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**Integrated Services Digital Network (ISDN);  
Conformance testing for the Euro-ISDN Programming  
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Part 3: Test Suite Structure and Test Purposes (TSS&TP)  
specification for the Network Access Facility (NAF)**

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## Foreword

The third part of this Interim European Telecommunication Standard (I-ETS) has been produced by the Terminal Equipment (TE) Technical Committee of the European Telecommunications Standards Institute (ETSI).

An ETSI standard may be given I-ETS status either because it is regarded as a provisional solution ahead of a more advanced standard, or because it is immature and requires a "trial period". The life of an I-ETS is limited to three years after which it can be converted into an ETS, have its life extended for a further two years, be replaced by a new version, or be withdrawn.

This is the third part of a I-ETS which comprises four Parts:

"Integrated Services Digital Network (ISDN); Conformance testing for the Euro-ISDN Programming Communication Interface (PCI);

Part 1: "Test Suite Structure and Test Purposes (TSS&TP) for the PCI User Facility (PUF)";

Part 2: "Abstract Test Suite (ATS) for the PCI User Facility (PUF)";

**Part 3: "Test Suite Structure and Test Purposes (TSS&TP) for the Network Access Facility (NAF)";**

Part 4: "Abstract Test Suite (ATS) for the Network Access Facility (NAF)".

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## Introduction

I-ETS 300 697, Parts 1 to 4 comprises the Test Suite Structure and Test Purposes (TSS&TP) and the Abstract Test Suites (ATS) for ETS 300 325 [1]. The Euro-ISDN PCI is a Programming Communication Interface (PCI) which provides access to the Euro-ISDN. The basic model of the Euro-ISDN PCI consists of two entities, a service user called the PCI User Facility (PUF) and a service provider called the Network Access Facility (NAF). For the purposes of conformance testing, the PUF and the NAF are treated separately. This is because the PUF manufacturer and the NAF manufacturer may be completely different and their testing needs should be treated separately. Each part is tested to ensure that they each meet the conformance requirements of the I-ETS and to increase their probability of inter-operating. This is the reason why a separate TSS&TP and a separate ATS has been produced for each of the PCI User Facility (PUF) and the Network Access Facility (NAF).

All parts have been produced according to ISO/IEC 9646, Parts 1 to 3 [2], [3], [4] and ETS 300 406 [8].

As stated above, this I-ETS is structured in four Parts:

- part 1 contains the TSS&TP for the PUF;
- part 2 contains the ATS for the PUF;
- **part 3 contains the TSS&TP for the NAF;**
- part 4 contains the ATS for the NAF.

**Part 1** (TSS&TP for the PUF) contains all Test Purposes (TPs) for PUF (PCI messages). It describes what is covered by the TPs for the PUF and what areas of the I-ETS are not covered. The Test Suite Structure (TSS) is described and the convention followed in naming the TPs is described. A list of basic interconnection tests is given.

**Part 2** (ATS for the PUF) contains the Abstract Test Suite (ATS) for the PUF (PCI messages). The test method used is described in detail and diagrams explaining the test method are presented. The reasons for choosing the test method are also given. The ATS is written in the Tree and Tabular Combined Notation (TTCN) and the TTCN is contained in annex A. Annex B contains the Protocol Conformance Test Report (PCTR), annex C contains the Implementation eXtra Information for Testing (IXIT) and annex D contains an Implementation Conformance Statement (ICS).

**Part 3** (TSS&TP for the NAF) contains all the TPs for the NAF (PCI messages and Exchange Mechanism). It describes what is covered by the TPs for the NAF and what areas of the I-ETS are not covered. The TSS is described and the TPs are given. A list of basic interconnection tests is given.

**Part 4** (ATS for the NAF) contains the ATS for the NAF (PCI messages and Exchange Mechanism). The test method used is described in detail and a diagram explaining the test method is given. The reasons for choosing the test method is also given. The ATS is written in concurrent TTCN and the TTCN is contained in annex A. Annex B contains the PCTR, annex C contains the IXIT and annex D contains an ICS.

NOTE: The ICS in annexes D of Parts 2 and 4 of this I-ETS are informative because ETS 300 325 [1] already contains an ICS. However the ICS in ETS 300 325 [1] is not adequate for these ATSS and should, eventually, be replaced by annex D of Parts 2 and 4 of this I-ETS.

## 1 Scope

Part 3 of this I-ETS contains the Test Suite Structure and Test Purposes (TSS&TP) for the Network Access Facility (NAF) part of Euro-ISDN PCI. The NAF is situated between the PCI User Facility (PUF) and the ISDN network. In order to test the NAF, the NAF is stimulated from both sides, i.e. PUF and network, and the response of the NAF can be observed on either side and a result for the test assigned.

## 2 Normative references

Part 3 of this I-ETS incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this part of the I-ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

- [1] ETS 300 325 (1994): "Integrated Services Digital Network (ISDN); Programming Communication Interface (PCI) for Euro-ISDN".
- [2] ISO/IEC 9646-1 (1994): "Information Technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts".
- [3] ISO/IEC 9646-2 (1994): "Information Technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 2: Abstract Test Suite specification".
- [4] ISO/IEC 9646-3 (1994): "Information Technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 3: The Tree and Tabular Combined Notation".
- [5] ETS 300 102-1: "Integrated Services Digital Network (ISDN); User-network interface layer 3; Specifications for basic call control".
- [6] ETS 300 080 (1992): "Integrated Services Digital Network (ISDN); ISDN lower layer protocols for telematic terminals".
- [7] ISO/IEC 8208 (1990): "Information technology - Data communications - X.25 Packet Layer Protocol for Data Terminal Equipment".
- [8] ETS 300 406 (1995): "Methods for Testing and Specification (MTS); Protocol and profile conformance testing specification Standardisation Methodology".

## 3 Definitions and abbreviations

### 3.1 Definitions

For the purposes of this part of the I-ETS, all the definitions in ISO/IEC 9646, Parts 1, 2 and 3 ([2], [3], [4]) and ETS 300 102-1 ([5]) apply.

### 3.2 Abbreviations

For the purposes of this I-ETS, the following abbreviations apply:

ATS	Abstract Test Suite
Bcug	Bilateral closed user group
CTS	Conformance Testing Services
GFI	General Format Identifier
ICS	Implementation Conformance Statement
IE	Information Element
ISDN	Integrated Services Digital Network
IUT	Implementation Under Test
LT	Lower Tester

NAF	Network Access Facility
NCO	Network Connection Object
NCOID	NCO IDentifier
NMA	Network layer Message Access
PCI	Programming Communication Interface
PCO	Point of Control and Observation
PIXIT	PCI Implementation eXtra Information for Testing
PUF	PCI User Facility
TMA	Transparent Message Access
TP	Test Purpose
TSS	Test Suite Structure
TSS&TP	Test Suite Structure & Test Purposes
TTCN	Tree and Tabular Combined Notation
UT	Upper Tester

## 4 Coverage

The tests in this third part of the I-ETS which have been produced for the NAF were selected under the constraint that the duration of the final test campaign would be one to two days only. Thus the number of test cases has been limited. This has been achieved in some areas by combining several TPs into one TP and in other areas by selective coverage of a feature, e.g. the treatment by the NAF of a missing parameter is checked in some messages only. The combined TP occurs in the main body of the I-ETS and the individual TPs are presented in annex A. In the case of a combined TP, the reference shall always be to more than one individual TP in annex A.

### 4.1 What is covered?

Nearly all mandatory and optional requirements of ETS 300 325 [1] are covered, i.e. all messages of all planes and all the mandatory and optional parameters within the messages. The functionality described in ETS 300 325 [1] is also covered. The User Plane protocols (ETS 300 080 [6], CCITT Recommendation T.70, Null are not covered.

### 4.2 Invalid behaviour coverage

The reaction of the NAF to invalid behaviour by the PUF or network is tested through the NAF's use of the Administration Plane return codes and by testing its reaction to messages which contain errors, as defined in ETS 300 325 [1], e.g. missing parameters, invalid parameter contents, etc.

## 5 Testability of the NAF

The nature of both the upper and the lower interfaces of the NAF are clearly stated in ETS 300 325 [1], and the behaviour of the NAF at these two interfaces can be both controlled and observed. The upper interface is the ISDN-PCI Exchange Mechanism and the lower interface is the ISDN network. The operation of the NAF at the two interfaces shall be tested and the mapping by the NAF of messages from each interface to the other shall also be tested. Because the test suite can be automated, verdict assignment can also be automated at these two interfaces.

In the description of the PCI messages, some parameters are noted as mandatory and some as optional. Normally, test cases which are derived by combining other test cases cannot test a mixture of mandatory and optional parameters because the optional parameter might not be supported by the IUT and this might lead to a problem when executing the test case. However, it is important to note here that the term "optional" has a specific and different meaning in ETS 300 325 [1] for each of the PUF and the NAF, see ETS 300 325 [1], subclause 6.1.2. In the case of the NAF, the network may provide any parameter and "...the NAF shall only supply the item if it is available". This is interpreted to mean that the network may supply a parameter to the NAF and if supplied, the NAF shall pass it to the PUF. In the context of testing, where the tester has control of the network, the tester may supply several parameters to the NAF which are noted as optional in ETS 300 325 [1], and the NAF shall supply these parameters to the PUF. It is the same case for messages sent by the PUF. Therefore, optional parameters can be combined because the test tool shall have control over whether or not the feature is optional.



## 6 NAF basic interconnection tests

There is no basic interconnection test group in the TSS. However, a list of basic interconnection tests is provided here. These tests may be executed on the Implementation Under Test (IUT) prior to execution of the test suite in order to give the IUT implementor confidence that the IUT can perform certain basic tasks. The tests have been chosen to check that the IUT can perform simple tasks on each of the three planes, i.e. create a Network Connection Object (NCO), set up a D-channel and transfer data on the B-channel. Some operations from the Exchange Mechanism are specifically included and other operations from the Exchange Mechanism shall be exercised in the other test cases.

PCI message/Exchange Mechanism	Test case identifier
DOS declaration	1.1.1.a
DOS PCIRegister	1.1.4
Unix declaration	1.2.1.a
Unix PCIRegister	1.2.3
Windows declaration	1.3.1
Windows PCIRegister	1.3.5
ACreateNCOcnf	2.1.1.4
CConnectRsp	3.1.1.6
CConnectCnf	3.1.1.7
CDisconnectReq	3.1.1.14
CDisconnectInd	3.1.1.36
U3ConnectRsp	4.1.38
U3ConnectCnf	4.1.51
U3DisconnectReq	4.1.65
U3DataReq	4.1.81
U3DataInd	4.1.86

## 7 Test Suite Structure (TSS)

This clause describes the Test Suite Structure (TSS) used in this part of the I-ETS.

The TSS is strictly hierarchical and contains separate test groups for the:

- Exchange Mechanism;
- Administration Plane;
- Control Plane;
- User Plane.

The DOS, UNIX and Windows Exchange Mechanisms are covered by different test groups within the more general test group named "Exchange Mechanism".

The Administration Plane (see clause 9), apart from covering the three message classes corresponding to that functional plane and including two test groups concerning error handling, has an additional test group related to the "Selection Criteria", as this feature can be seen as resource management and this is clearly related to this functional plane.

The Control Plane (see clause 10) is divided into two major test groups. The first contains separate test groups covering the support and implementation of each message class in this plane and, where it applies, the mapping between the ISDN events and the exchanges at the PCI interface. The second major test group is related to error handling.

Within the subclause 10.2 ("Invalid state for message errors"), the TPs only cover those states that are considered as testable. Note that in this precise context, testable states are those which correspond to waiting situations from the NAF point of view, i.e. when the NAF is waiting for some message from the PUF, as opposed to those states when the NAF sends something to the PUF.

The User Plane (see clause 11) covers both PUF co-ordination and NAF co-ordination. It also covers the Transparent Message Access (TMA) messages and includes a subclause on error handling in the User Plane.

There is no explicit separate part to test the way the NAF reacts to the use of the PUF co-ordination function as this is seen as the default situation. In this way it is being tested over all three planes.

There are no specific TPs addressing each of the supplementary services, because the PUF is the only entity which plays an active role in this matter. The NAF only provides a passive mapping of the ISDN messages to PCI messages and Information Element (IE) contents to PCI parameters field values, and this mapping is covered in other Parts of the I-ETS.

## 8 Exchange Mechanism

Test group objective: This test group tests the Exchange Mechanism for each of the three operating systems: DOS, Unix and Windows. All of the operating systems are tested for all of the Exchange Mechanism functions and for the declaration and extraction mechanism.

### 8.1 DOS Mechanism

TP111a (reference ETS 300 325 [1] / annex F, subclause F.4.1.1).

keywords: DOS declaration.

Verify that the IUT, in order to declare itself to the list of available NAFs, adds its handle to the PCIDD\$ device driver of available PCI\_Handles, i.e. is now available to PCIGetHandles.

TP111b (reference ETS 300 325 [1] / annex F, subclause F.4.1.2).

keywords: DOS extraction.

Verify that the IUT, in order to extract itself from the list of available NAFs, removes its own PCI\_HANDLE from PCIDD\$ device driver, i.e. is no longer available to PCIGetHandles.

TP112 (reference ETS 300 325 [1] / subclause 7.1.3, annex F, subclause F.1.3.2, subclause 6.8.6, table 28).

keywords: PciGetProperty function.

Verify that if the PUF calls to the far function address PCIHandle, obtained by prior execution of the PciGetHandles function or by use of other means (e.g. local knowledge), with:

- PciGetProperty function code;
- value of MaximumSize of property allowed on return;
- pointer to Property buffer;
- pointer to ActualSize variable.

On successful execution the NAF returns the value #0 - Success and:

- has set the value of ActualSize according to the number of bytes actually filled on the Property buffer;
- has filled the Property buffer in a TLV coding form, with the NAF properties.

TP113 (reference ETS 300 325 [1] / subclause 7.1.3, annex F, subclause F.1.3.2, subclause 6.8.6, table 28).

keywords: PciGetProperty function, PropertyBufferTooSmall.

Verify that if the PUF calls to the far function address PCIHandle, obtained by prior execution of the PciGetHandles function or by use of other means (e.g. local knowledge), with:

- PciGetProperty function code;
- MaximumSize of property allowed on return, with a value which is less than that required to get the all list of Properties;
- pointer to Property buffer;
- pointer to ActualSize variable.

The NAF provides the PUF with the function return code #144 - PropertyBufferTooSmall, indicating that the size of the buffer for Properties is too small to contain the complete list of Properties.

TP114 (reference ETS 300 325 [1] / subclause 7.1.4, annex F, subclause F.1.3.3, subclause 6.8.6, table 28).

keywords: PciRegister function.

Verify that if the PUF calls to the far function address PCIHandle, obtained by prior execution of the PciGetHandles function, with:

- PciRegister function code;
- pointer to PCIRegisterInfo structure;
- pointer to PCIOpSysInfo structure;
- pointer to ExchangeID variable.

On successful execution the NAF makes available the value of the exchange identifier ExchangeID which identifies the exchange link between PUF and NAF and returns the value #0 - Success.

TP115 (reference ETS 300 325 [1] / subclause 7.1.4, annex F, subclause F.1.3.3, subclause 6.8.6, table 28).

keywords: PciRegister function, InvalidPUFType.

Verify that if the PUF calls to the far function address PCIHandle, obtained by prior execution of the PciGetHandles function, with:

- PciRegister function code;
- pointer to PCIRegisterInfo structure, with field PUFVersion=1 and PUFType field value other than 0;
- pointer to PCIOpSysInfo structure;
- pointer to ExchangeID variable.

The NAF provides the PUF with the function return code #134 - InvalidPUFType, indicating that the type of the PUF is invalid or unsupported.

TP116 (reference ETS 300 325 [1] / subclause 7.1.4, annex F, subclause F.1.3.3, subclause 6.8.6, table 28).

keywords: PciRegister function, InvalidPUFVersion.

Verify that if the PUF calls to the far function address PCIHandle, obtained by prior execution of the PciGetHandles function, with:

- PciRegister function code;
- pointer to PCIRegisterInfo structure, with PUFVersion field value greater than 1 and field PUFType =0;
- pointer to PCIOpSysInfo structure;
- pointer to ExchangeID variable.

The NAF provides the PUF with the function return code #135 - InvalidPUFVersion, indicating that the PCI version that the PUF implements is invalid or unsupported.

TP117 (reference ETS 300 325 [1] / subclause 7.3.6, annex F, subclause F.1.3.5, subclause 6.8.6, table 28).

keywords: PciPutMessage function.

Verify that when in the conversation phase, if the PUF calls to the far function address provided by the NAF during registration phase, with:

- PciPutMessage function code;
- ExchangeID related to the current association, obtained by prior execution of PciRegister;
- pointer to appropriately filled PCIMPB structure;
- pointer to appropriately filled message buffer.

On successful execution the NAF returns the value #0 - Success.

TP118 (reference ETS 300 325 [1] / subclause 7.3.6, annex F, subclause F.1.3.5, subclause 6.8.6, table 28).

keywords: PciPutMessage function, InvalidExID.

Verify that when in the conversation phase, if the PUF calls to the far function address provided by the NAF during registration phase, with:

- PciPutMessage function code;
- an invalid ExchangeID interaction identifier;
- pointer to appropriately filled PCIMPB structure;
- pointer to appropriately filled message buffer.

After execution the NAF returns the value #136 - InvalidExID.

TP119 (reference ETS 300 325 [1] / subclause 7.3.6, annex F, subclause F.1.3.5, subclause 6.8.6, table 28).

keywords: PciPutMessage function, InvalidPCIMPB.

Verify that when in the conversation phase, if the PUF calls to the far function address provided by the NAF during registration phase, with:

- PciPutMessage function code;
- ExchangeID related to the current association, obtained by prior execution of PciRegister;
- invalid pointer to PCIMPB structure;
- pointer to appropriately filled message buffer;
- pointer to appropriately filled data buffer.

After execution the NAF returns the value #137 - InvalidPCIMPB.

TP1110 (reference ETS 300 325 [1] / subclause 7.3.7, annex F, subclause F.1.3.6, subclause 6.8.6, table 28).

keywords: PciGetMessage function.

Verify that when in the conversation phase and if the NAF has some message available, if the PUF calls to the far function address provided by the NAF during registration phase, with:

- PciGetMessage function code;
- ExchangeID related to the current association, obtained by prior execution of PciRegister;
- pointer to appropriately partially filled PCIMPB structure;
- pointer to message buffer;
- pointer to data buffer.

After successful execution the NAF has filled the message and data buffers in accordance with the MessageID MessageActualUsedSize and DataActualUsedSize values updated by the NAF in the PCIMPB structure, and returns the value #0 - Success.

TP1111 (reference ETS 300 325 [1] / subclause 7.3.7, annex F, subclause F.1.3.6, subclause 6.8.6, table 28).

keywords: PciGetMessage function, NOMESSAGE.

Verify that when in the conversation phase and if there is no message available, if the PUF calls to the far function address provided by the NAF during registration phase, with:

- PciGetMessage function code;
- ExchangeID related to the current association, obtained by prior execution of PciRegister;
- pointer to appropriately partially filled PCIMPB structure;
- pointer to message buffer;
- pointer to data buffer.

After successful execution the NAF has filled the MessageType field of the PCIMPB structure with the value NOMESSAGE(0), and returns the value #0 - Success.

TP1112 (reference ETS 300 325 [1] / subclause 7.3.7, annex F, subclause F.1.3.6, subclause 6.8.6, table 28).

keywords: PciGetMessage function, InvalidExID.

