Request call state R01 and the Null call state U00.

5.2.14.2 Valid

Selection: IUT supports restart procedure (incoming RESTART message). PICS: MCu 5.1

USBSU_R00I_V_001 subclause 9.5.2
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, on receipt of a RESTART message including a Restart indicator information element indicating "Single interface",
sends a RESTART ACKNOWLEDGE message including a Restart indicator information element indicating "single interface", re-enters the Restart Null call state R00 and enters the Null call state U00.

USBSU_R00I_V_002 subclause 9.5.2
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, on receipt of a RESTART message including a Restart indicator information element indicating "all interfaces",
sends a RESTART ACKNOWLEDGE message including a Restart indicator information element indicating "All interfaces", re-enters the Restart Null call state R00 and enters the Null call state U00.

USBSU_R00I_V_003 subclause 9.5.2
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, on receipt of a RESTART message including a Restart indicator information element indicating "Indicated channels" and a Channel identification information element indicating a B-channel,
sends a RESTART ACKNOWLEDGE message including a Restart indicator information element indicating "Indicated channels" and a Channel Identification information element indicating the same B-channel, re-enters the Restart Null call state R00 and remains in the Active call state U10.

USBSU_R00I_V_004 subclause 9.5.3
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, on receipt of a RESTART ACKNOWLEDGE message,
sends no message, remains in the Restart Null call state R00 and remains in the Active call state U10.

5.2.14.3 Inopportune

No USBS specific TPs for this sub-group.

5.2.14.4 Syntactically invalid

USBSU_R00I_S_001 subclause 9.7
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, on receipt of an excluded DISCONNECT message using the global call reference,
sends a STATUS message using the global call reference including 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 U10.

USBSU_R00I_S_002 subclause 9.7
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, on receipt of a RESTART message with a non-mandatory information element out of sequence,
processes the message as valid.

USBSU_R00I_S_003 subclause 9.7
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, on receipt of a RESTART message with a mandatory information element (Restart indicator) missing,
sends a STATUS message including 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 U10.

USBSU_R00I_S_004 subclause 9.7
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, on receipt of a RESTART message with a mandatory information element (Restart indicator) content error,
sends a STATUS message including a Cause information element indicating the cause value 100 "mandatory information element contents" and remains in the Restart Null call state R00 and the Active call state U10.

USBSU_R00I_S_005 subclause 9.7
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, on receipt of a RESTART message with an unrecognized information element (encoded comprehension required),
sends a STATUS message including 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 U10.

USBSU_R00I_S_006 subclause 9.7
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, 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 including a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

USBSU_R00I_S_007 subclause 9.7
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, on receipt of a RESTART message with a non-mandatory information element content error,
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 100 "invalid information element contents".

USBSU_R00I_S_008 subclause 9.7
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, 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 including a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

5.2.15 Restart Null call state R00 (Outgoing call)

Selection: IUT supports outgoing calls. PICS: MCu 1

5.2.15.1 Active

Selection: IUT supports initiation of restart procedure. PICS: MCu 5.2

USBSU_R00O_A_001 subclause 9.5.1
Ensure that the IUT in the Restart Null call state R00, to return interface to the idle condition,
sends a RESTART message including a Restart indicator information element indicating "single interface" or "all interfaces" and enters the Restart Request call state R01 and the Null call state U00.

5.2.15.2 Valid

Selection: IUT supports restart procedure (incoming RESTART message). PICS: MCu 5.1

USBSU_R00O_V_001 subclause 9.5.2
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, on receipt of a RESTART message including a Restart indicator information element indicating "Single interface",
sends a RESTART ACKNOWLEDGE message including a Restart indicator information element indicating "single interface", re-enters the Restart Null call state R00 and enters the Null call state U00.

USBSU_R00O_V_002 subclause 9.5.2
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, on receipt of a RESTART message including a Restart indicator information element indicating "all interfaces",
sends a RESTART ACKNOWLEDGE message including a Restart indicator information element indicating "All interfaces", re-enters the Restart Null call state R00 and enters the Null call state U00.

USBSU_R00O_V_003 subclause 9.5.2
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, on receipt of a RESTART message including a Restart indicator information element indicating "Indicated channels" and a Channel identification information element indicating a B-channel,
sends a RESTART ACKNOWLEDGE message including a Restart indicator information element indicating "Indicated channels" and a Channel Identification information element indicating the same B-channel, re-enters the Restart Null call state R00 and remains in the Active call state U10.