Verify that when in the conversation phase, if the PUF calls to the far function address provided by the NAF during registration phase, with:

- PciGetMessage function code;
- an invalid ExchangeID interaction identifier;
- pointer to appropriately filled PCIMPB structure;
- pointer to message buffer;
- pointer to data buffer.

After execution the NAF returns the value #136 - InvalidExID.

TP1113 (reference ETS 300 325 [1] / subclause 7.3.7, annex F, subclause F.1.3.6, subclause 6.8.6, table 28).

keywords: PciGetMessage function, InvalidPCIMPB.

Verify that when in the conversation phase, if the PUF calls to the far function address provided by the NAF during registration phase, with:

- PciGetMessage function code;
- ExchangeID related to the current association, obtained by prior execution of PciRegister;
- invalid pointer to PCIMPB structure;
- pointer to message buffer;
- pointer to data buffer.

After execution the NAF returns the value #137 - InvalidPCIMPB.

TP1114 (reference ETS 300 325 [1] / subclause 7.3.7, annex F, subclause F.1.3.6, subclause 6.8.6, table 28).

keywords: PciGetMessage function, InvalidMessageBuffer.

Verify that when in the conversation phase, if the PUF calls to the far function address provided by the NAF during registration phase, with:

- PciGetMessage function code;
- ExchangeID related to the current association, obtained by prior execution of PciRegister;
- pointer to appropriately filled PCIMPB structure;
- invalid pointer to message buffer;
- pointer to data buffer.

After execution the NAF returns the value #138 - InvalidMessageBuffer.

TP1115 (reference ETS 300 325 [1] / subclause 7.3.7, annex F, subclause F.1.3.6, subclause 6.8.6, table 28).

keywords: PciGetMessage function, MessageBufferTooSmall.

Verify that when in the conversation phase, if the PUF calls to the far function address provided by the NAF during registration phase, with:

- PciGetMessage function code;
- ExchangeID related to the current association, obtained by prior execution of PciRegister;
- pointer to appropriately filled PCIMPB structure, but with the MaximumMessageSize field with a value inferior to that needed to get the message;
- pointer to message buffer;
- pointer to data buffer.

After execution the NAF returns the value #141 - MessageBufferTooSmall.

TP1116 (reference ETS 300 325 [1] / annex F, subclause F.3.6.7).

key words: NAF notification mechanism.

Verify that on conversation phase, and after PUF's successful execution of the PciSetSignal function setting the notification mechanism, if there is a PCI message to be delivered to the PUF, then the NAF shall notify the PUF by calling back the routine located at the address passed during the previous call to the PciSetSignal.

TP1117 (reference ETS 300 325 [1] / annex F, subclause F.3.6.7).

keywords: NAF notification mechanism removal.

Verify that on conversation phase, and after PUF's successful execution of the PciSetSignal function removing the notification mechanism previously established, if there is a PCI message to be delivered to the PUF, then the NAF shall not notify the PUF.

TP1118 (reference ETS 300 325 [1] / subclauses 7.2 & 7.2.10).

keyword: De-registration.

Verify that if the PUF disassociates using the PciDeregister function, then the NAF shall free any resources allocated for this PUF, e.g. clearing already existing connections.

## 8.2 UNIX Mechanism

TP121a (reference ETS 300 325 [1] / annex F, subclause F.4.3.1).

keywords: UNIX declaration.

Verify that the IUT, in order to declare itself to the list of available NAFs, adds a dummy file which is the name of the new NAF to the directory /etc/pcidd, i.e. is now available to PCIGetHandles.

TP121b (reference ETS 300 325 [1] / annex F, subclause F.4.3.2).

keywords: UNIX extraction.

Verify that the IUT, in order to extract itself from the list of available NAFs, removes a dummy file which is the name of the NAF from the directory /etc/pcidd, i.e. is no longer available to PCIGetHandles.

TP122 (reference ETS 300 325 [1] / annex F, subclause F.3.6.2).

keywords: PciGetProperty function.

Verify that during PUF's successful execution of the PciGetProperty exchange function, if upon return from the ioctl() call the return value is 0, the ic\_len component of the strioctl structure contains the number of bytes returned by the ioctl call and the ic\_dp component points to the property returned.

TP123 (reference ETS 300 325 [1] / annex F, subclause F.3.6.3).

keywords: PciRegister function.

Verify that during PUF's successful execution of the PciRegister exchange function, upon return from the ioctl() call the return value corresponds to the maximum PCI message size the NAF supports.

TP124 (reference ETS 300 325 [1] / annex F, subclause F.3.6.5).

keywords: PciPutMessage function.

Verify that on conversation phase during PUF's execution of the PciPutMessage exchange function, if upon return from the putmsg() call the return value is 0, then the NAF has received the PCI message sent by PUF.

TP125 (reference ETS 300 325 [1] / annex F, subclause F.3.6.6).

keywords: PciGetMessage function

Verify that on conversation phase if there is an available NAF message, then during PUF's execution of the PciGetMessage exchange function, if upon return from the getmsg() call the return value is 0, the buf component of the ctlbuf structure contains the PCIMPB structure appropriately filled followed by the content of the PCI message, and the buf component of the structure databuf contains the data associated with the message if any.

TP126 (reference ETS 300 325 [1] / annex F, subclause F.3.6.6).

keywords: PciGetMessage function, NOMESSAGE.

Verify that on conversation phase if there is no available NAF message, then during PUF's execution of the PciGetMessage exchange function, if upon return from the getmsg() call the return value is 0, the buf component of the ctlbuf structure contains the PCIMPB structure appropriately filled and the MessageID component of the PCIMPB structure shall be set to NOMESSAGE(0).

TP127 (reference ETS 300 325 [1] / annex F, subclause F.3.6.7).

keywords: NAF notification mechanism.

Verify that on conversation phase, and after PUF's successful execution of the PciSetSignal function setting the notification mechanism, if there is a PCI message to be delivered to the PUF, then the NAF shall notify the PUF by issuing the SIGPOLL signal.

TP128 (reference ETS 300 325 [1] / annex F, subclause F.3.6.7).

keywords: NAF notification mechanism removal.

Verify that on conversation phase, and after PUF's successful execution of the PciSetSignal function removing the notification mechanism previously established, if there is a PCI message to be delivered to the PUF, then the NAF shall not notify the PUF by issuing the SIGPOLL signal.

TP129 (reference ETS 300 325 [1] / subclause 7.2).

keywords: De-registration.

Verify that if the PUF disassociates using the PciDeregister function, then the NAF shall free any resources allocated for this PUF, e.g. clearing already existing connections.

### 8.3 Windows Mechanism

TP131 (reference ETS 300 325 [1] / annex F, subclause F.4.2.1).

keywords: Windows declaration.

Verify that the IUT, in order to be declare itself to the list of available NAFs, then it adds itself to the driver list in "PCI.INI" of available PCI\_Handles, i.e. is now available to PCIGetHandles.

TP132 (reference ETS 300 325 [1] / annex F, subclause F.4.2.2).

keywords: Windows extraction.

Verify that the IUT, in order to extract itself from the list of available NAFs, it removes its own PCI\_HANDLE from the driver list in "PCI.INI", i.e. is no longer available to PCIGetHandles.

TP133 (reference ETS 300 325 [1] / annex F, subclause, F.2.4.2, subclause 7.1.3).

keywords: Windows PciGetProperties.

Verify that if the PUF calls the PciGetProperty function exported by NAF, in order to obtain a NAF property, with the following parameters:

MaximumSize;

NAFProperty;

ActualSize.

Then on successful execution, the NAFProperty contains the NAF properties and the ActualSize contains the actual size of the NAF properties.

TP134 (reference ETS 300 325 [1] / annex F, subclause F.2.4.2, subclause 7.1.3).

keywords: Windows PciGetProperties, PropertyBufferTooSmall.

Verify that if the PUF calls the PciGetProperty function exported by NAF, in order to obtain a NAF property, with the following parameters:

MaximumSize containing a value too small for properties;

NAFProperty;

ActualSize.

Then on successful execution, the NAFProperty does not contain the NAF properties and the NAF provides the PUF with the function return code #144 PropertyBufferTooSmall.

TP135 (reference ETS 300 325 [1] / annex F, subclause F.2.4.3, subclause 7.1.4).

keywords: Windows PciRegister.

Verify that if the PUF calls the PciRegister function exported by NAF, in order to associate to a NAF, with the following parameters:

PCIRegisterInfo;

ExID.

Then on successful execution, the Exchange Identifier and the maximum message size parameter of the registration parameter structure shall have been provided by the NAF.

TP136 (reference ETS 300 325 [1] / annex F, subclause F.2.4.4, subclause 7.2.1).

keywords: Windows PciDeregister.

Verify that if the PUF calls the PciDeregister function exported by NAF, in order to disassociate from a NAF, with the following parameter:

ExID.

Then on execution of the function (successful or not), the ExID used becomes invalid.

TP137 (reference ETS 300 325 [1] / annex F, subclause F.2.4.5, subclause 7.3.6).

keywords: Windows PciPutMessage.

Verify that if the PUF calls the PciPutMessage function exported by NAF, in order for the PUF to send a message and associated data if any, to the NAF, with the following parameters:

ExID;

PCIMPB;

Message;

Data.

Then on successful execution, the NAF shall return the value Success.

TP138 (reference ETS 300 325 [1] / annex F, subclause F.2.4.5, subclause 7.3.6).

keywords: Windows PciPutMessage, InvalidPCIMPB.

Verify that if the PUF calls the PciPutMessage function exported by NAF, in order for the PUF to send a message and associated data if any, to the NAF, with the following parameters:

ExID;

invalid pointer to PCIMPB structure;

Message;

Data.

Then on execution, the NAF shall return the value InvalidPCIMPB.

TP139 (reference ETS 300 325 [1] / annex F, subclause F.2.4.6, subclause 7.3.7).

keywords: Windows PciGetMessage.

Verify that if the PUF calls the PciGetMessage function, in order for the PUF to get a message and associated data if any, from the NAF, with the following parameters:

ExID;

PCIMPB;

Message;

Data.

Then on successful execution, the NAF shall return the value Success, and has filled the message and data buffers.

TP1310 (reference ETS 300 325 [1] / annex F, subclause F.2.4.6, subclause 7.3.7).

keywords: Windows PciGetMessage NOMESSAGE.

Verify that if the PUF calls the PciGetMessage function exported by NAF, in order for the PUF to get a message and associated data if any, from the NAF, with the following parameters:

ExID;

PCIMPB;

Message;

Data;

and there is no message available, then on successful execution, the NAF shall return the value Success and the NAF has filled the Message Type field of the PCIMPB structure with the value NOMESSAGE (0).



TP1311 (reference ETS 300 325 [1] / annex F, subclause F.2.4.7, subclause 7.3.8).

keywords: Windows PciSetSignal, signal mechanism.

Verify that if the PUF calls the PciSetSignal function exported by NAF, in order to ask for notification from the NAF when an event occurs using the signal mechanism procedure, with the following parameters:

ExID;

Signal = 0;

SignalProcedure.

Then on successful execution, the NAF shall return the value Success and when an event occurs, the NAF notifies the PUF each time a new message is available without waiting for the PUF to use the PciGetMessage function.

TP1312 (reference ETS 300 325 [1] / annex F, subclause F.2.4.7, subclause 7.3.8).

keywords: Windows PciSetSignal, user message mechanism.

Verify that if the PUF calls the PciSetSignal function exported by NAF, in order to ask for notification from the NAF when an event occurs using the user message mechanism procedure, with the following parameters:

ExID;

Signal <> 0;

SignalProcedure.

Then on successful execution, the NAF shall return the value Success and when an event occurs, the NAF notifies the PUF each time a new message is available without waiting for the PUF to use the PciGetMessage function by use of a WINDOWS API PostMessage call with the following parameters:

LOWORD(SignalProcedure);

WM\_USER+Signal;

MessageID;

(DWORD)(MessageSize << 16) | (DataSize)).

TP1313 (reference ETS 300 325 [1] / annex F, subclause F.2.4.7, subclause 7.3.8).

keywords: Windows PciSetSignal, stopping the mechanism.

Verify that if the PUF calls the PciSetSignal function exported by NAF, in order to ask for notification from the NAF when an event occurs using the user message mechanism procedure, with the following parameters:

ExID;

Signal <> 0;

SignalProcedure;

and on successful execution, the NAF shall return the value Success, then the signal mechanism can be stopped by supplying a NULL(0) value instead of Signal and Signal procedures during a further call to PCISetSignal.

## 9 Administration Plane

Test group objective: This test group tests the Administration Plane. All messages of the Administration Plane shall be tested, and all parameters within the messages shall be tested. The response of the Administration Plane to invalid behaviour is tested in the return codes (see subclause 9.3).

### 9.1 Administration Plane Messages

#### 9.1.1 Class 1- Management of NCOs and error reports

TP2111 (reference ETS 300 325 [1] / subclause 6.2.3).

keywords: Sending ACreateNCOConf Message case 1.

Verify that the NAF confirms the receipt of an ACreateNCOReq by making available an ACreatNCOConf message which includes the Completion Status parameter.

TP2112 (reference ETS 300 325 [1] / subclause 6.2.3).

keywords: Sending ACreateNCOCnf Message case 2.

Verify that the NAF confirms the receipt of an ACreateNCOREq message containing a RequestID parameter, by making available an ACreateNCOCnf message:

- containing the RequestID parameter with the value previously supplied by the PUF.

TP2113 (reference ETS 300 325 [1] / subclause 6.2.3).

keywords: Sending ACreateNCOCnf Message case 3.

Verify that the NCOID parameter is included in the ACreateNCOCnf message confirming the receipt of an ACreateNCOREq, if the CompletionStatus is Success.

TP2114 (reference ETS 300 325 [1] / subclause 6.2.3).

keywords: Sending ACreateNCOCnf Message case 4.

Verify that the GroupID parameter is not included in the ACreateNCOCnf message confirming the receipt of an ACreateNCOREq, if NCO created was of type C/U3 or U3 and if CompletionStatus is Success.

TP2115 (reference ETS 300 325 [1] / subclause 6.2.3).

keywords: Sending ACreateNCOCnf Message case 5.

Verify that the Group identifier parameter is included in the ACreateNCOCnf message confirming the receipt of an ACreateNCOREq, if NCO created was of type U3G and if CompletionStatus is Success.

TP2116 (reference ETS 300 325 [1] / subclause 6.2.5).

keywords: Sending ADestroyNCOCnf Message case 1.

Verify that the NAF confirms the receipt of an ADestroyNCOREq by making available an ADestroyNCOCnf message which includes the NCOID parameter.

TP2117 (reference ETS 300 325 [1] / subclause 6.2.5).

keywords: Sending ADestroyNCOCnf Message case 2.

Verify that the NAF confirms the receipt of an ADestroyNCOREq by making available an ADestroyNCOCnf message which includes the CompletionStatus parameter.

TP2118 (reference ETS 300 325 [1] / subclause 6.2.5).

keywords: Sending ADestroyNCOCnf Message case 3.

Verify that the NAF confirms the receipt of an ADestroyNCOREq message containing a RequestID parameter, by making available an ADestroyNCOCnf message:

- containing the RequestID parameter with the value previously supplied by the PUF.

TP21110 (reference ETS 300 325 [1] / subclause 6.2.6).

keywords: Sending AErrorInd Message case 2.

Verify that if the RequestID was present in the request message, then the RequestID is present in the AErrorInd message.

TP21111 (reference ETS 300 325 [1] / subclause 6.2.8).

keywords: Sending AGetNCOInfoCnf Message case 1.

Verify that if the PUF sends an AGetNCOInfoReq message to the NAF, then the NAF responds with an AGetNCOInfoCnf message containing:

- NCOID.

TP21112 (reference ETS 300 325 [1] / subclause 6.2.8).  
keywords: Sending AGetNCOInfoCnf Message case 2.  
Verify that if the PUF sends an AGetNCOInfoReq message to the NAF, then the NAF responds with an AGetNCOInfoCnf message containing:  
CompletionStatus = completion status of the GetNCOInfo operation.

TP21113 (reference ETS 300 325 [1] / subclause 6.2.8).  
keywords: Sending AGetNCOInfoCnf Message case 3.  
Verify that if the PUF sends an AGetNCOInfoReq message to the NAF, then the NAF responds with an AGetNCOInfoCnf message containing:  
AAttribute = Administration Plane attribute set parameters if CompletionStatus Success, else absent.

### 9.1.2 Class 2 - Management of connection security

TP2121 (reference ETS 300 325 [1] / subclause 6.2.10).  
keywords: Sending ASecurityCnf Message case 1.  
Verify that the CompletionStatus parameter indicating the required security algorithm has been activated or stopped for the requested connection, or the reason for non-activation of the security algorithm, is present in the ASecurityCnf message.

TP2122 (reference ETS 300 325 [1] / subclause 6.2.10).  
keywords: Sending ASecurityCnf Message case 2.  
Verify that the RequestID parameter is present in the ASecurityCnf message if it was supplied in the ASecurityReq message.

### 9.1.3 Class 3 - Manufacturer Specific

TP2131 (reference ETS 300 325 [1] / subclause 6.2.12).  
keywords: Sending AManufacturerInd Message, case 1.  
Verify that if the PUF sends an AManufacturerReq message to the NAF, then the NAF responds with an AManufacturerCnf message containing:  
RequestID.

TP2132 (reference ETS 300 325 [1] / subclause 6.2.12).  
keywords: Sending AManufacturerInd Message, case 2.  
Verify that if the PUF sends an AManufacturerReq message to the NAF, then the NAF responds with an AManufacturerCnf message containing:  
ManufacturerCode.

TP2133 (reference ETS 300 325 [1] / subclause 6.2.12).  
keywords: Sending AManufacturerInd Message, case 3.  
Verify that if the PUF sends an AManufacturerReq message to the NAF, then the NAF responds with an AManufacturerCnf message containing:  
CompletionStatus, then this indicates the result which is manufacturer specific.

## 9.2 Selection Criteria

### 9.2.1 NCO Selection

TP2213 (reference ETS 300 325 [1] / subclauses 4.3.7 and 6.7.1).  
keywords: Multi-NCO operation - PUF co-ordination.  
Verify that the NAF, on receiving an incoming call, broadcasts it to all NCOs which have indicated compatibility within an NCO and the NCOs do not contain SelectorIDs.

TP2214 (reference ETS 300 325 [1] / subclauses 4.3.7 and 6.7.1).

keywords: Multi-NCO operation - PUF co-ordination.

Verify that the NAF, on broadcasting an incoming call to all compatible NCOs, assigns the call to the NCO which first accepts the call and sends a disconnect indication to all other NCOs.

TP2215 (reference ETS 300 325 [1] / subclause 6.7.1).

keywords: Selection Criteria, 1 NCO, 1 criterion provided by the network and the NCO.

Verify that, if 1 NCO exists containing a NCOType encoded as C/U3, a CDirection encoded as incoming and a CalledNumber, the NAF, on receiving a SETUP ETS 300 102-1 [5] message from the network, containing the same CalledNumber, sends a CConnectInd message on this NCO.

TP2216 (reference ETS 300 325 [1] / subclause 6.7.1).

keywords: Selection Criteria, 1 NCO, 1 criterion provided by the network and not by the NCO.

Verify that, if 1 NCO exists containing a NCOType encoded as C/U3, a CDirection encoded as incoming, a CalledNumber and no BearerCap, the NAF, on receiving a SETUP ETS 300 102-1 [5] message from the network, containing the same CalledNumber and a BearerCap, sends a CConnectInd message on this NCO.

TP2218 (reference ETS 300 325 [1] / subclause 6.7.1).

keywords: Selection Criteria, SelectorId.

Verify that, if 2 NCOs exist containing a NCOType encoded as C/U3, a CDirection encoded as incoming, the same CalledNumber and the same SelectorId, the NAF, on receiving a SETUP ETS 300 102-1 [5] message from the network, containing the same CalledNumber, sends a CConnectInd message on the latest one.

TP2219 (reference ETS 300 325 [1] / subclause 6.7.1).

keywords: Selection Criteria, 2 NCOs with different criteria.

Verify that, if 2 NCOs exist containing a NCOType encoded as C/U3, a CDirection encoded as incoming and different CalledNumber, the NAF, on receiving a SETUP ETS 300 102-1 [5] message from the network, containing the CalledNumber of one of them, sends a CConnectInd message only on this one.

### 9.2.2 Action if no NCO available

TP2221 (reference ETS 300 325 [1] / subclause 6.7.2.1).

keywords: No NCO available for incoming call.

Verify that if no NCO is available for an incoming call, the NAF sends a U3DisconnectInd containing:

- X213reason "Connection rejection - reason unspecified transient".

### 9.3 Administration Plane return codes

TP241 (reference ETS 300 325 [1] / subclause 6.8.7).

Keywords: APlane return code: success.

Verify that if the PUF sends a valid ACreateNCOREq, the NAF responds with a ACreateNCOcnf containing:

- CompletionStatus = Success.

TP243 (reference ETS 300 325 [1] / subclause 6.8.7).

Keywords: APlane return code: UndefinedMsgType.

Verify that if the PUF sends a message with an undefined message type, the NAF responds with a AErrorInd containing:

- CompletionStatus = UndefinedMsgType.

TP244 (reference ETS 300 325 [1] / subclause 6.8.7).

Keywords: APlane return code: UnsupportedMsgType.

Verify that if the PUF sends an unsupported message, the NAF responds with a AErrorInd containing:

- CompletionStatus = UnsupportedMsgType.

TP245 (reference ETS 300 325 [1] / subclause 6.8.7).

Keywords: APlane return code: InvalidParameter.

Verify that if the PUF sends a ACreateNCOREq with an invalid parameter, the NAF responds with a ACreatNCOCnf containing:

- CompletionStatus = InvalidParameter.

TP246 (reference ETS 300 325 [1] / subclause 6.8.7).

Keywords: APlane return code: MissingParameter.

Verify that if the PUF sends a ACreateNCOREq missing a parameter, the NAF responds with a ACreatNCOCnf containing:

- CompletionStatus = MissingParameter.

TP247 (reference ETS 300 325 [1] / subclause 6.8.7).

Keywords: APlane return code: InvalidParameterLength.

Verify that if the PUF sends a ACreateNCOREq with a CalledAddress >16 characters, the NAF responds with a ACreatNCOCnf containing:

- CompletionStatus = InvalidParameterLength.

TP248 (reference ETS 300 325 [1] / subclause 6.8.7).

Keywords: APlane return code: InvalidContents.

Verify that if the PUF sends a ACreateNCOREq with an invalid parameter content, the NAF responds with a ACreatNCOCnf containing:

- CompletionStatus = InvalidContents.

TP249 (reference ETS 300 325 [1] / subclauses 6.8.7 and 6.8.1).

Keywords: APlane return code: InvalidNCOID.

Verify that if the PUF sends a ADestroyNCOREq with an invalid NCOID, the NAF responds with a AErrorInd containing:

- CompletionStatus = InvalidNCOID;

- ErrorSpecific = NCOID value.

TP2410 (reference ETS 300 325 [1] / subclause 6.8.7).

Keywords: APlane return code: NCOIDinUse.

Verify that if the PUF sends a ACreateNCOREq with an NCOID that is in use for an established connection, then the NAF responds with a ACreatNCOCnf containing:

- CompletionStatus = NCOIDinUse.

TP2411 (reference ETS 300 325 [1] / subclause 6.8.7).

Keywords: APlane return code: InvalidNCOType.

Verify that if the PUF sends a ACreateNCOREq containing an Invalid NCO Type, the NAF responds with a ACreatNCOCnf containing:

- CompletionStatus = InvalidNCOType.

TP2412 (reference ETS 300 325 [1] / subclause 6.8.7).

Keywords: APlane return code: InvalidDirectionType.

Verify that if the PUF sends a ACreateNCOREq containing an Invalid Direction, the NAF responds with a ACreatNCOCnf containing:

- CompletionStatus = InvalidDirectionType.

TP2413 (reference ETS 300 325 [1] / subclause 6.8.7).

Keywords: APlane return code: AttributeNameError.

Verify that if the PUF sends a ACreateNCOREq containing an invalid use of an Attribute name, the NAF responds with a ACreatNCOCnf containing:

- CompletionStatus = AttributeNameError.

TP2414 (reference ETS 300 325 [1] / subclause 6.8.7).

Keywords: APlane return code: ExtraSetError.

Verify that if the PUF sends a ACreateNCOREq containing an attribute set name that is not required, the NAF responds with a ACreatNCOCnf containing:

- CompletionStatus = ExtraSetError.

TP2415 (reference ETS 300 325 [1] / subclause 6.8.7).

Keywords: APlane return code: SecurityNotActivated.

Verify that if the PUF sends a ASecurityReq requesting a security algorithm that has not been activated, the NAF responds with a ASecurityCnf containing:

- CompletionStatus = SecurityNotActivated.

TP2416 (reference ETS 300 325 [1] / subclause 6.8.7).

Keywords: APlane return code: InvalidCoordValue.

Verify that if the PUF sends an Invalid NAF co-ordination parameter, the NAF responds with a message containing:

- CompletionStatus = InvalidCoordValue.

TP2417 (reference ETS 300 325 [1] / subclause 6.8.7).

Keywords: APlane return code: InvalidGroupID.

Verify that if the PUF sends a ACreateNCOREq containing an Invalid GroupID, the NAF responds with a ACreatNCOCnf containing:

- CompletionStatus = InvalidGroupID.

TP2418 (reference ETS 300 325 [1] / subclause 6.8.7).

Keywords: APlane return code: GroupIDError.

Verify that if the PUF sends a ACreateNCOREq which does not contain a required GroupID, the NAF responds with a ACreatNCOCnf containing:

- CompletionStatus = GroupIDError.

TP2419 (reference ETS 300 325 [1] / subclause 6.8.7).

Keywords: APlane return code: InvalidExtEquipName.

Verify that if the PUF sends a ACreateNCOREq with an NCO containing Invalid external equipment name, the NAF responds with a ACreateNCOCnf containing:

- CompletionStatus = InvalidExtEquipName.

TP2420 (reference ETS 300 325 [1] / subclause 6.8.7).

Keywords: APlane return code: InvalidExtEquipType.

Verify that if the PUF sends a ACreateNCOREq with an NCO containing Invalid external equipment type, the NAF responds with a ACreateNCOCnf containing:

- CompletionStatus = InvalidExtEquiptype

TP2422 (reference ETS 300 325 [1] / subclause 6.8.7).

Keywords: APlane return code: ManufacturerCodeError.

Verify that if the PUF sends a AManufacturerReq with an invalid ManufacturerCode, the NAF responds with a AManufacturerInd containing:

- CompletionStatus = ManufacturerCodeError.

## 10 Control Plane

Test group objective: This test group tests the Control Plane. All messages of the Control Plane shall be tested, and all parameters within the messages shall be tested. Error handling is described in subclause 10.2 where the response of the NAF to errors from the PUF is tested. Where tests have been combined, the original TPs are in annex A and the combined TPs in this clause reference the TPs in the annex.

### 10.1 Control Plane messages and mapping to ETS 300 102-1 messages

#### 10.1.1 Class 1 - Connection establishment and connection breakdown

TP3111 (reference annex A, items A2.1.1, A2.1.2 combined).

keywords: Receiving CAlertReq.

Verify that if the Control Plane Connection is in state 2, and after receiving from the PUF a valid CAlertReq message, the NAF sends to the network a correct ALERTING ETS 300 102-1 [5] message including all the IEs corresponding to the parameters included in the received CAlertReq.

TP3112 (reference annex A, items A2.1.3 to A2.1.6 combined).

keywords: Sending CAlertInd.

Verify that if the Control Plane connection is on state 1, then on receipt from the network of an ALERTING ETS 300 102-1 [5] message, the NAF sends a CAlertInd message including all mandatory parameters and the parameters corresponding to the received ALERTING IEs.

TP3113 (reference annex A, items A2.1.7 to A2.1.17 combined).

keywords: Receiving CConnectReq.

Verify that if on state 0 and on receipt of a valid CConnectReq message from the PUF, the NAF sends to the network a correct SETUP ETS 300 102-1 [5] message including all the IEs corresponding to the parameters included in the received CConnectReq.

TP3114 (reference annex A, items A2.1.18 to A2.1.29 combined).

keywords: Sending CConnectInd.

Verify that if on state 0 and on receipt of a valid SETUP ETS 300 102-1 [5] message from the network, the NAF indicates the incoming call to the appropriate PUF by making available a CConnectInd message including all mandatory parameters and the parameters corresponding to the received SETUP IEs.

TP3115 (reference annex A, items A2.1.30 to A2.1.33 combined).

keywords: Receiving CConnectRsp, state 2.

Verify that if on state 2 and on receipt of a valid CConnectRsp message from the PUF, the NAF sends to the network a correct CONNECT ETS 300 102-1 [5] message including all the IEs corresponding to the parameters included in the received CConnectRsp.

TP3116 (reference annex A, items A2.1.34 to A2.1.37 combined).

keywords: Receiving CConnectRsp, state 3.

Verify that if on state 3 and on receipt of a valid CConnectRsp message from the PUF, the NAF sends to the network a correct CONNECT ETS 300 102-1 [5] message including all the IEs corresponding to the parameters included in the received CConnectRsp.

TP3117 (reference annex A, items A2.1.38 to A2.1.43 combined).

keywords: Sending CConnectCnf.

Verify that if on state 1 and on receipt of a CONNECT ETS 300 102-1 [5] message from the network, the NAF indicates to the PUF that the called terminal accepts the call by making available a CConnectCnf message including all mandatory parameters and the parameters corresponding to the received CONNECT IEs.

TP31118 (reference annex A, items A2.1.44 to A2.1.46 combined).

keywords: Receiving CDisconnectReq on state 1.

Verify that if the Control Plane connection is on state 1 and on receipt of a valid CDisconnectReq message from the PUF, the NAF sends to the network a correct DISCONNECT ETS 300 102-1 [5] message including all the IEs corresponding to the parameters included in the received CDisconnectReq.

TP31110 (reference annex A, items A2.1.47 to A2.1.49 combined).

keywords: Receiving CDisconnectReq on state 2.

Verify that if the Control Plane connection is on state 2 and on receipt of a valid CDisconnectReq message from the PUF refusing an incoming call, the NAF sends to the network a correct RELEASE COMPLETE ETS 300 102-1 [5] message including all the IEs corresponding to the parameters included in the received CDisconnectReq.

NOTE: This is the case where the PCI CDisconnectReq message is used to respond to a previously received CConnectInd message from the NAF (see note 1 of table B.1).

TP31112 (reference annex A, items A2.1.50 to A2.1.52 combined).

keywords: Receiving CDisconnectReq on state 3.

Verify that if the Control Plane connection is on state 3 and on receipt of a valid CDisconnectReq message from the PUF, the NAF sends to the network a correct DISCONNECT ETS 300 102-1 [5] message including all the IEs corresponding to the parameters included in the received CDisconnectReq.

TP31114 (reference annex A, items A2.1.53 to A2.1.55 combined).

keywords: Receiving CDisconnectReq on state 4.

Verify that if the Control Plane connection is on state 4 and on receipt of a valid CDisconnectReq message from the PUF, the NAF sends to the network a correct DISCONNECT ETS 300 102-1 [5] message including all the IEs corresponding to the parameters included in the received CDisconnectReq.

TP31115 (reference ETS 300 325 [1] / subclauses 6.3.1 (see remarks), 6.3.8 & 6.8.8, annex B, clauses B.1 & B.2, note 1 of clause B.1).

keywords: Receiving CDisconnectReq on state 4, no CauseToNAF.

Verify that if the Control Plane connection is on state 4 and on receipt of a valid CDisconnectReq message from the PUF, not including the CauseToNAF parameter, the NAF sends to the network a correct DISCONNECT ETS 300 102-1 [5] message including a Cause IE indicating #16 "Normal Call Clearing".

TP31116 (reference ETS 300 325 [1] / subclause 6.3.11, annex B, clauses B.1 & B.2, note 1 of clause B.1).

keywords: Sending CDisconnectCnf, case 1.

Verify that if the Control Plane connection is on state 2 and on receipt of a CDisconnectReq refusing an incoming call, the NAF acknowledges this message by making available a CDisconnectCnf message including the NCOID parameter and that this message is not mapped from a message from ISDN.

TP31117 (reference annex A, items A2.1.56 to A2.1.58 combined).

keywords: Sending CDisconnectCnf, case 2.

Verify that if on state 5 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, the NAF informs the PUF that the connection has ended and the channel has been cleared down by making available a CDisconnectCnf message including all mandatory parameters and the parameters corresponding to the received RELEASE IEs.



TP31118 (reference annex A, items A2.1.59 to A2.1.62 combined).

keywords: Sending CDisconnectInd in state 1-case 1.

Verify that if the Control Plane connection is in state 1 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including all mandatory parameters and the parameters corresponding to the received DISCONNECT IEs.

TP31120 (reference annex A, items A2.1.63 to A2.1.66 combined).

keywords: Sending CDisconnectInd in state 1-case 2.

Verify that if the Control Plane connection is in state 1 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including all mandatory parameters and the parameters corresponding to the received RELEASE IEs.

TP31122 (reference annex A, items A2.1.67 to A2.1.70 combined).

keywords: Sending CDisconnectInd in state 1-case 3.

Verify that if the Control Plane connection is in state 1 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including all mandatory parameters and the parameters corresponding to the received RELEASE COMPLETE IEs.

TP31124 (reference annex A, items A2.1.71 to A2.1.74 combined).

keywords: Sending CDisconnectInd in state 2-case 1.

Verify that if the Control Plane connection is in state 2 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including all mandatory parameters and the parameters corresponding to the received DISCONNECT IEs.

TP31126 (reference annex A, items A2.1.75 to A2.1.78 combined).

keywords: Sending CDisconnectInd in state 2-case 2.

Verify that if the Control Plane connection is in state 2 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including all mandatory parameters and the parameters corresponding to the received RELEASE IEs.

TP31128 (reference annex A, items A2.1.79 to A2.1.82 combined).

keywords: Sending CDisconnectInd in state 2-case 3.

Verify that if the Control Plane connection is in state 2 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including all mandatory parameters and the parameters corresponding to the received RELEASE COMPLETE IEs.

TP31130 (reference annex A, items A2.1.83 to A2.1.86 combined).

keywords: Sending CDisconnectInd in state 3-case 1.

Verify that if the Control Plane connection is in state 3 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including all mandatory parameters and the parameters corresponding to the received DISCONNECT IEs.

TP31132 (reference annex A, items A2.1.87 to A2.1.90 combined).

keywords: Sending CDisconnectInd in state 3-case 2.

Verify that if the Control Plane connection is in state 3 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including all mandatory parameters and the parameters corresponding to the received RELEASE IEs.

TP31134 (reference annex A, items A2.1.91 to A2.1.94 combined).

keywords: Sending CDisconnectInd in state 3-case 3.

Verify that if the Control Plane connection is in state 3 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including all mandatory parameters and the parameters corresponding to the received RELEASE COMPLETE IEs.

TP31136 (reference annex A, items A2.1.95 to A2.1.98 combined).

keywords: Sending CDisconnectInd in state 4-case 1.

Verify that if the Control Plane connection is in state 4 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including all mandatory parameters and the parameters corresponding to the received DISCONNECT IEs.

TP31137 (reference ETS 300 325 [1] / subclause 6.3.9, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 4-case 1, no Cause.

Verify that if the Control Plane connection is in state 4 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, not containing a Cause IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the CauseToPUF parameter indicating #16 "Normal Call Clearing".

TP31138 (reference annex A, items A2.1.99 to A2.1.102 combined).

keywords: Sending CDisconnectInd in state 4-case 2.

Verify that if the Control Plane connection is in state 4 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including all mandatory parameters and the parameters corresponding to the received RELEASE IEs.

TP31140 (reference annex A, items A2.1.103 to A2.1.106 combined).

keywords: Sending CDisconnectInd in state 4-case 3.

Verify that if the Control Plane connection is in state 4 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including all mandatory parameters and the parameters corresponding to the received RELEASE COMPLETE IEs.

TP31142 (reference annex A, items A2.1.107 to A2.1.110 combined).

keywords: Sending CDisconnectInd in state 10-case 1.

Verify that if the Control Plane connection is in state 10 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including all mandatory parameters and the parameters corresponding to the received DISCONNECT IEs.

TP31144 (reference annex A, items A2.1.111 to A2.1.114 combined).

keywords: Sending CDisconnectInd in state 10-case 2.

Verify that if the Control Plane connection is in state 10 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including all mandatory parameters and the parameters corresponding to the received RELEASE IEs.

TP31146 (reference annex A, items A2.1.115 to A2.1.118 combined).

keywords: Sending CDisconnectInd in state 10-case 3.

Verify that if the Control Plane connection is in state 10 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including all mandatory parameters and the parameters corresponding to the received RELEASE COMPLETE IEs.

TP31148 (reference annex A, items A2.1.119 to A2.1.122 combined).

keywords: Sending CDisconnectInd in state 11-case 1.

Verify that if the Control Plane connection is in state 11 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including all mandatory parameters and the parameters corresponding to the received DISCONNECT IEs.

TP31150 (reference annex A, items A2.1.123 to A2.1.126 combined).

keywords: Sending CDisconnectInd in state 11-case 2.

Verify that if the Control Plane connection is in state 11 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including all mandatory parameters and the parameters corresponding to the received RELEASE IEs.

TP31152 (reference annex A, items A2.1.127 to A2.1.130 combined).

keywords: Sending CDisconnectInd in state 11-case 3.

Verify that if the Control Plane connection is in state 11 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including all mandatory parameters and the parameters corresponding to the received RELEASE COMPLETE IEs.

TP31154 (reference ETS 300 325 [1] / subclause 6.3.10, annex B, clauses B.1 & B.2).

keywords: Receiving CDisconnectRsp, case 1.

Verify that if it was a RELEASE COMPLETE ETS 300 102-1 [5] message that caused the CDisconnectInd, the corresponding CDisconnectRsp PUF's response message does not cause any message to be sent by the NAF to the ISDN network.

TP31155 (reference ETS 300 325 [1] / subclause 6.3.10, annex B, clauses B.1 & B.2).

keywords: Receiving CDisconnectRsp.

Verify that if it was a DISCONNECT ETS 300 102-1 [5] message that caused the CDisconnectInd, the corresponding CDisconnectRsp PUF's response message, causes a RELEASE ISDN message to be sent by the NAF to the ISDN network.

TP31156 (reference annex A, items A2.1.131, A2.1.132 combined).

keywords: Sending CProgressInd.

Verify that if on state 1 and on receipt of a PROGRESS ETS 300 102-1 [5] message from the network, the NAF indicates to the PUF that information is available in the B-channel by making available an CProgressInd message including all mandatory parameters and the parameters corresponding to the received PROGRESS IEs.

TP31157 (reference ETS 300 325 [1] / subclauses 6.3.13 & 6.6.15, annex B, clauses B.1 & B.2).

keywords: Sending CStatusInd.