USBSU_R00O_V_004 subclause 9.5.3
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, on receipt of a RESTART ACKNOWLEDGE message,
sends no message, remains in the Restart Null call state R00 and the Active call state U10.

5.2.15.3 Inopportune

No USBS specific TPs for this sub-group.

5.2.15.4 Syntactically invalid

USBSU_R00O_S_001 subclause 9.7
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, on receipt of an excluded DISCONNECT message using the global call reference,
sends a STATUS message using the global call reference including 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 U10.

USBSU_R00O_S_002 subclause 9.7
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, on receipt of a RESTART message with a non-mandatory information element out of sequence,
processes the message as valid.

USBSU_R00O_S_003 subclause 9.7
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, on receipt of a RESTART message with a mandatory information element (Restart indicator) missing,
sends a STATUS message including 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 U10.

USBSU_R00O_S_004 subclause 9.7
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, on receipt of a RESTART message with a mandatory information element (Restart indicator) content error,
sends a STATUS message including a Cause information element indicating the cause value 100 "mandatory information element contents" and remains in the Restart Null call state R00 and the Active call state U10.

USBSU_R00O_S_005 subclause 9.7
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, on receipt of a RESTART message with an unrecognized information element (encoded comprehension required),
sends a STATUS message including 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 U10.

USBSU_R00O_S_006 subclause 9.7
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, 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 including a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

USBSU_R00O_S_007 subclause 9.7
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, on receipt of a RESTART message with a non-mandatory information element content error,
processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 100 "invalid information element contents".

USBSU_R00O_S_008 subclause 9.7
Ensure that the IUT in the Restart Null call state R00 and the Active call state U10, 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 including a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

5.2.16 Restart Request call state R01

5.2.16.1 Active

No Active TP in this call state.

5.2.16.2 Valid

USBSU_R01_V_001 subclause 9.5.1
Ensure that the IUT in the Restart Request call state R01, on receipt of a RESTART ACKNOWLEDGE message,
sends no message, returns the interface to the idle condition, and enters the Restart Null call state R00.

Selection: IUT supports restart procedure (incoming RESTART message). PICS: MCn 5.1

USBSU_R01_V_002 subclause 9.5.1
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 including a Restart indicator information element indicating "Single interface" or "All interfaces", and remains in the Restart Request call state R01.

Selection: IUT supports initiation of restart procedure. PICS: MCn 5.2

5.2.16.3 Inopportune

No USBS specific TPs for this sub-group.

5.2.16.4 Syntactically invalid

USBSU_R01_S_001 subclause 9.7
Ensure that the IUT in the Restart Request call state R01, on receipt of an excluded DISCONNECT message using the global call reference,

sends a STATUS message using the global call reference including 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 Request call state R01.

USBSU_R01_S_002 subclause 9.7
Ensure that the IUT in the Restart Request call state R01, on receipt of a RESTART ACKNOWLEDGE message with a non-mandatory information element out of sequence,

processes the message as valid.

USBSU_R01_S_003 subclause 9.7
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 including a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Restart Request call state R01.

USBSU_R01_S_004 subclause 9.7
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 including a Cause information element indicating the cause value 100 "mandatory information element contents" and remains in the Restart Request call state R01.

USBSU_R01_S_005 subclause 9.7
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 including a Cause information element indicating the cause value 96 "mandatory information element missing" and remains in the Restart Request call state R01.

USBSU_R01_S_006 subclause 9.7
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 including a Cause information element indicating the cause value 99 "information element non-existent or not implemented".

USBSU_R01_S_007 subclause 9.7
Ensure that the IUT in the Restart Request call state R01, on receipt of a RESTART ACKNOWLEDGE message with a non-mandatory information element content error,

processes the message as valid and optionally sends a STATUS message including a Cause information element indicating the cause value 100 "invalid information element contents".

5.2.17 Message segmentation procedures

No specific USBS TPs for this feature.

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 5 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 [4].

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 5 shall be included in a compliant ATS.

7 Requirements for a comprehensive testing service

As a minimum the Remote test method, as specified in ISO/IEC 9646-2 [4], shall be used by any organization claiming to provide a comprehensive testing service for network equipment claiming conformance to EN 301 142-1 [1].

History

Document history				
V1.1.1	January 1999	Public Enquiry	PE 9918:	1999-01-01 to 1999-04-30