Verify that on receipt of a STATUS ETS 300 102-1 [5] message from the network, containing the Cause IE, the NAF indicates a signalling protocol error to the PUF by making available an CStatusInd message including the NCOID parameter and the CauseToPuf parameter according to the STATUS Cause IE.

### 10.1.2 Class 2 - Overlap sending specific messages

TP3121 (reference annex A, items A2.2.1 to A2.2.3 combined).

keywords: Sending CSetupAckInd Msg.

Verify that if on state 1 and on receipt of a SETUP ACKNOWLEDGE ETS 300 102-1 [5] message from the network, the NAF indicates to the PUF that more establishment information is needed to perform the call in the overlap sending case by making available an CSetupAckInd message including all mandatory parameters and the parameters corresponding to the received SETUP ACKNOWLEDGE IEs.

TP3122 (reference ETS 300 325 [1] / subclauses 6.3.15 & 6.6.7, annex B, clauses B.1 & B.2).

keywords: Receiving CConnectInfoReq Msg.

Verify that if on state 1 and on receipt of a valid CConnectInfoReq message from the PUF, containing a CalledNumber parameter, the NAF sends to the network a correct INFORMATION ETS 300 102-1 [5] message including a Called Party Number IE according to the CalledNumber parameter of the received CConnectInfoReq.

TP3123 (reference annex A, items A2.2.4 to A2.2.6 combined).

keywords: Sending CProceedingInd Msg.

Verify that if on state 1 and on receipt of a CALL PROCEEDING ETS 300 102-1 [5] message from the network, the NAF indicates to the PUF that no more establishment information will be accepted, in the overlap sending case by making available an CProceedingInd message including all mandatory parameters and the parameters corresponding to the received CALL PROCEEDING IEs.

### 10.1.3 Class 3 - User-to-user information transfer

TP3131 (reference annex A, items A2.3.1 to A2.3.2 combined).

keywords: Receiving CUserInformationReq Msg.

Verify that if on state 4 and on receipt of a valid CUserInformationReq message from the PUF, the NAF sends to the network a correct USER INFORMATION ETS 300 102-1 [5] message including all the IEs corresponding to the parameters included in the received CUserInformationReq.

TP3132 (reference annex A, items A2.3.3 to A2.3.4 combined).

keywords: Sending CUserInformationInd Msg.

Verify that on receipt of an USER INFORMATION ETS 300 102-1 [5] message from the network, the NAF presents to the PUF the received user-user information by making available an CUserInformationInd message including all mandatory parameters and the parameters corresponding to the received USER INFORMATION IEs.

TP3133 (reference annex A, items A2.3.5 to A2.3.6 combined).

keywords: Receiving CCongestionControlReq Msg.

Verify that if on state 4 and on receipt of a valid CCongestionControlReq message from the PUF, the NAF sends to the network a correct CONGESTION CONTROL ETS 300 102-1 [5] message including all the IEs corresponding to the parameters included in the received CCongestionControlReq.

TP3134 (reference annex A, items A2.3.7 to A2.3.9 combined).

keywords: Sending CCongestionControlInd Msg.

Verify that on receipt of a CONGESTION CONTROL ETS 300 102-1 [5] message from the network, the NAF presents to the PUF the received user-user information by making available an CUserInformationInd message including all mandatory parameters and the parameters corresponding to the received CONGESTION CONTROL IEs.

### 10.1.4 Class 4 - Adjournment of calls

TP3141 (reference ETS 300 325 [1] / subclause 6.3.21, annex B, clauses B.1 & B.2).

keywords: Receiving CSuspendReq Msg.

Verify that if on state 4 and on receipt of a valid CSuspendReq message from the PUF, the NAF sends to the network a correct SUSPEND ETS 300 102-1 [5] message.

TP3142 (reference annex A, items A2.4.1 to A2.4.2 combined).

keywords: Sending CSuspendCnf Msg - case 1.

Verify that on receipt of a SUSPEND ACKNOWLEDGE ETS 300 102-1 [5] message from the network, the NAF answers the previously received CSuspendReq message from the PUF, by making available an CSuspendCnf message including the parameters corresponding to the received SUSPEND ACKNOWLEDGE IEs and with the CompletionStatus parameter indicating "success".

TP3143 (reference annex A, items A2.4.3 to A2.4.5 combined).

keywords: Sending CSuspendCnf Msg.

Verify that on receipt of a SUSPEND REJECT ETS 300 102-1 [5] message from the network, the NAF answers the previously received CSuspendReq message from the PUF, by making available an CSuspendCnf message including the parameters corresponding to the received SUSPEND REJECT IEs and with the CompletionStatus parameter indicating "operation failed".

TP3144 (reference ETS 300 325 [1] / subclause 6.3.23, annex B, clauses B.1 & B.2).

keywords: Receiving CResumeReq Msg.

Verify that if on state 0 and on receipt of a valid CResumeReq message from the PUF, the NAF sends to the network a correct RESUME ETS 300 102-1 [5] message.

TP3145 (reference annex A, items A2.4.6 to A2.4.7 combined).

keywords: Sending CResumeCnf Msg.

Verify that on receipt of a RESUME ACKNOWLEDGE ETS 300 102-1 [5] message from the network, the NAF answers the previously received CResumeReq message from the PUF, by making available an CResumeCnf message including the parameters corresponding to the received RESUME ACKNOWLEDGE IEs and with the CompletionStatus parameter indicating "success".

TP3146 (reference annex A, items A2.4.8 to A2.4.10 combined).

keywords: Sending CResumeCnf Msg.

Verify that on receipt of a RESUME REJECT ETS 300 102-1 [5] message from the network, the NAF answers the previously received CResumeReq message from the PUF, by making available an CResumeCnf message including the parameters corresponding to the received RESUME REJECT IEs and with the CompletionStatus parameter indicating "operation failed".

TP3147 (reference annex A, items A2.4.11 to A2.4.12 combined).

keywords: Sending CNotifyInd Msg.

Verify that on receipt of a NOTIFY ETS 300 102-1 [5] message from the network indicating a new state for the connection, the NAF informs the PUF by making available an CNotifyInd message including all mandatory parameters and the parameters corresponding to the received NOTIFY IEs.

### 10.1.5 Class 5 - Facility Invocation

TP3151 (reference ETS 300 325 [1] / subclause 6.3.26, annex B, clauses B.1 & B.2).

keywords: Receiving CFacilityReq, NCOID included.

Verify that on receipt of a valid CFacilityReq message containing the NCOID parameter from the PUF, the NAF sends to the network a correct FACILITY ETS 300 102-1 [5] message on the corresponding established connection including the Facility IE according to the Facility parameter of the received CFacilityReq.

TP3152 (reference ETS 300 325 [1] / subclause 6.3.26, annex B, clauses B.1 & B.2).

keywords: Receiving CFacilityReq, NCOID absent.

Verify that on receipt of a valid CFacilityReq message not containing the NCOID parameter from the PUF, the NAF sends to the network a correct FACILITY ETS 300 102-1 [5] message including the Facility IE according to the Facility parameter of the received CFacilityReq.

TP3153 (reference ETS 300 325 [1] / subclause 6.3.27, clause B.1 & B.2).

keywords: Sending CFacilityInd, NCOID present.

Verify that on receipt of a valid FACILITY ETS 300 102-1 [5] message from the network related to an established connection, the NAF presents to the PUF the facility coming from the network by making available a CFacilityInd message including the NCOID parameter and the Facility parameter according to the received Facility IE.

TP3154 (reference ETS 300 325 [1] / subclause 6.3.27, annex B, B.1 & B.2).

keywords: Sending CFacilityInd, NCOID absent.

Verify that on receipt of a valid FACILITY ETS 300 102-1 [5] message from the network not related to an established connection, the NAF presents to the PUF the facility coming from the network by making available a CFacilityInd message not including the NCOID parameter and the Facility parameter according to the received Facility IE.

TP3155 (reference ETS 300 325 [1] / subclauses 6.3.27 & 6.6.24, annex B, clauses B.1 & B.2).

keywords: Sending CFacilityInd, Display parameter.

Verify that on receipt of a FACILITY ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF presents to the PUF the facility coming from the network by making available a CFacilityInd message including a Display parameter according to the FACILITY Display IE.

#### 10.1.6 Class 6 - external equipment handling

TP3161 (reference ETS 300 325 [1] / subclauses 5.3.2.3 & 6.3.28).

keywords: CExtEquipAvailabilityInd, case 1.

Verify that as long as a NCO that specifies an external equipment in its configuration exists and if the state of that external equipment changes to available, the NAF generates a valid CExtEquipAvailabilityInd message including:

- NCOID parameter;
- ExtEquipAvailability with value TRUE.

TP3162 (reference ETS 300 325 [1] / subclauses 5.3.2.3 & 6.3.28).

keywords: CExtEquipAvailabilityInd, case 2.

Verify that as long as a NCO that specifies an external equipment in its configuration exists and if the state of that external equipment changes to unavailable, the NAF generates a valid CExtEquipAvailabilityInd message including:

- NCOID parameter;
- ExtEquipAvailability with value FALSE.

TP3163 (reference ETS 300 325 [1] / subclauses 6.3.1 (see note 2) & 6.3.28).

keywords: CExtEquipAvailabilityInd, case 3.

Verify that when a connection associated to an external equipment is active if the external equipment becomes unavailable the NAF breaks down the connection.

TP3164 (reference ETS 300 325 [1] / subclauses 6.3.1 & 6.3.31).

keywords: CExtEquipOffHookInd.

Verify that the NAF informs the PUF that the handset of the external equipment is off-hooked by making available a CExtEquipOffHookInd containing the NCOID parameter.

TP3165 (reference ETS 300 325 [1] / subclauses 6.3.1 & 6.3.32).

keywords: CExtEquipOnHookInd, case 1.

Verify that the NAF informs the PUF that the handset of the external equipment is on-hooked by making available a CExtEquipOnHookInd containing the NCOID parameter.

TP3166 (reference ETS 300 325 [1] / subclause 6.3.1, see note 1).

keywords: CExtEquipOnHookInd, case 2.

Verify that CExtEquipOnHook may appear in all states except state 0, and that it causes a transition to state 0.

TP3167 (reference ETS 300 325 [1] / subclauses 6.3.1 & 6.3.29).

keywords: CExtEquipBlockDiallingInd.

Verify that the PUF gets the dialling information made by the user on the keypad of the external equipment in the case of block sending in a CExtEquipBlockDiallingInd message containing the NCOID parameter and the ExtEquipBlockDialling containing the complete remote address and/or the remote subaddress.

TP3168 (reference ETS 300 325 [1] / subclauses 6.3.1 & 6.3.30).

keywords: CExtEquipKeyPressedInd.

Verify that the PUF gets the dialling information made by the user on the keypad of the external equipment in the case of overlap sending by receiving a CExtEquipKeyPressedInd message for each key pressed.

## 10.2 Error handling in Control Plane

### 10.2.1 Invalid state for a message errors (inopportune tests)

TP3211 (reference ETS 300 325 [1] / subclause 6.3.1 and subclause 6.8.2.1, table 30).

keywords: Receiving CAlertReq on state 0.

Verify that if the Control Plane connection is on state 0, and on receipt of a CAlertReq message, the NAF reports a Control Plane protocol error, by making available a CStatusInd message including:

- NCOID parameter;
- CauseToPUF parameter with value #98 or #101, and diagnostic field containing the CAlertReq message identifier,

and there is no change of state for the connection.

TP3214 (reference ETS 300 325 [1] / subclause 6.3.1 & subclause 6.8.2.1, table 30).

keywords: Receiving CDisconnectRsp, state 1.

Verify that if the Control Plane connection is on state 1, and on receipt of a CDisconnectRsp message, the NAF reports a Control Plane protocol error, by making available a CStatusInd message including:

- NCOID parameter;
- CauseToPUF parameter with value #98 or #101, and diagnostic field containing the CDisconnectRsp message identifier,

and there is no change of state for the connection.

TP3217 (reference ETS 300 325 [1] / subclause 6.3.1 & subclause 6.8.2.1, table 30).

keywords: Receiving CSuspendReq, state 2.

Verify that if the Control Plane connection is on state 2, and on receipt of a CSuspendReq message, the NAF reports a Control Plane protocol error, by making available a CStatusInd message including:

- NCOID parameter;
- CauseToPUF parameter with value #98 or #101, and diagnostic field containing the CSuspendReq message identifier,

and there is no change of state for the connection.

TP3219 (reference ETS 300 325 [1] / subclause 6.3.1 & subclause 6.8.2.1, table 30).

keywords: Receiving CResumeReq, state 3.

Verify that if the Control Plane connection is on state 3, and on receipt of a CResumeReq message, the NAF reports a Control Plane protocol error, by making available a CStatusInd message including:

- NCOID parameter;
  - CauseToPUF parameter with value #98 or #101, and diagnostic field containing the CResumeReq message identifier,
- and there is no change of state for the connection.

TP32111 (reference ETS 300 325 [1] / subclause 6.3.1 & subclause 6.8.2.1, table 30).

keywords: Receiving CDisconnectRsp, state 4.

Verify that if the Control Plane connection is on state 4, and on receipt of a CDisconnectRsp message, the NAF reports a Control Plane protocol error, by making available a CStatusInd message including:

- NCOID parameter;
  - CauseToPUF parameter with value #98 or #101, and diagnostic field containing the CDisconnectRsp message identifier,
- and there is no change of state for the connection.

## 10.2.2 Mandatory Parameters missing errors

TP3221 (reference ETS 300 325 [1] / subclause 6.8.2.2).

keywords: Mandatory parameter missing on CConnectReq.

Verify that on receipt of CConnectReq message with a mandatory parameter missing, e.g. CalledNumber (if it was not provided during NCO creation), the NAF indicates this error to the PUF by making available a CDisconnectCnf message including the NCOID parameter identifying the connection, and CauseToPuf parameter with value #96 - Mandatory parameter missing.

TP3226 (reference ETS 300 325 [1] / subclause 6.8.2.2, table 30).

keywords: Mandatory parameter missing on CConnectInfoReq.

Verify that on receipt of CConnectInfoReq message with a mandatory parameter missing, the NAF indicates this error to the PUF by making available a CStatusInd with:

- NCOID parameter;
  - CauseToPUF parameter with value #96 - Mandatory parameter missing,
- and does not perform any operation, nor is there a change of state for the connection.

TP32211 (reference ETS 300 325 [1] / subclause 6.8.2.2, table 30).

keywords: Mandatory parameter missing on CFacilityReq.

Verify that on receipt of CFacilityReq message with a mandatory parameter missing, the NAF indicates this error to the PUF by making available a CStatusInd with:

- NCOID parameter;
  - CauseToPUF parameter with value #96 - Mandatory parameter missing,
- and does not perform any operation, nor is there a change of state for the connection.

## 10.2.3 Mandatory Parameters content errors

TP3236 (reference ETS 300 325 [1] / subclause 6.8.2.2, table 30).

keywords: Mandatory parameter content error on CConnectInfoReq.

Verify that on receipt of CConnectInfoReq message with a mandatory parameter content error, the NAF indicates this error to the PUF by making available a CStatusInd with:

- NCOID parameter;
  - CauseToPUF parameter with value #100 - Invalid parameter contents,
- and does not perform any operation, nor is there a change of state for the connection.



TP3237 (reference ETS 300 325 [1] / subclause 6.8.2.2, table 30).

keywords: Mandatory parameter content error on CUserInfoReq.

Verify that on receipt of CUserInfoReq message with a mandatory parameter content error, the NAF indicates this error to the PUF by making available a CStatusInd with:

- NCOID parameter;
  - CauseToPUF parameter with value #100 - Invalid parameter contents,
- and does not perform any operation, nor is there a change of state for the connection.

TP3238 (reference ETS 300 325 [1] / subclause 6.8.2.2, table 30).

keywords: Mandatory parameter content error on CCongestionControlReq.

Verify that on receipt of CCongestionControlReq message with a mandatory parameter content error, the NAF indicates this error to the PUF by making available a CStatusInd with:

- NCOID parameter;
  - CauseToPUF parameter with value #100 - Invalid parameter contents,
- and does not perform any operation, nor there is a change of state for the connection.

TP32311 (reference ETS 300 325 [1] / subclause 6.8.2.2, table 30).

keywords: Mandatory parameter content error on CFacilityReq.

Verify that on receipt of CFacilityReq message with a mandatory parameter content error, the NAF indicates this error to the PUF by making available a CStatusInd with:

- NCOID parameter;
  - CauseToPUF parameter with value #100 - Invalid parameter contents,
- and does not perform any operation, nor there is a change of state for the connection.

#### 10.2.4 Unrecognised parameter errors

TP3241 (reference ETS 300 325 [1] / subclause 6.8.2.2, table 30).

keywords: Unrecognised parameter on CConnectReq.

Verify that on receipt of CConnectReq message with an unrecognised parameter, the NAF indicates this error to the PUF by making available a CDisconnectInd with:

- NCOID parameter;
- CauseToPUF parameter with value #99 - Invalid parameter.

TP3242 (reference ETS 300 325 [1] / subclause 6.8.2.2).

keywords: Unrecognised parameter on CDisconnectReq.

Verify that on receipt of CDisconnectReq message with an unrecognised parameter, the NAF indicates this error to the PUF by making available a CDisconnectCnf message including the NCOID parameter identifying the call.

TP3244 (reference ETS 300 325 [1] / subclause 6.8.2.2, table 30).

keywords: Unrecognised parameter on CConnectRsp.

Verify that on receipt of CConnectRsp message with an unrecognised parameter, the NAF indicates this error to the PUF by making available a CStatusInd with:

- NCOID parameter;
  - CauseToPUF parameter with value #99 - Invalid parameter,
- and does not perform any operation, nor there is a change of state for the connection.

TP3245 (reference ETS 300 325 [1] / subclause 6.8.2.2, table 30).

keywords: Unrecognised parameter on CDisconnectRsp.

Verify that on receipt of CDisconnectRsp message with an unrecognised parameter, the NAF indicates this error to the PUF by making available a CStatusInd with:

- NCOID parameter;
  - CauseToPUF parameter with value #99 - Invalid parameter,
- and does not perform any operation, nor there is a change of state for the connection.

TP3246 (reference ETS 300 325 [1] / subclause 6.8.2.2, table 30).

keywords: Unrecognised parameter on CConnectInfoReq.

Verify that on receipt of CConnectInfoReq message with an unrecognised parameter, the NAF indicates this error to the PUF by making available a CStatusInd with:

- NCOID parameter;
  - CauseToPUF parameter with value #99 - Invalid parameter,
- and does not perform any operation, nor there is a change of state for the connection.

TP3247 (reference ETS 300 325 [1] / subclause 6.8.2.2, table 30).

keywords: Unrecognised parameter on CUserInformationReq.

Verify that on receipt of CUserInformationReq message with an unrecognised parameter, the NAF indicates this error to the PUF by making available a CStatusInd with:

- NCOID parameter;
  - CauseToPUF parameter with value #99 - Invalid parameter,
- and does not perform any operation, nor there is a change of state for the connection.

### 10.2.5 Optional parameters content errors

TP3251 (reference ETS 300 325 [1] / subclause 6.8.2.3, table 30).

keywords: Optional parameter content error on CConnectReq.

Verify that on receipt of CConnectReq message with an optional parameter content error, the NAF processes the message as if the parameter were not present, and then indicates the parameter in error to the PUF by sending a CStatusInd including:

- NCOID parameter;
- CauseToPUF parameter with:
  - Cause value #100 - Invalid parameter contents;
  - Diagnostic field identifying the parameter in error.

TP3252 (reference ETS 300 325 [1] / subclause 6.8.2.3, table 30).

keywords: Optional parameter content error on CDisconnectReq.

Verify that on receipt of CDisconnectReq message with an optional parameter content error, the NAF processes the message as if the parameter were not present, and then indicates the parameter in error to the PUF by sending a CStatusInd including:

- NCOID parameter;
- CauseToPUF parameter with:
  - Cause value #100 - Invalid parameter contents;
  - Diagnostic field identifying the parameter in error.

TP3254 (reference ETS 300 325 [1] / subclause 6.8.2.3, table 30).

keywords: Optional parameter content error on CConnectRsp.

Verify that on receipt of CConnectRsp message with an optional parameter content error, the NAF processes the message as if the parameter were not present, and then indicates the parameter in error to the PUF by sending a CStatusInd including:

- NCOID parameter;
- CauseToPUF parameter with:
  - Cause value #100 - Invalid parameter contents;
  - Diagnostic field identifying the parameter in error.

## 11 User Plane

Test group objective: This test group tests the User Plane for the ISO/IEC 8208 [7] protocol. All messages of the User Plane shall be tested, and all parameters within the messages shall be tested. Where tests have been combined, the original TPs are in annex A and the combined TPs in this clause reference the TPs in the annex. The NAF co-ordination section checks that the NAF can handle NAF co-ordination and subclause 11.4 deals with the checking of the Transparent Message Access (TMA) mechanism. Each of the user causes shall be tested as are some general User Plane error conditions.

## 11.1 User Plane messages, PUF co-ordination

TP412 (reference ETS 300 325 [1] / subclause 6.4.3, annex B, clause B.3).

keywords: U3ConnectReq case 2.

Verify that if the PUF sends a U3ConnectReq message to the NAF in state 1 which contains:

- NCOID;
- CalledDTEAddress,

then in the CALL REQUEST packet sent by the NAF to the network, the CalledDTEAddress supersedes the NCO value.

TP413 (reference ETS 300 325 [1] / subclause 6.4.3, annex B, clause B.3).

keywords: U3ConnectReq case 3.

Verify that if the PUF sends a U3ConnectReq message to the NAF in state 1 which contains:

- NCOID;
- CalledDTEAddressExt;

then in the CALL REQUEST packet sent by the NAF to the network, the CalledDTEAddressExt supersedes the NCO value.

TP414 (reference ETS 300 325 [1] / subclause 6.4.3, annex B, clause B.3).

keywords: U3ConnectReq case 4.

Verify that if the PUF sends a U3ConnectReq message to the NAF in state 1 which contains:

- NCOID;
- CallingDTEAddress,

then in the CALL REQUEST packet sent by the NAF to the network, the CallingDTEAddress supersedes the NCO value.

TP415 (reference ETS 300 325 [1] / subclause 6.4.3, annex B, clause B.3).

keywords: U3ConnectReq case 5.

Verify that if the PUF sends a U3ConnectReq message to the NAF in state 1 which contains:

- NCOID;
- CallingDTEAddressExt,

then in the CALL REQUEST packet sent by the NAF to the network, the CallingDTEAddressExt supersedes the NCO value.

TP416 (reference ETS 300 325 [1] / subclause 6.4.3, annex B, clause B.3).

keywords: U3ConnectReq case 6.

Verify that if the PUF sends a U3ConnectReq message to the NAF in state 1 which contains:

- NCOID;
- ReceiptConfirm = TRUE,

then in the CALL REQUEST packet the D bit set.

TP417 (reference ETS 300 325 [1] / subclause 6.4.3, annex B, clause B.3).

keywords: U3ConnectReq case 7.

Verify that if the PUF sends a U3ConnectReq message to the NAF in state 1 which contains:

- NCOID;
- ExpeditedData = TRUE,

then in the CALL REQUEST packet the ExpeditedData negotiation facility shall have the same value as that of the U3ConnectReq message.

TP419 (reference ETS 300 325 [1] / subclause 6.4.3, annex B, clause B.3).

keywords: U3ConnectReq case 9.

Verify that if the PUF sends a U3ConnectReq message to the NAF in state 1 which contains:

- NCOID;
- UserData,

but no FastSelect field, then in the CALL REQUEST packet the UserData field contains the same information as that of the U3ConnectReq message and shall have a maximum length of 16.

TP4110 (reference ETS 300 325 [1] / subclause 6.4.3, annex B, clause B.3).

keywords: U3ConnectReq case 10.

Verify that if the PUF sends a U3ConnectReq message to the NAF in state 1 which contains:

- NCoid;
- UserData;
- FastSelect,

then in the CALL REQUEST packet the UserData field contains the same information as that of the U3ConnectReq message and shall have a maximum length of 128.

TP4111 (reference ETS 300 325 [1] / subclause 6.4.3, annex B, clause B.3).

keywords: U3ConnectReq case 11.

Verify that if the PUF sends a U3ConnectReq message to the NAF in state 1 which contains:

- NCoid;
- Bcug,

then in the CALL REQUEST packet the Bcug field shall have the same value as that of the U3ConnectReq message.

TP4112 (reference ETS 300 325 [1] / subclause 6.4.3, annex B, clause B.3).

keywords: U3ConnectReq case 12.

Verify that if the PUF sends a U3ConnectReq message to the NAF in state 1 which contains:

- NCoid;
- FastSelect = norestriction,

then in the CALL REQUEST packet the FastSelect field shall have the same value as that of the U3ConnectReq message.

TP4113 (reference annex A, items A3.1.54 - A3.1.55 combined).

keywords: U3ConnectReq case 13.

Verify that if the PUF sends a U3ConnectReq message to the NAF in state 1 which contains:

- NCoid;
- PacketSize;
- WindowSize,

then in the CALL REQUEST packet the PacketSize and WindowSize fields shall have the same values as that of the U3ConnectReq message PacketSize and WindowSize fields and these values shall override any value in the NCO.

TP4115 (reference ETS 300 325 [1] / subclause 6.4.3, annex B, clause B.3).

keywords: U3ConnectReq case 15.

Verify that if the PUF sends a U3ConnectReq message to the NAF in state 1 which contains:

- NCoid;
- FacilityData,

then in the CALL REQUEST packet the FacilityData field shall have the same value as that of the U3ConnectReq message FacilityData field.

TP4116 (reference annex A, items A3.1.56 - A3.1.59 combined).

keywords: U3ConnectReq case 16a.

Verify that if the PUF sends a U3ConnectReq message to the NAF in state 1 which contains:

- NCoid;
- FacilityData;
- Bcug;
- FastSelect;
- CalledAddressExt;
- CallingAddressExt,

then in the CALL REQUEST packet, the parameters of the U3ConnectReq message shall override the FacilityData parameter of the U3ConnectReq message.

TP4120 (reference annex A, items A3.1.60 - A3.1.62 combined).

keywords: U3ConnectInd case 1a.

Verify that if the NAF in state 1 receives an Incoming Call packet from the network, it sends a U3ConnectInd message to the PUF which contains:

- NCOID;
- PacketSize;
- WindowSize.

TP4123 (reference annex A, items A3.1.63 - A3.1.72 combined).

keywords: U3ConnectInd, optional parameters.

Verify that if the NAF in state 1 receives an Incoming Call packet from the network containing all optional parameters. it sends a U3ConnectInd message to the PUF which contains these parameters.

TP4138 (reference annex A, items A3.1.1 - A3.1.11 combined).

keywords: U3ConnectRsp optional parameters.

Verify that if the PUF sends a U3ConnectRsp to the NAF in state 3 which contains:

- NCOID;

and the optional parameters except the responding address fields, then the NAF sends a Call Accepted packet to the network which contains these optional parameters.

TP4142 (reference annex A, items A3.1.12 - A3.1.13 combined).

keywords: U3ConnectRsp, RespondingDTEAddresses.

Verify that if the PUF sends a U3ConnectRsp to the NAF in state 3 which contains:

- NCOID;
- RespondingDTEAddress;
- RespondingDTEAddressExt,

then the NAF sends a Call Accepted packet to the network which contains:

Called DTE-Address field set to the RespondingDTEAddress;

Called DTE Address extension facility set to the RespondingDTEAddressExt.

TP4151 (reference annex A, items A3.1.14- A3.1.16 combined).

keywords: U3ConnectCnf mandatory parameters.

Verify that if the network sends a Call Connected packet to the NAF in state 2, then the NAF sends a U3ConnectCnf message to the PUF which contains all the mandatory parameters.

TP4154 (reference annex A, items A3.1.17 - A3.1.25 combined).

keywords: U3ConnectCnf optional parameters.

Verify that if the network sends a Call Connected packet to the NAF in state 2 which contains optional parameters, then the NAF sends a U3ConnectCnf message to the PUF which contains the optional parameters.

TP4158 (reference annex A, items A3.1.26 - A3.1.27 combined).

keywords: U3ConnectCnf case 1h.

Verify that if the network sends a Call Connected packet to the NAF in state 2 which contains:

a Called address facility and a called address extension facility,

- then the NAF sends a U3ConnectCnf message to the PUF which contains:

- NCOID;
- PacketSize;
- WindowSize;
- RespondingDTEAddress;
- RespondingDTEAddressExt.

TP4165 (reference ETS 300 325 [1] / subclause 6.4.7, annex B, clause B.3, CCITT Recommendation X.25, § 5.2.4).

keywords: U3DisconnectReq case 1a.

Verify that if the PUF sends a U3DisconnectReq message to the NAF in state 4, the NAF sends a Clear Request packet to the network containing:

- Clearing Cause set to "disconnection normal" condition of X213.

TP4166 (reference annex A, items A3.1.28 - A3.1.29 combined).

keywords: U3DisconnectReq case 1b.

Verify that if the PUF sends a U3DisconnectReq message to the NAF in state 4 containing:

- RespondingDTEAddress;
- RespondingDTEAddressExt;

then the NAF sends a Clear Request packet to the network containing:

- address block containing called DTE address information;
- Called Address Extension Facility.

TP4168 (reference ETS 300 325 [1] / subclause 6.4.7, annex B, clause B.3, CCITT Recommendation X.25, § 5.2.4).

keywords: U3DisconnectReq case 1c.

Verify that if the PUF sends a U3DisconnectReq message to the NAF in state 4 containing:

- X25Cause;

then the NAF sends a Clear Request packet to the network containing:

- Clearing Cause set to the X25Cause.

TP4169 (reference annex A, items A3.1.30 - A3.1.32 combined).

keywords: U3DisconnectReq case 1d.

Verify that if the PUF sends a U3DisconnectReq message to the NAF in state 4 containing optional parameters, then the NAF sends a Clear Request packet to the network containing the optional information.

TP4173 (reference annex A, items A3.1.33 - A.3.1.40 combined).

keywords: U3DisconnectInd, including optional parameters.

Verify that if the network sends a DCE Clear Indicate packet containing optional parameters to the NAF, the NAF in state 4 sends a U3DisconnectInd message to the PUF containing the optional parameters.

TP4181 (reference annex A, items A3.1.41 - A3.1.44 combined).

keywords: U3DataReq case 1a.

Verify that if the PUF sends a U3DataReq message to the NAF in state 4, the NAF sends a DTE data packet to the network containing user data from the data buffer, the D, Q and M bits mapped to the Bit\_DQM parameter.

TP4185 (reference ETS 300 325 [1] / subclauses 6.4.9 & 6.6.4 & annex B, clause B.3).

keywords: U3DataReq case 2.

Verify that if the PUF sends a U3DataReq message to the NAF in state 4 with invalid use of the More bit with the Qualifier bit, then this results in the user connection being reset.

TP4186 (reference annex A, items A3.1.45 - A3.1.47 combined).

keywords: U3DataInd case 1a.

Verify that if the network sends a DCE data packet to the NAF in state 4, then the NAF sends a U3DataInd packet to the PUF containing User data parameter and the Bit\_DQM parameter.

TP4189 (reference ETS 300 325 [1] / subclauses 6.4.10 & 6.6.4, annex B, clause B.3).

keywords: U3DataInd case 2.

Verify that if the network sends a DCE data packet to the NAF in state 4 with invalid use of the More bit and Qualifier bit, then this shall result in the user connection being reset.

TP4190 (reference ETS 300 325 [1] / subclause 6.4.11, annex B, clause B.3).

keywords: U3ExpeditedDataReq case 1.

Verify that if the PUF sends a U3ExpeditedDataReq message to the NAF in state 4, the data shall not be constrained by the flow control mechanism used to control U3DataReq messages.

TP4191 (reference annex A, items A3.1.48 - A3.1.49 combined).

keywords: U3ExpeditedDataInd case 1a.

Verify that if the network sends expedited data to the NAF in state 4, the data shall be passed to the PUF in a U3ExpeditedDataInd message that contains NCOID parameter and UserData parameter.

TP4193 (reference ETS 300 325 [1] / subclause 6.4.13, annex B, clause B.3, CCITT Recommendation X.25, § 5.4.3).

keywords: U3ResetReq case 1.

Verify that if the PUF sends a U3ResetReq message to the NAF in state 4, the NAF sends a Reset Request packet to the network containing:

- Resetting cause = X25Cause or X213Cause or DTE originated.

TP4194 (reference annex A, items A3.1.50 - A3.1.53 combined).

keywords: U3ResetInd all parameters except X.213 cause.

Verify that if the Network sends a Reset indication packet containing the X25Cause and the Diagnostic code to the NAF in state 4, the NAF sends a U3ResetInd to the PUF containing the all parameters except the X.213 cause.

TP4198 (reference ETS 300 325 [1] / subclause 6.4.15, annex B, clause B.3, ISO/IEC 8878, table 7).

keywords: U3ResetRsp case 1.

Verify that if the PUF sends a U3ResetRsp message to the NAF in state 6, then the NAF sends a Reset Confirm packet to the network.

TP4199 (reference ETS 300 325 [1] / subclause 6.4.16 & annex B, clause B.3, ISO/IEC 8878, table 7).

keywords: U3ResetCnf case 1.

Verify that if the PUF sends a U3ResetCnf message to the NAF in state 5, then the NAF sends a Reset Confirm packet to the network.

TP41100 (reference ETS 300 325 [1] / subclause 6.4.17 and annex B, clause B.3, ISO/IEC 8878, subclause 9.2.1).

keywords: U3DataAcknowledgeReq case 1.

Verify that if the PUF sends a U3DataAcknowledgeReq message to the NAF in state 4, then the NAF sends a DTE Data, Receive ready or Receive not ready packet to the network, with P(R) set to acknowledge received data.

TP41101 (reference ETS 300 325 [1] / subclause 6.4.18, annex B, clause B.3).

keywords: U3DataAcknowledgeInd case 1.

Verify that if the PUF sends a U3DataReq message with the ReceiptConfirm parameter requesting confirmation of data reception to the NAF in state 4, then the NAF sends a U3DataAcknowledgeInd containing:

- NCOID.

TP41102 (reference ETS 300 325 [1] / subclause 6.4.19, annex B, clause B.3).

keywords: U3ReadyToReceiveReq case 1a.

Verify that if the PUF sends a U3ReadytoRecieveReq message to the NAF in state 4 containing:

- NCOID;

- ReadyFlag = TRUE,

then the NAF can transfer data to the PUF.

TP41103 (reference ETS 300 325 [1] / subclause 6.4.19, annex B, clause B.3).

keywords: U3ReadyToReceiveReq case 1b.

Verify that if while the NAF is transferring data to the PUF, the PUF sends a U3ReadytoRecieveReq message to the NAF in state 4 containing:

- NCOID;

- ReadyFlag = FALSE,

then the NAF sends no more incoming data to the PUF.

TP41104 (reference ETS 300 325 [1] / subclause 6.4.20, annex B, clause B.3).

keywords: U3ReadyToReceiveInd case 1.

Verify that when the NAF is ready to receive data for transmission on a user connection in state 4, it sends a U3ReadyToReceiveInd to the PUF containing:

- NCOID;

- ReadyFlag = TRUE.

TP41105 (reference ETS 300 325 [1] / subclause 6.4.20, annex B, clause B.3).

keywords: U3ReadyToReceiveInd case 2.

Verify that when the NAF cannot receive data for transmission on a user connection in state 4, it sends a U3ReadyToReceiveInd to the PUF containing:

- NCOID;

- ReadyFlag = FALSE.

## 11.2 User Plane messages, NAF co-ordination

TP421 (reference ETS 300 325 [1] / figure 8).

keywords: Outgoing call setup.

Verify that when the PUF sends a U3ConnectReq, the NAF sets up both the ISDN call and the X.25 call.

TP424 (reference ETS 300 325 [1] / annex D, clause D.2, ISO/IEC 9574, subclause 2.3.2.3).

keywords: Call disconnect case 1.

Verify that when a B-channel is disconnected, the NAF sends a U3DisconnectInd message to the PUF.

TP425 (reference ETS 300 325 [1] / annex D, clause D.2, ISO/IEC 9574, subclause 2.3.2.3).

keywords: Call disconnect case 2a.

Verify that when the PUF sends a U3DisconnectReq to the NAF, the NAF releases the X.25 call.

TP426 (reference ETS 300 325 [1] / annex D, clause D.2, ISO/IEC 9574, subclause 2.3.2.3).

keywords: Call disconnect case 2b.

Verify that when the PUF sends a U3DisconnectReq to the NAF, the NAF releases the ISDN call.

TP427 (reference ETS 300 325 [1] / subclause 5.2.4).

keywords: NAF co-ordination and PUF co-ordination on 2 B-channels simultaneously.

Verify that the NAF allows NAF co-ordination and PUF co-ordination to operate simultaneously.



## 11.3 NMA Messages

### 11.3.1 Error Handling in NMA User Plane

TP43111 (reference ETS 300 325 [1] / subclauses 5.8.3 and 6.6.19).

keywords: NAF unavailable, User Plane.

Verify that if on arrival of a User Plane message the NAF is not available, it indicates an error to the PUF by making available an AErrorInd message including the CompletionStatus parameter with subfields coded as:

- ErrorSpecific #255 NAFnotAvailable;
- ErrorSpecificInformation - not present.

TP43121 (reference ETS 300 325 [1] / subclauses 5.8.3 & 6.6.19).

keywords: Message type error, unknown message.

Verify that if instead of an expected User Plane message the NAF gets a message with unknown type, it indicates an error to the PUF, by making available an AErrorInd message including the CompletionStatus parameter with subfields coded as:

- ErrorSpecific - #95 UndefinedMSgType;
- ErrorSpecificInformation - MessageType.

TP43122 (reference ETS 300 325 [1] / subclause 6.8.4.1).

keywords: Invalid use of Receipt Confirmation service.

Verify that on detecting invalid use of the Receipt Confirmation Service, the NAF sends the PUF a U3DisconnectInd.

TP43123 (reference ETS 300 325 [1] / subclause 6.8.4.2).

keywords: Invalid Use of Confirmation request on U3DataReq.

Verify that if the PUF makes invalid use of the Confirmation Request on U3DataReq, then the NAF sends a U3DisconnectInd to the PUF.

TP43124 (reference ETS 300 325 [1] / subclause 6.8.4.3).

keywords: Invalid length of U3DataReq UserData parameter.

Verify that if the PUF sends a U3DataReq message with an invalid length for the UserData parameter, then the NAF sends a U3DisconnectInd to the PUF.

TP43125 (reference ETS 300 325 [1] / subclause 6.8.4.4).

keywords: Invalid use of Expedited Data.

Verify that if the PUF sends a U3ExpeditedDataReq message with an invalid use of expedited data, then the NAF sends a U3DisconnectInd to the PUF.

TP43126 (reference ETS 300 325 [1] / subclause 6.8.4.5).

keywords: Invalid issuing of messages while in Reset state.

Verify that if the PUF issues messages invalidly while in the Reset state, then the NAF sends a U3DisconnectInd to the PUF.

TP43127 (reference ETS 300 325 [1] / subclause 6.8.4.6).

keywords: Association of more and qualifier bits.

Verify that if the PUF makes invalid use of the More and Qualifier bits on subsequent U3DataReq messages, then the NAF sends a U3ResetInd to the PUF.

TP43128 (reference ETS 300 325 [1] / subclause 6.8.4.7).

keywords: Unrecognised Parameter.

Verify that if the PUF sends a U3DisconnectReq with an unrecognised parameter, then the NAF sends a U3DisconnectInd to the PUF and disconnects the virtual circuit.

TP43129 (reference ETS 300 325 [1] / subclause 6.8.4.7).

keywords: Optional Parameter Content Error.

Verify that if the PUF sends a U3ConnectReq with an optional parameter content error, then the NAF sends a U3DisconnectInd to the PUF.

### 11.3.1.1 User Plane causes

TP43131 (reference ETS 300 325 [1] / subclause 6.8.9, ISO/IEC 8878 (1987), table 10).

keywords: UPlanecause: Undefined.

Verify that if the network sends an X.25 clearing cause of 220(dec), then the NAF sends a U3DisconnectInd containing:

- X213Cause "Undefined".

TP43132 (reference ETS 300 325 [1] / subclause 6.8.9, ISO/IEC 8878 (1987), table 10).

keywords: UPlanecause: DiscPerm.

Verify that if the network sends an X.25 clearing cause of 226(dec), then the NAF sends a U3DisconnectInd containing:

- X213Cause "DiscPerm".

TP43133 (reference ETS 300 325 [1] / subclause 6.8.9, ISO/IEC 8878 (1987), table 10).

keywords: UPlanecause: DiscTrans.

Verify that if the network sends an X.25 clearing cause 225(dec), the NAF sends a U3DisconnectInd containing:

- X213Cause "DiscTrans".

TP43134 (reference ETS 300 325 [1] / subclause 6.8.9, ISO/IEC 8878 (1987), table 10).

keywords: UPlanecause: NSAPunknown.

Verify that if X.25 clearing cause 232(dec), the NAF sends a U3DisconnectInd containing:

- X213Cause "NSAPunknown".

TP43135 (reference ETS 300 325 [1] / subclause 6.8.9, ISO/IEC 8878 (1987), table 10).

keywords: UPlanecause: NSAPunreachableTrans.

Verify that if the network sends an X.25 clearing cause 231(dec), the NAF sends a U3DisconnectInd containing:

- X213Cause "NSAPunreachableTrans".

TP43136 (reference ETS 300 325 [1] / subclause 6.8.9, ISO/IEC 8878 (1987), table 10).

keywords: UPlanecause: NSAPunreachablePerm.

Verify that if the network sends an X.25 clearing cause 221(dec), the NAF sends a U3DisconnectInd containing:

- X213reason "NSAPunreachablePerm".

TP43137 (reference ETS 300 325 [1] / subclause 6.8.9, ISO/IEC 8878 (1987), table 10).

keywords: UPlanecause: QOSnotavailPerm.

Verify that if the network sends an X.25 clearing cause 230(dec), the NAF sends a U3DisconnectInd containing:

- X213reason "QOSnotavailPerm".

TP43138 (reference ETS 300 325 [1] / subclause 6.8.9, ISO/IEC 8878 (1987), table 10).  
keywords: UPlanecause: QOSnotavailTrans.  
Verify that if the network sends an X.25 clearing cause 229(dec), the NAF sends a U3DisconnectInd containing:  
- X213Cause "QOSnotavailTrans".

TP43139 (reference ETS 300 325 [1] / subclause 6.8.9, ISO/IEC 8878 (1987), table 10).  
keywords: UPlanecause: NoReasonPerm.  
Verify that if the network sends an X.25 clearing cause 228(dec), the NAF sends a U3DisconnectInd containing:  
- X213Cause "NoReasonPerm".

TP431310 (reference ETS 300 325 [1] / subclause 6.8.9, ISO/IEC 8878 (1987), table 10).  
keywords: UPlanecause: NoReasonTrans.  
Verify that if the network sends an X.25 clearing cause 227(dec), the NAF sends a U3DisconnectInd containing:  
- X213Cause "NoReasonTrans".

TP431311 (reference ETS 300 325 [1] / subclause 6.8.9, ISO/IEC 8878 (1987), table 10).  
keywords: UPlanecause: DiscNorm.  
Verify that if the network sends an X.25 clearing cause 241(dec), the NAF sends a U3DisconnectInd containing:  
- X213reason "DiscNorm".

TP431312 (reference ETS 300 325 [1] / subclause 6.8.9, ISO/IEC 8878 (1987), table 10).  
keywords: UPlanecause: DiscAbnorm.  
Verify that if the network sends an X.25 clearing cause 242(dec), the NAF sends a U3DisconnectInd containing:  
- X213Cause "DiscAbnorm".

TP431313 (reference ETS 300 325 [1] / subclause 6.8.9, ISO/IEC 8878 (1987), table A.3).  
keywords: UPlanecause: ConRejectPerm.  
Verify that if the network sends an X.25 clearing cause 245(dec), the NAF sends a U3DisconnectInd containing:  
- X213reason "ConRejectPerm".

TP431314 (reference ETS 300 325 [1] / subclause 6.8.9, ISO/IEC 8878 (1987), table A.3).  
keywords: UPlanecause: ConRejectTrans.  
Verify that if the network sends an X.25 clearing cause 244(dec), the NAF sends a U3DisconnectInd containing:  
- X213Cause "ConRejectTrans".

TP431315 (reference ETS 300 325 [1] / subclause 6.8.9, ISO/IEC 8878 (1987), table A.3).  
keywords: UPlanecause: ConRejectUserData.  
Verify that if the network sends an X.25 clearing cause 248(dec), the NAF sends a U3DisconnectInd containing:  
- X213reason "ConRejectUserData".

#### 11.4 TMA messages

TP441 (reference ETS 300 325 [1] / subclause 6.4.22).  
keywords: U1DataReq case1a.  
Verify that when the NAF is operating in TMA mode, and it receives a U1DataReq from the PUF and there is data in the data buffer (not as a parameter of the message), then the transparent data is sent on the B-channel.

TP442 (reference ETS 300 325 [1] / subclause 6.4.22).

keywords: U1DataReq case1b.

Verify that when the NAF is operating in TMA mode, and it receives a U1DataReq from the PUF, then the NAF transmits data and when no more data is available, the NAF sends the default octet provided in the Attribute Set used for this connection.

TP443 (reference ETS 300 325 [1] / subclause 6.4.23).

keywords: U1DataInd.

Verify that the NAF indicates received transparent data on the B-channel by sending a U1DataInd message to the PUF which contains:

- NCoid.

### 11.4.1 Error handling in the TMA User Plane

TP4412 (reference ETS 300 325 [1] / subclauses 6.4.24 & 6.8.5.1).

keywords: TMA Error Mandatory parameter missing case 1b.

Verify that if an error occurs during TMA i.e. mandatory parameter missing, the NAF sends a U1ErrorInd message to the PUF containing:

- NCoid;
- CompletionStatus = missing parameter.

TP4413 (reference ETS 300 325 [1] / subclauses 6.4.24 & 6.8.5.2).

keywords: TMA Error Mandatory parameter content error length.

Verify that if the PUF sends a U1dataReq with NCoid parameter length incorrect, the NAF sends a U1ErrorInd with:

- cause =InvalidParameterLength.

TP4414 (reference ETS 300 325 [1] / subclauses 6.4.24 & 6.8.5.2).

keywords: TMA Error NCoid invalid.

Verify that if the PUF sends a U1dataReq with an invalid NCoid, the NAF sends a U1ErrorInd with:

- cause = InvalidNCoid.

TP4415 (reference ETS 300 325 [1] / subclauses 6.4.24 & 6.8.5.3).

keywords: TMA Error Unrecognised parameter.

Verify that if the PUF sends a U1dataReq with an unrecognised parameter, the NAF sends a U1ErrorInd with:

- CompletionStatus =InvalidParameter.

## 12 Untestable

TP2217 (reference ETS 300 325 [1] / subclause 6.7.1).

keywords: Selection Criteria, 1 NCO, 1 criterion not provided by the network and provided by the NCO.

Verify that, if 1 NCO exists containing a NCOType encoded as C/U3, a CDirection encoded as incoming, a CalledNumber and a HLC, the NAF, on receiving a SETUP ETS 300 102-1 [5] message from the network, containing the same CalledNumber and no HLC, does not send a CConnectInd message on this NCO.

NOTE: This TP is not in the ATS because there is an ambiguity about this conformance requirement in ETS 300 325 [1].

## **Annex A (normative): Test Purposes to be combined**

### **A.1 Administration Plane messages**

None.

### **A.2 Control Plane messages and mapping to ETS 300 102-1 messages**

#### **A.2.1 Class 1 - Connection establishment and connection breakdown**

A2.1.1 (reference ETS 300 325 [1] / subclauses 6.3.2 & 6.6.30, annex B, clauses B.1& B.2).

keywords: Receiving CAAlertReq, Facility parameter.

Verify that if the Control Plane Connection is in state 2, and after receiving from the PUF a valid CAAlertReq message including at least one Facility parameter, the NAF sends to the network a correct ALERTING ETS 300 102-1 [5] message including one or more Facility IEs according to the Facility parameters included in the received CAAlertReq.

A2.1.2 (reference ETS 300 325 [1] / subclauses 6.3.2 & 6.6.66, annex B, clauses B1& B.2).

keywords: Receiving CAAlertReq, UserToUserInfo parameter.

Verify that if the Control Plane Connection is in state 2, and after receiving from the PUF a valid CAAlertReq message including the UserToUserInfo parameter, the NAF sends to the network a correct ALERTING ETS 300 102-1 [5] message including User-user IE according to the UserToUserInfo parameter contained in the received CAAlertReq.

A2.1.3 (reference ETS 300 325 [1] / subclauses 6.3.3 & 6.6.17, annex B, clauses B.1& B.2).

keywords: Sending CAAlertInd, ChannelIdentification parameter.

Verify that if the Control Plane connection is on state 1, then on receipt from the network of an ALERTING ETS 300 102-1 [5] message including the Channel identification IE, the NAF sends a CAAlertInd message including the NCOID parameter and the ChannelIdentification parameter according to the ALERTING Channel identification IE.

A2.1.4 (reference ETS 300 325 [1] / subclauses 6.3.3 & 6.6.30, annex B, clauses B.1& B.2).

keywords: Sending CAAlertInd, Facility parameter.

Verify that if the Control Plane connection is on state 1, then on receipt from the network of an ALERTING ETS 300 102-1 [5] message including at least one Facility IE, the NAF sends a CAAlertInd message including the NCOID parameter and one or more Facility parameters according to the ALERTING Facility IEs.

A2.1.5 (reference ETS 300 325 [1] / subclauses 6.3.3 & 6.6.24, annex B, clauses B.1& B.2).

keywords: Sending CAAlertInd, Display parameter.

Verify that if the Control Plane connection is on state 1, then on receipt from the network of an ALERTING ETS 300 102-1 [5] message including the Display IE, the NAF sends a CAAlertInd message including the NCOID parameter and the Display parameter according to the ALERTING Display IE.

A2.1.6 (reference ETS 300 325 [1] / subclauses 6.3.3 & 6.6.66, annex B, clauses B.1& B.2).

keywords: Sending CAAlertInd, UserToUserInfo parameter.

Verify that if the Control Plane connection is on state 1, then on receipt from the network of an ALERTING ETS 300 102-1 [5] message including the User-user IE, the NAF sends a CAAlertInd message including the NCOID parameter and the UserToUserInfo parameter according to the ALERTING User-user IE.

A2.1.7 (reference ETS 300 325 [1] / subclauses 6.3.4 & 6.6.17, annex B, clauses B.1& B.2).

keywords: Receiving CConnectReq, ChannelIdentification parameter.

Verify that if on state 0 and on receipt of a valid CConnectReq message from the PUF, containing the ChannelIdentification parameter, the NAF sends to the network a correct SETUP ETS 300 10261 [5] message including the Channel Identification IE according to the ChannelIdentification parameter of the CConnectReq.

A2.1.8 (reference ETS 300 325 [1] / subclauses 6.3.4 & 6.6.11, annex B, clauses B.1& B.2).

keywords: Receiving CConnectReq, CallingNumber parameter.

Verify that if on state 0 and on receipt of a valid CConnectReq message from the PUF, containing the CallingNumber parameter, the NAF sends to the network a correct SETUP ETS 300 102-1 [5] message including the Calling Party Number IE according to the CallingNumber parameter of the CConnectReq.

A2.1.9 (reference ETS 300 325 [1] / subclauses 6.3.4 & 6.6.12, annex B, clauses B.1& B.2).

keywords: Receiving CConnectReq, CallingSubaddress parameter.

Verify that if on state 0 and on receipt of a valid CConnectReq message from the PUF, containing the CallingSubaddress parameter, the NAF sends to the network a correct SETUP ETS 300 102-1 [5] message including the Calling Party Subaddress IE according to the CallingSubaddress parameter of the CConnectReq.

A2.1.10 (reference ETS 300 325 [1] / subclauses 6.3.4 & 6.6.7, annex B, clauses B.1& B.2).

keywords: Receiving CConnectReq, CalledNumber parameter.

Verify that if on state 0 and on receipt of a valid CConnectReq message from the PUF, containing the CalledNumber parameter, the NAF sends to the network a correct SETUP ETS 300 102-1 [5] message including the Called Party Number IE according to the CalledNumber parameter of the CConnectReq.

A2.1.11 (reference ETS 300 325 [1] / subclauses 6.3.4 & 6.6.8, annex B, clauses B.1 & B.2).

keywords: Receiving CConnectReq, CalledSubaddress parameter.

Verify that if on state 0 and on receipt of a valid CConnectReq message from the PUF, containing the CalledSubaddress parameter, the NAF sends to the network a correct SETUP ETS 300 102-1 [5] message including the Called Party Subaddress IE according to the CalledSubaddress parameter of the CConnectReq.

A2.1.12 (reference ETS 300 325 [1] / subclauses 6.3.4 & 6.6.3, annex B, clauses B.1& B.2).

keywords: Receiving CConnectReq, BearerCap parameter.

Verify that if on state 0 and on receipt of a valid CConnectReq message from the PUF, containing the BearerCap parameter, the NAF sends to the network a correct SETUP ETS 300 102-1 [5] message including the Bearer Capability IE according to the BearerCap parameter of the CConnectReq.

A2.1.13 (reference ETS 300 325 [1] / subclauses 6.3.4 & 6.6.46, annex B, clauses B.1 & B.2).

keywords: Receiving CConnectReq, LLC parameter.

Verify that if on state 0 and on receipt of a valid CConnectReq message from the PUF, containing the LLC parameter, the NAF sends to the network a correct SETUP ETS 300 102-1 [5] message including the Low Layer Compatibility IE according to the LLC parameter of the CConnectReq.

A2.1.14 (reference ETS 300 325 [1] / subclauses 6.3.4 & 6.6.34, annex B, clauses B.1 & B.2).

keywords: Receiving CConnectReq, HLC parameter.

Verify that if on state 0 and on receipt of a valid CConnectReq message from the PUF, containing the HLC parameter, the NAF sends to the network a correct SETUP ETS 300 102-1 [5] message including the High Layer Compatibility IE according to the HLC parameter of the CConnectReq.

A2.1.15 (reference ETS 300 325 [1] / subclauses 6.3.4 & 6.6.37, annex B, clauses B.1 & B.2).

keywords: Receiving CConnectReq, Keypad parameter.

Verify that if on state 0 and on receipt of a valid CConnectReq message from the PUF, containing the Keypad parameter, the NAF sends to the network a correct SETUP ETS 300 102-1 [5] message including the Keypad Facility IE according to the Keypad parameter of the CConnectReq.

A2.1.16 (reference ETS 300 325 [1] / subclauses 6.3.4 & 6.6.30, annex B, clauses B.1 & B.2).

keywords: Receiving CConnectReq, Facility parameter.

Verify that if on state 0 and on receipt of a valid CConnectReq message from the PUF, containing the at least one Facility parameter, the NAF sends to the network a correct SETUP ETS 300 102-1 [5] message including one or more Facility IEs according to the Facility parameters of the CConnectReq.

A2.1.17 (reference ETS 300 325 [1] / subclauses 6.3.4 & 6.6.66, annex B, clauses B.1 & B.2).

keywords: Receiving CConnectReq, UserToUserInfo parameter.

Verify that if on state 0 and on receipt of a valid CConnectReq message from the PUF, containing the UserToUserInfo parameter, the NAF sends to the network a correct SETUP ETS 300 102-1 [5] message including the User-user IE according to the UserToUserInfo parameter of the CConnectReq.

A2.1.18 (reference ETS 300 325 [1] / subclauses 6.3.5 & 6.6.17, annex B, clauses B.1 & B.2).

keywords: Sending CConnectInd, ChannelIdentification parameter.

Verify that if on state 0 and on receipt of a valid SETUP ETS 300 102-1 [5] message from the network, containing the Channel identification IE, the NAF indicates the incoming call to all appropriate PUFs by making available a CConnectInd message including the NCOID parameter and the ChannelIdentification parameter according to the Channel identification IE of the SETUP.

A2.1.19 (reference ETS 300 325 [1] / subclauses 6.3.5 & 6.6.11, annex B, clauses B.1 & B.2).

keywords: Sending CConnectInd, CallingNumber parameter.

Verify that if on state 0 and on receipt of a valid SETUP ETS 300 102-1 [5] message from the network, containing the Calling party number IE, the NAF indicates the incoming call to all appropriate PUFs by making available a CConnectInd message including the NCOID parameter and the CallingNumber parameter according to the Calling party number IE of the SETUP.

A2.1.20 (reference ETS 300 325 [1] / subclauses 6.3.5 & 6.6.12, annex B, clauses B.1 & B.2).

keywords: Sending CConnectInd, CallingSubaddress parameter.

Verify that if on state 0 and on receipt of a valid SETUP ETS 300 102-1 [5] message from the network, containing the Calling party subaddress IE, the NAF indicates the incoming call to all appropriate PUFs by making available a CConnectInd message including the NCOID parameter and the CallingSubaddress parameter according to the Calling party subaddress IE of the SETUP.

A2.1.21 (reference ETS 300 325 [1] / subclauses 6.3.5 & 6.6.7, annex B, clauses B.1 & B.2).

keywords: Sending CConnectInd, CalledNumber parameter.

Verify that if on state 0 and on receipt of a valid SETUP ETS 300 102-1 [5] message from the network, containing the Called party number IE, the NAF indicates the incoming call to all appropriate PUFs by making available a CConnectInd message including the NCOID parameter and the CalledNumber parameter according to the Called party number IE of the SETUP.

A2.1.22 (reference ETS 300 325 [1] / subclauses 6.3.5 & 6.6.8, annex B, clauses B.1 & B.2).

keywords: Sending CConnectInd, CalledSubaddress parameter.

Verify that if on state 0 and on receipt of a valid SETUP ETS 300 102-1 [5] message from the network, containing the Called party subaddress IE, the NAF indicates the incoming call to all appropriate PUFs by making available a CConnectInd message including the NCOID parameter and the CalledSubaddress parameter according to the Called party subaddress IE of the SETUP.

A2.1.23 (reference ETS 300 325 [1] / subclauses 6.3.5 & 6.6.3, annex B, clauses B.1 & B.2).

keywords: Sending CConnectInd, BearerCap parameter.

Verify that if on state 0 and on receipt of a valid SETUP ETS 300 102-1 [5] message from the network, containing the Bearer capability IE, the NAF indicates the incoming call to all appropriate PUFs by making available a CConnectInd message including the NCOID parameter and the BearerCap parameter according to the Bearer capability IE of the SETUP.

A2.1.24 (reference ETS 300 325 [1] / subclauses 6.3.5 & 6.6.46, annex B, clauses B.1 & B.2).

keywords: Sending CConnectInd, LLC parameter.

Verify that if on state 0 and on receipt of a valid SETUP ETS 300 102-1 [5] message from the network, containing the Low Layer Compatibility IE, the NAF indicates the incoming call to all appropriate PUFs by making available a CConnectInd message including the NCOID parameter and the LLC parameter according to the Low Layer Compatibility IE of the SETUP.

A2.1.25 (reference ETS 300 325 [1] / subclauses 6.3.5 & 6.6.34, annex B, clauses B.1 & B.2).

keywords: Sending CConnectInd, HLC parameter.

Verify that if on state 0 and on receipt of a valid SETUP ETS 300 102-1 [5] message from the network, containing the High Layer Compatibility IE, the NAF indicates the incoming call to all appropriate PUFs by making available a CConnectInd message including the NCOID parameter and the HLC parameter according to the High Layer Compatibility IE of the SETUP.

A2.1.26 (reference ETS 300 325 [1] / subclauses 6.3.5 & 6.6.23, annex B, clauses B.1 & B.2).

keywords: Sending CConnectInd, DateTime parameter.

Verify that if on state 0 and on receipt of a valid SETUP ETS 300 102-1 [5] message from the network, containing the Date/time IE, the NAF indicates the incoming call to all appropriate PUFs by making available a CConnectInd message including the NCOID parameter and the DateTime parameter according to the Date/time IE of the SETUP.

A2.1.27 (reference ETS 300 325 [1] / subclauses 6.3.5 & 6.6.30, annex B, clauses B.1 & B.2).

keywords: Sending CConnectInd, Facility parameter.

Verify that if on state 0 and on receipt of a valid SETUP ETS 300 102-1 [5] message from the network, containing at least one Facility parameter, the NAF indicates the incoming call to all appropriate PUFs by making available a CConnectInd message including the NCOID parameter and one or more Facility parameters according to the Facility IEs of the SETUP.

A2.1.28 (reference ETS 300 325 [1] / subclauses 6.3.5 & 6.6.24, annex B, clauses B.1 & B.2).

keywords: Sending CConnectInd, Display parameter.

Verify that if on state 0 and on receipt of a valid SETUP ETS 300 102-1 [5] message from the network, containing the Display IE, the NAF indicates the incoming call to all appropriate PUFs by making available a CConnectInd message including the NCOID parameter and the Display parameter according to the Display IE of the SETUP.

A2.1.29 (reference ETS 300 325 [1] / subclauses 6.3.5 & 6.6.66, annex B, clauses B.1 & B.2).

keywords: Sending CConnectInd, UserToUserInfo parameter.

Verify that if on state 0 and on receipt of a valid SETUP ETS 300 102-1 [5] message from the network, containing the User-user IE, the NAF indicates the incoming call to all appropriate PUFs by making available a CConnectInd message including the NCOID parameter and the UserToUserInfo parameter according to the User-user IE of the SETUP.

A2.1.30 (reference ETS 300 325 [1] / subclauses 6.3.6 & 6.6.17, annex B, clauses B.1 & B.2).

keywords: Receiving CConnectRsp state 2, ChannelIdentification parameter.

Verify that if on state 2 and on receipt of a valid CConnectRsp message from the PUF, containing the ChannelIdentification parameter, the NAF sends to the network a correct CONNECT ETS 300 102-1 [5] message including a Channel Identification IE according to the ChannelIdentification parameter of the CConnectRsp.



A2.1.31 (reference ETS 300 325 [1] / subclauses 6.3.6 & 6.6.46, annex B, clauses B.1 & B.2).

keywords: Receiving CConnectRsp state 2, LLC parameter.

Verify that if on state 2 and on receipt of a valid CConnectRsp message from the PUF, containing the LLC parameter, the NAF sends to the network a correct CONNECT ETS 300 102-1 [5] message including a Low Layer Compatibility IE according to the LLC parameter of the CConnectRsp.

A2.1.32 (reference ETS 300 325 [1] / subclauses 6.3.6 & 6.6.30, annex B, clauses B.1 & B.2).

keywords: Receiving CConnectRsp state 2, Facility parameter.

Verify that if on state 2 and on receipt of a valid CConnectRsp message from the PUF, containing at least one Facility parameter, the NAF sends to the network a correct CONNECT ETS 300 102-1 [5] message including one or more Facility IEs according to the Facility parameters of the CConnectRsp.

A2.1.33 (reference ETS 300 325 [1] / subclauses 6.3.6 & 6.6.66, annex B, clauses B.1 & B.2).

keywords: Receiving CConnectRsp state 2, UserToUserInfo parameter.

Verify that if on state 2 and on receipt of a valid CConnectRsp message from the PUF, containing the UserToUserInfo parameter, the NAF sends to the network a correct CONNECT ETS 300 102-1 [5] message including a User-user IE according to the UserToUserInfo parameter of the CConnectRsp.

A2.1.34 (reference ETS 300 325 [1] / subclauses 6.3.6 & 6.6.17, annex B, clauses B.1 & B.2).

keywords: Receiving CConnectRsp state 3, ChannelIdentification parameter.

Verify that if on state 3 and on receipt of a valid CConnectRsp message from the PUF, containing the ChannelIdentification parameter, the NAF sends to the network a correct CONNECT ETS 300 102-1 [5] message including a Channel Identification IE according to the ChannelIdentification parameter of the CConnectRsp.

A2.1.35 (reference ETS 300 325 [1] / subclauses 6.3.6 & 6.6.46, annex B, clauses B.1 & B.2).

keywords: Receiving CConnectRsp state 3, LLC parameter.

Verify that if on state 3 and on receipt of a valid CConnectRsp message from the PUF, containing the LLC parameter, the NAF sends to the network a correct CONNECT ETS 300 102-1 [5] message including a Low Layer Compatibility IE according to the LLC parameter of the CConnectRsp.

A2.1.36 (reference ETS 300 325 [1] / subclauses 6.3.6 & 6.6.30, annex B, clauses B.1 & B.2).

keywords: Receiving CConnectRsp state 3, Facility parameter.

Verify that if on state 3 and on receipt of a valid CConnectRsp message from the PUF, containing at least one Facility parameter, the NAF sends to the network a correct CONNECT ETS 300 102-1 [5] message including one or more Facility IEs according to the Facility parameters of the CConnectRsp.

A2.1.37 (reference ETS 300 325 [1] / subclauses 6.3.6 & 6.6.66, annex B, clauses B.1 & B.2).

keywords: Receiving CConnectRsp state 3, UserToUserInfo parameter.

Verify that if on state 3 and on receipt of a valid CConnectRsp message from the PUF, containing the UserToUserInfo parameter, the NAF sends to the network a correct CONNECT ETS 300 102-1 [5] message including a User-user IE according to the UserToUserInfo parameter of the CConnectRsp.

A2.1.38 (reference ETS 300 325 [1] / subclauses 6.3.7 & 6.6.17, annex B, clauses B.1 & B.2).

keywords: Sending CConnectCnf, ChannelIdentification parameter.

Verify that if on state 1 and on receipt of a CONNECT ETS 300 102-1 [5] message from the network, including the Channel identification IE, the NAF indicates to the PUF that the called terminal accepts the call by making available a CConnectCnf message including the NCOID parameter and the ChannelIdentification parameter according to the CONNECT Channel Identification IE.

A2.1.39 (reference ETS 300 325 [1] / subclauses 6.3.7 & 6.6.46, annex B, clauses B.1 & B.2).  
keywords: Sending CConnectCnf, LLC parameter.

Verify that if on state 1 and on receipt of a CONNECT ETS 300 102-1 [5] message from the network, including the Low Layer Compatibility IE, the NAF indicates to the PUF that the called terminal accepts the call by making available a CConnectCnf message including the NCOID parameter and the LLC parameter according to the CONNECT Low Layer Compatibility IE.

A2.1.40 (reference ETS 300 325 [1] / subclauses 6.3.7 & 6.6.23, annex B, clauses B.1 & B.2).  
keywords: Sending CConnectCnf, DateTime parameter.

Verify that if on state 1 and on receipt of a CONNECT ETS 300 102-1 [5] message from the network, including the Date/Time IE, the NAF indicates to the PUF that the called terminal accepts the call by making available a CConnectCnf message including the NCOID parameter and the DateTime parameter according to the CONNECT Date/Time IE.

A2.1.41 (reference ETS 300 325 [1] / subclauses 6.3.7 & 6.6.30, annex B, clauses B.1 & B.2).  
keywords: Sending CConnectCnf, Facility parameter.

Verify that if on state 1 and on receipt of a CONNECT ETS 300 102-1 [5] message from the network, including at least one Facility IE, the NAF indicates to the PUF that the called terminal accepts the call by making available a CConnectCnf message including the NCOID parameter and one or more Facility parameters according to the CONNECT Facility IEs.

A2.1.42 (reference ETS 300 325 [1] / subclauses 6.3.7 & 6.6.24, annex B, clauses B.1 & B.2).  
keywords: Sending CConnectCnf, Display parameter.

Verify that if on state 1 and on receipt of a CONNECT ETS 300 102-1 [5] message from the network, including a Display IE, the NAF indicates to the PUF that the called terminal accepts the call by making available a CConnectCnf message including the NCOID parameter and the Display parameter according to the CONNECT Display IE.

A2.1.43 (reference ETS 300 325 [1] / subclauses 6.3.7 & 6.6.66, annex B, clauses B.1 & B.2).  
keywords: Sending CConnectCnf, UserToUserInfo parameter.

Verify that if on state 1 and on receipt of a CONNECT ETS 300 102-1 [5] message from the network, including a User-user IE, the NAF indicates to the PUF that the called terminal accepts the call by making available a CConnectCnf message including the NCOID parameter and the UserToUserInfo parameter according to the CONNECT User-user IE.

A2.1.44 (reference ETS 300 325 [1] / subclauses 6.3.1 (see remarks), 6.3.8 & 6.6.14, annex B, clauses B.1 & B.2, note 1 of B.1).

keywords: Receiving CDisconnectReq on state 1, CauseToNAF parameter.

Verify that if the Control Plane connection is on state 1 and on receipt of a valid CDisconnectReq message from the PUF, including the CauseToNAF parameter, the NAF sends to the network a correct DISCONNECT ETS 300 102-1 [5] message including a Cause IE according to the CauseToNAF parameter of the CDisconnectReq.

A2.1.45 (reference ETS 300 325 [1] / subclauses 6.3.1 (see remarks), 6.3.8 & 6.6.30, annex B, clauses B.1 & B.2, note 1 of B.1).

keywords: Receiving CDisconnectReq on state 1, Facility parameter.

Verify that if the Control Plane connection is on state 1 and on receipt of a valid CDisconnectReq message from the PUF, including at least one Facility parameter, the NAF sends to the network a correct DISCONNECT ETS 300 102-1 [5] message including one or more Facility IE according to the Facility parameters of the CDisconnectReq.

A2.1.46 (reference ETS 300 325 [1] / subclause 6.3.1 (see remarks), 6.3.8 & 6.6.66, annex B, clauses B.1 & B.2, note 1 of B.1).

keywords: Receiving CDisconnectReq on state 1, UserToUserInfo parameter.

Verify that if the Control Plane connection is on state 1 and on receipt of a valid CDisconnectReq message from the PUF, including an UserToUserInfo parameter, the NAF sends to the network a correct DISCONNECT ETS 300 102-1 [5] message including The User-user IE according to the UserToUserInfo parameter of the CDisconnectReq.

A2.1.47 (reference ETS 300 325 [1] / subclauses 6.3.1 (see remarks), 6.3.8 & 6.6.14, annex B, clauses B.1 & B.2, note 1 of B.1).

keywords: Receiving CDisconnectReq on state 2, CauseToNAF parameter.

Verify that if the Control Plane connection is on state 2 and on receipt of a valid CDisconnectReq message from the PUF refusing an incoming call, including the CauseToNAF parameter, the NAF sends to the network a correct RELEASE COMPLETE ETS 300 102-1 [5] message including a Cause IE according to the CauseToNAF parameter of the CDisconnectReq.

NOTE 1: This is the case where the PCI CDisconnectReq message is used to respond to a previously received CConnectInd message from the NAF (see ETS 300 325 [1], annex B, note 1 of table B.1).

A2.1.48 (reference ETS 300 325 [1] / subclauses 6.3.1 (see remarks), 6.3.8 & 6.6.30, annex B, clauses B.1 & B.2, note 1 of B.1).

keywords: Receiving CDisconnectReq on state 2, Facility parameter.

Verify that if the Control Plane connection is on state 2 and on receipt of a valid CDisconnectReq message from the PUF refusing an incoming call, including at least one Facility parameter, the NAF sends to the network a correct RELEASE COMPLETE ETS 300 102-1 [5] message including one or more Facility IE according to the Facility parameters of the CDisconnectReq.

NOTE 2: This is the case where the PCI CDisconnectReq message is used to respond to a previously received CConnectInd message from the NAF (see ETS 300 325 [1], annex B, note 1 of table B.1).

A2.1.49 (reference ETS 300 325 [1] / subclauses 6.3.1 (see remarks), 6.3.8 & 6.6.66, annex B, clauses B.1 & B.2, note 1 of table B.1).

keywords: Receiving CDisconnectReq on state 2, UserToUserInfo parameter.

Verify that if the Control Plane connection is on state 2 and on receipt of a valid CDisconnectReq message from the PUF refusing an incoming call, including an UserToUserInfo parameter, the NAF sends to the network a correct RELEASE COMPLETE ETS 300 102-1 [5] message including The User-user IE according to the UserToUserInfo parameter of the CDisconnectReq.

NOTE 3: This is the case where the PCI CDisconnectReq message is used to respond to a previously received CConnectInd message from the NAF (see ETS 300 325 [1], annex B, note 1 of table B.1).

A2.1.50 (reference ETS 300 325 [1] / subclauses 6.3.1 (see remarks), 6.3.8 & 6.6.14, annex B, clauses B.1 & B.2, note 1 of B.1).

keywords: Receiving CDisconnectReq on state 3, CauseToNAF parameter.

Verify that if the Control Plane connection is on state 3 and on receipt of a valid CDisconnectReq message from the PUF refusing an incoming call, including the CauseToNAF parameter, the NAF sends to the network a correct DISCONNECT ETS 300 102-1 [5] message including a Cause IE according to the CauseToNAF parameter of the CDisconnectReq.

A2.1.51 (reference ETS 300 325 [1] / subclauses 6.3.1 (see remarks), 6.3.8 & 6.6.30, annex B, clauses B.1 & B.2, note 1 of table B.1).

keywords: Receiving CDisconnectReq on state 3, Facility parameter.

Verify that if the Control Plane connection is on state 3 and on receipt of a valid CDisconnectReq message from the PUF refusing an incoming call, including at least one Facility parameter, the NAF sends to the network a correct DISCONNECT ETS 300 102-1 [5] message including one or more Facility IE according to the Facility parameters of the CDisconnectReq.

A2.1.52 (reference ETS 300 325 [1] / subclauses 6.3.1 (see remarks), 6.3.8 & 6.6.66, annex B, clauses B.1 & B.2, note 1 of table B.1).

keywords: Receiving CDisconnectReq on state 3, UserToUserInfo parameter.

Verify that if the Control Plane connection is on state 3 and on receipt of a valid CDisconnectReq message from the PUF refusing an incoming call, including an UserToUserInfo parameter, the NAF sends to the network a correct DISCONNECT ETS 300 102-1 [5] message including The User-user IE according to the UserToUserInfo parameter of the CDisconnectReq.

A2.1.53 (reference ETS 300 325 [1] / subclauses 6.3.1 (see remarks), 6.3.8 & 6.6.14, annex B, clauses B.1 & B.2, note 1 of table B.1).

keywords: Receiving CDisconnectReq on state 4, CauseToNAF parameter.

Verify that if the Control Plane connection is on state 4 and on receipt of a valid CDisconnectReq message from the PUF, including the CauseToNAF parameter, the NAF sends to the network a correct DISCONNECT ETS 300 102-1 [5] message including a Cause IE according to the CauseToNAF parameter of the CDisconnectReq.

A2.1.54 (reference ETS 300 325 [1] / subclauses 6.3.1 (see remarks), 6.3.8 & 6.6.30, annex B, clauses B.1 & B.2, note 1 of table B.1).

keywords: Receiving CDisconnectReq on state 4, Facility parameter.

Verify that if the Control Plane connection is on state 4 and on receipt of a valid CDisconnectReq message from the PUF, including at least one Facility parameter, the NAF sends to the network a correct DISCONNECT ETS 300 102-1 [5] message including one or more Facility IE according to the Facility parameters of the CDisconnectReq.

A2.1.55 (reference ETS 300 325 [1] / subclauses 6.3.1 (see remarks), 6.3.8 & 6.6.66, annex B, clauses B.1 & B.2, note 1 of table B.1).

keywords: Receiving CDisconnectReq on state 4, UserToUserInfo parameter.

Verify that if the Control Plane connection is on state 4 and on receipt of a valid CDisconnectReq message from the PUF, including an UserToUserInfo parameter, the NAF sends to the network a correct DISCONNECT ETS 300 102-1 [5] message including The User-user IE according to the UserToUserInfo parameter of the CDisconnectReq.

A2.1.56 (reference ETS 300 325 [1] / subclauses 6.3.11 & 6.6.30, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectCnf case 2, CauseToPUF parameter.

Verify that if on state 5 and on receipt of a RELEASE ETS 300 102-1 [5] response message from the network, containing a Cause IE, the NAF informs the PUF that the connection has ended and the channel has been cleared down by making available a CDisconnectCnf message including the NCOID parameter and a CauseToPUF parameter according to the RELEASE Cause IEs.

A2.1.57 (reference ETS 300 325 [1] / subclauses 6.3.11 & 6.6.30, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectCnf case 2, Facility parameter.

Verify that if on state 5 and on receipt of a RELEASE ETS 300 102-1 [5] response message from the network, containing at least one Facility IE, the NAF informs the PUF that the connection has ended and the channel has been cleared down by making available a CDisconnectCnf message including the NCOID parameter and one or more Facility parameters according to the RELEASE Facility IEs.

A2.1.58 (reference ETS 300 325 [1] / subclauses 6.3.11 & 6.6.24, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectCnf case 2, Display parameter.

Verify that if on state 5 and on receipt of a RELEASE ETS 300 102-1 [5] response message from the network, containing at least one Facility IE, the NAF informs the PUF that the connection has ended and the channel has been cleared down by making available a CDisconnectCnf message including the NCOID parameter and a Display parameter according to the RELEASE Display IE.

A2.1.59 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.15, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 1-case 1, CauseToPUF parameter.

Verify that if the Control Plane connection is in state 1 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing a Cause IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and the CauseToPUF parameter according to the DISCONNECT Cause IE.

A2.1.60 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.30, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 1-case 1, Facility parameter.

Verify that if the Control Plane connection is in state 1 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing at least one Facility IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and one or more Facility parameters according to the DISCONNECT Facility IEs.

A2.1.61 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.24, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd state 1-case 1, Display parameter.

Verify that if the Control Plane connection is in state 1 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and a Display parameter according to the DISCONNECT Display IE.

A2.1.62 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.66, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 1-case 1, UserToUserInfo parameter.

Verify that if the Control Plane connection is in state 1 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing an User-user IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and an UserToUserInfo parameter according to the DISCONNECT User-user IE.

A2.1.63 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.15, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 1-case 2, CauseToPUF parameter.

Verify that if the Control Plane connection is in state 1 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing a Cause IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and the CauseToPUF parameter according to the RELEASE Cause IE.

A2.1.64 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.30, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 1-case 2, Facility parameter.

Verify that if the Control Plane connection is in state 1 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing at least one Facility IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and one or more Facility parameters according to the RELEASE Facility IEs.

A2.1.65 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.24, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd state 1-case 2, Display parameter.

Verify that if the Control Plane connection is in state 1 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and a Display parameter according to the RELEASE Display IE.

A2.1.66 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.66, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 1-case 2, UserToUserInfo parameter.

Verify that if the Control Plane connection is in state 1 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing an User-user IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and an UserToUserInfo parameter according to the RELEASE User-user IE.

A2.1.67 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.15, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 1-case 3, CauseToPUF parameter.

Verify that if the Control Plane connection is in state 1 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing a Cause IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and the CauseToPUF parameter according to the RELEASE COMPLETE Cause IE.

A2.1.68 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.30, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 1-case 3, Facility parameter.

Verify that if the Control Plane connection is in state 1 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing at least one Facility IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and one or more Facility parameters according to the RELEASE COMPLETE Facility IEs.

A2.1.69 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.24, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd state 1-case 3, Display parameter.

Verify that if the Control Plane connection is in state 1 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and a Display parameter according to the RELEASE COMPLETE Display IE.

A2.1.70 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.66, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 1-case 3, UserToUserInfo parameter.

Verify that if the Control Plane connection is in state 1 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing an User-user IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and an UserToUserInfo parameter according to the RELEASE COMPLETE User-user IE.

A2.1.71 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.15, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 2-case 1, CauseToPUF parameter.

Verify that if the Control Plane connection is in state 2 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing a Cause IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and the CauseToPUF parameter according to the DISCONNECT Cause IE.

A2.1.72 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.30, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 2-case 1, Facility parameter.

Verify that if the Control Plane connection is in state 2 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing at least one Facility IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and one or more Facility parameters according to the DISCONNECT Facility IEs.

A2.1.73 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.24, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd state 2-case 1, Display parameter.

Verify that if the Control Plane connection is in state 2 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and a Display parameter according to the DISCONNECT Display IE.

A2.1.74 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.66, annex B, clauses B.1 & B.2).  
keywords: Sending CDisconnectInd in state 2-case 1, UserToUserInfo parameter.  
Verify that if the Control Plane connection is in state 2 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing an User-user IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and an UserToUserInfo parameter according to the DISCONNECT User-user IE.

A2.1.75 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.15, annex B, clauses B.1 & B.2).  
keywords: Sending CDisconnectInd in state 2-case 2, CauseToPUF parameter.  
Verify that if the Control Plane connection is in state 2 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing a Cause IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and the CauseToPUF parameter according to the RELEASE Cause IE.

A2.1.76 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.30, annex B, clauses B.1 & B.2).  
keywords: Sending CDisconnectInd in state 2-case 2, Facility parameter.  
Verify that if the Control Plane connection is in state 2 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing at least one Facility IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and one or more Facility parameters according to the RELEASE Facility IEs.

A2.1.77 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.24, annex B, clauses B.1 & B.2).  
keywords: Sending CDisconnectInd state 2-case 2, Display parameter.  
Verify that if the Control Plane connection is in state 2 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and a Display parameter according to the RELEASE Display IE.

A2.1.78 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.66, annex B, clauses B.1 & B.2).  
keywords: Sending CDisconnectInd in state 2-case 2, UserToUserInfo parameter.  
Verify that if the Control Plane connection is in state 2 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing an User-user IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and an UserToUserInfo parameter according to the RELEASE User-user IE.

A2.1.79 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.15, annex B, clauses B.1 & B.2).  
keywords: Sending CDisconnectInd in state 2-case 3, CauseToPUF parameter.  
Verify that if the Control Plane connection is in state 2 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing a Cause IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and the CauseToPUF parameter according to the RELEASE COMPLETE Cause IE.

A2.1.80 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.30, annex B, clauses B.1 & B.2).  
keywords: Sending CDisconnectInd in state 2-case 3, Facility parameter.  
Verify that if the Control Plane connection is in state 2 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing at least one Facility IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and one or more Facility parameters according to the RELEASE COMPLETE Facility IEs.

A2.1.81 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.24, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd state 2-case 3, Display parameter.

Verify that if the Control Plane connection is in state 2 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and a Display parameter according to the RELEASE COMPLETE Display IE.

A2.1.82 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.66, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 2-case 3, UserToUserInfo parameter.

Verify that if the Control Plane connection is in state 2 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing an User-user IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and an UserToUserInfo parameter according to the RELEASE COMPLETE User-user IE.

A2.1.83 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.15, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 3-case 1, CauseToPUF parameter.

Verify that if the Control Plane connection is in state 3 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing a Cause IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and the CauseToPUF parameter according to the DISCONNECT Cause IE.

A2.1.84 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.30, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 3-case 1, Facility parameter.

Verify that if the Control Plane connection is in state 3 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing at least one Facility IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and one or more Facility parameters according to the DISCONNECT Facility IEs.

A2.1.85 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.24, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd state 3-case 1, Display parameter.

Verify that if the Control Plane connection is in state 3 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and a Display parameter according to the DISCONNECT Display IE.

A2.1.86 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.66, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 3-case 1, UserToUserInfo parameter.

Verify that if the Control Plane connection is in state 3 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing an User-user IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and an UserToUserInfo parameter according to the DISCONNECT User-user IE.

A2.1.87 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.15, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 3-case 2, CauseToPUF parameter.

Verify that if the Control Plane connection is in state 3 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing a Cause IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and the CauseToPUF parameter according to the RELEASE Cause IE.



A2.1.88 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.30, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 3-case 2, Facility parameter.

Verify that if the Control Plane connection is in state 3 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing at least one Facility IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and one or more Facility parameters according to the RELEASE Facility IEs.

A2.1.89 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.24, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd state 3-case 2, Display parameter.

Verify that if the Control Plane connection is in state 3 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and a Display parameter according to the RELEASE Display IE.

A2.1.90 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.66, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 3-case 2, UserToUserInfo parameter.

Verify that if the Control Plane connection is in state 3 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing an User-user IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and an UserToUserInfo parameter according to the RELEASE User-user IE.

A2.1.91 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.15, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 3-case 3, CauseToPUF parameter.

Verify that if the Control Plane connection is in state 3 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing a Cause IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and the CauseToPUF parameter according to the RELEASE COMPLETE Cause IE.

A2.1.92 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.30, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 3-case 3, Facility parameter.

Verify that if the Control Plane connection is in state 3 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing at least one Facility IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and one or more Facility parameters according to the RELEASE COMPLETE Facility IEs.

A2.1.93 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.24, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd state 3-case 3, Display parameter.

Verify that if the Control Plane connection is in state 3 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and a Display parameter according to the RELEASE COMPLETE Display IE.

A2.1.94 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.66, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 3-case 3, UserToUserInfo parameter.

Verify that if the Control Plane connection is in state 3 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing an User-user IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and an UserToUserInfo parameter according to the RELEASE COMPLETE User-user IE.

A2.1.95 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.15, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 4-case 1, CauseToPUF parameter.

Verify that if the Control Plane connection is in state 4 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing a Cause IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and the CauseToPUF parameter according to the DISCONNECT Cause IE.

A2.1.96 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.30, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 4-case 1, Facility parameter.

Verify that if the Control Plane connection is in state 4 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing at least one Facility IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and one or more Facility parameters according to the DISCONNECT Facility IEs.

A2.1.97 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.24, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd state 4-case 1, Display parameter.

Verify that if the Control Plane connection is in state 4 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and a Display parameter according to the DISCONNECT Display IE.

A2.1.98 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.66, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 4-case 1, UserToUserInfo parameter.

Verify that if the Control Plane connection is in state 4 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing an User-user IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and an UserToUserInfo parameter according to the DISCONNECT User-user IE.

A2.1.99 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.15, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 4-case 2, CauseToPUF parameter.

Verify that if the Control Plane connection is in state 4 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing a Cause IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and the CauseToPUF parameter according to the RELEASE Cause IE.

A2.1.100 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.30, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 4-case 2, Facility parameter.

Verify that if the Control Plane connection is in state 4 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing at least one Facility IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and one or more Facility parameters according to the RELEASE Facility IEs.

A2.1.101 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.24, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd state 4-case 2, Display parameter.

Verify that if the Control Plane connection is in state 4 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and a Display parameter according to the RELEASE Display IE.

A2.1.102 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.66, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 4-case 2, UserToUserInfo parameter.

Verify that if the Control Plane connection is in state 4 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing an User-user IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and an UserToUserInfo parameter according to the RELEASE User-user IE.

A2.1.103 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.15, annex B, clauses B.1 & B.2).  
keywords: Sending CDisconnectInd in state 4-case 3, CauseToPUF parameter.  
Verify that if the Control Plane connection is in state 4 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing a Cause IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and the CauseToPUF parameter according to the RELEASE COMPLETE Cause IE.

A2.1.104 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.30, annex B, clauses B.1 & B.2).  
keywords: Sending CDisconnectInd in state 4-case 3, Facility parameter.  
Verify that if the Control Plane connection is in state 4 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing at least one Facility IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and one or more Facility parameters according to the RELEASE COMPLETE Facility IEs.

A2.1.105 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.24, annex B, clauses B.1 & B.2).  
keywords: Sending CDisconnectInd state 4-case 3, Display parameter.  
Verify that if the Control Plane connection is in state 4 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and a Display parameter according to the RELEASE COMPLETE Display IE.

A2.1.106 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.66, annex B, clauses B.1 & B.2).  
keywords: Sending CDisconnectInd in state 4-case 3, UserToUserInfo parameter.  
Verify that if the Control Plane connection is in state 4 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing an User-user IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and an UserToUserInfo parameter according to the RELEASE COMPLETE User-user IE.

A2.1.107 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.15, annex B, clauses B.1 & B.2).  
keywords: Sending CDisconnectInd in state 10-case 1, CauseToPUF parameter.  
Verify that if the Control Plane connection is in state 10 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing a Cause IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and the CauseToPUF parameter according to the DISCONNECT Cause IE.

A2.1.108 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.30, annex B, clauses B.1 & B.2).  
keywords: Sending CDisconnectInd in state 10-case 1, Facility parameter.  
Verify that if the Control Plane connection is in state 10 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing at least one Facility IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and one or more Facility parameters according to the DISCONNECT Facility IEs.

A2.1.109 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.24, annex B, clauses B.1 & B.2).  
keywords: Sending CDisconnectInd state 10-case 1, Display parameter.  
Verify that if the Control Plane connection is in state 10 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and a Display parameter according to the DISCONNECT Display IE.

A2.1.110 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.66, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 10-case 1, UserToUserInfo parameter.

Verify that if the Control Plane connection is in state 10 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing an User-user IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and an UserToUserInfo parameter according to the DISCONNECT User-user IE.

A2.1.111 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.15, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 10-case 2, CauseToPUF parameter.

Verify that if the Control Plane connection is in state 10 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing a Cause IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and the CauseToPUF parameter according to the RELEASE Cause IE.

A2.1.112 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.30, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 10-case 2, Facility parameter.

Verify that if the Control Plane connection is in state 10 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing at least one Facility IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and one or more Facility parameters according to the RELEASE Facility IEs.

A2.1.113 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.24, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd state 10-case 2, Display parameter.

Verify that if the Control Plane connection is in state 10 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and a Display parameter according to the RELEASE Display IE.

A2.1.114 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.66, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 10-case 2, UserToUserInfo parameter.

Verify that if the Control Plane connection is in state 10 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing an User-user IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and an UserToUserInfo parameter according to the RELEASE User-user IE.

A2.1.115 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.15, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 10-case 3, CauseToPUF parameter.

Verify that if the Control Plane connection is in state 10 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing a Cause IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and the CauseToPUF parameter according to the RELEASE COMPLETE Cause IE.

A2.1.116 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.30, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 10-case 3, Facility parameter.

Verify that if the Control Plane connection is in state 10 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing at least one Facility IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and one or more Facility parameters according to the RELEASE COMPLETE Facility IEs.

A2.1.117 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.24, annex B, clauses B.1 & B.2).  
keywords: Sending CDisconnectInd state 10-case 3, Display parameter.  
Verify that if the Control Plane connection is in state 10 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and a Display parameter according to the RELEASE COMPLETE Display IE.

A2.1.118 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.66, annex B, clauses B.1 & B.2).  
keywords: Sending CDisconnectInd in state 10-case 3, UserToUserInfo parameter.  
Verify that if the Control Plane connection is in state 10 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing an User-user IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and an UserToUserInfo parameter according to the RELEASE COMPLETE User-user IE.

A2.1.119 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.15, annex B, clauses B.1 & B.2).  
keywords: Sending CDisconnectInd in state 11-case 1, CauseToPUF parameter.  
Verify that if the Control Plane connection is in state 11 and on receipt of a DISCONNECT ETS 300 102-11 [5] message from the network, containing a Cause IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and the CauseToPUF parameter according to the DISCONNECT Cause IE.

A2.1.120 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.30, annex B, clauses B.1 & B.2).  
keywords: Sending CDisconnectInd in state 11-case 1, Facility parameter.  
Verify that if the Control Plane connection is in state 11 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing at least one Facility IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and one or more Facility parameters according to the DISCONNECT Facility IEs.

A2.1.121 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.24, annex B, clauses B.1 & B.2).  
keywords: Sending CDisconnectInd state 11-case 1, Display parameter.  
Verify that if the Control Plane connection is in state 11 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and a Display parameter according to the DISCONNECT Display IE.

A2.1.122 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.66, annex B, clauses B.1 & B.2).  
keywords: Sending CDisconnectInd in state 11-case 1, UserToUserInfo parameter.  
Verify that if the Control Plane connection is in state 11 and on receipt of a DISCONNECT ETS 300 102-1 [5] message from the network, containing an User-user IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and an UserToUserInfo parameter according to the DISCONNECT User-user IE.

A2.1.123 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.15, annex B, clauses B.1 & B.2).  
keywords: Sending CDisconnectInd in state 11-case 2, CauseToPUF parameter.  
Verify that if the Control Plane connection is in state 11 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing a Cause IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and the CauseToPUF parameter according to the RELEASE Cause IE.

A2.1.124 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.30, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 11-case 2, Facility parameter.

Verify that if the Control Plane connection is in state 11 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing at least one Facility IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and one or more Facility parameters according to the RELEASE Facility IEs.

A2.1.125 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.24, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd state 11-case 2, Display parameter.

Verify that if the Control Plane connection is in state 11 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and a Display parameter according to the RELEASE Display IE.

A2.1.126 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.66, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 11-case 2, UserToUserInfo parameter.

Verify that if the Control Plane connection is in state 11 and on receipt of a RELEASE ETS 300 102-1 [5] message from the network, containing an User-user IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and an UserToUserInfo parameter according to the RELEASE User-user IE.

A2.1.127 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.15, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 11-case 3, CauseToPUF parameter.

Verify that if the Control Plane connection is in state 11 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing a Cause IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and the CauseToPUF parameter according to the RELEASE COMPLETE Cause IE.

A2.1.128 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.30, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 11-case 3, Facility parameter.

Verify that if the Control Plane connection is in state 11 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing at least one Facility IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and one or more Facility parameters according to the RELEASE COMPLETE Facility IEs.

A2.1.129 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.24, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd state 11-case 3, Display parameter.

Verify that if the Control Plane connection is in state 11 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and a Display parameter according to the RELEASE COMPLETE Display IE.

A2.1.130 (reference ETS 300 325 [1] / subclauses 6.3.9 & 6.6.66, annex B, clauses B.1 & B.2).

keywords: Sending CDisconnectInd in state 11-case 3, UserToUserInfo parameter.

Verify that if the Control Plane connection is in state 11 and on receipt of a RELEASE COMPLETE ETS 300 102-1 [5] message from the network, containing an User-user IE, the NAF indicates to the PUF that the connection was ended by making available a CDisconnectInd message including the NCOID parameter and an UserToUserInfo parameter according to the RELEASE COMPLETE User-user IE.

A2.1.131 (reference ETS 300 325 [1] / subclauses 6.3.12 & 6.6.53, annex B, clauses B.1 & B.2).  
keywords: Sending CProgressInd Message, ProgressIndicator parameter.  
Verify that on receipt of a PROGRESS ETS 300 102-1 [5] message from the network, containing a Progress Indicator IE, the NAF indicates to the PUF that information is available in the B-channel by making available an CProgressInd message including the NCOID parameter and the ProgressIndicator parameter according to the received Progress indicator IE.

A2.1.132 (reference ETS 300 325 [1] / subclauses 6.3.12 & 6.6.24, annex B, clauses B.1 & B.2).  
keywords: Sending CProgressInd Message, Display parameter.  
Verify that on receipt of a PROGRESS ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF indicates to the PUF that information is available in the B-channel by making available an CProgressInd message including the NCOID and the ProgressIndicator parameters and additionally the Display parameter according to the received Display IE.

## **A.2.2 Class 2 - Overlap sending specific messages**

A2.2.1 (reference ETS 300 325 [1] / subclauses 6.3.14 & 6.6.17, annex B, clauses B.1 & B.2).  
keywords: Sending CSetupAckInd Message, ChannelIdentification parameter.  
Verify that if on state 1 and on receipt of a SETUP ACKNOWLEDGE ETS 300 102-1 [5] message from the network, containing a Channel identification IE, the NAF indicates to the PUF that more establishment information is needed to perform the call in the overlap sending case by making available an CSetupAckInd message including the NCOID parameter and the ChannelIdentification parameter according to the SETUP ACKNOWLEDGE Channel Identification IE.

A2.2.2 (reference ETS 300 325 [1] / subclauses 6.3.14 & 6.6.24, annex B, clauses B.1 & B.2).  
keywords: Sending CSetupAckInd Message, Display parameter.  
Verify that if on state 1 and on receipt of a SETUP ACKNOWLEDGE ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF indicates to the PUF that more establishment information is needed to perform the call in the overlap sending case by making available an CSetupAckInd message including the NCOID parameter and the Display parameter according to the SETUP ACKNOWLEDGE Display IE.

A2.2.3 (reference ETS 300 325 [1] / subclauses 6.3.14 & 6.6.7, annex B, clauses B.1 & B.2).  
keywords: Sending CSetupAckInd Message, Display parameter.  
Verify that if on state 1 and on receipt of a SETUP ACKNOWLEDGE ETS 300 102-1 [5] message from the network, containing a Progress indicator IE, the NAF indicates to the PUF that more establishment information is needed to perform the call in the overlap sending case by making available an CSetupAckInd message including the NCOID parameter and the ProgressIndicator parameter according to the SETUP ACKNOWLEDGE Progress indicator IE.

A2.2.4 (reference ETS 300 325 [1] / subclauses 6.3.16 & 6.6.17, annex B, clauses B.1 & B.2).  
keywords: Sending CProceedingInd Message, ChannelIdentification parameter.  
Verify that if on state 1 and on receipt of a CALL PROCEEDING ETS 300 102-1 [5] message from the network, containing a Channel identification IE, the NAF indicates to the PUF that no more establishment information shall be accepted, in the overlap sending case by making available an CProceedingInd message including the NCOID parameter and the ChannelIdentification parameter according to the CALL PROCEEDING Channel Identification IE.

A2.2.5 (reference ETS 300 325 [1] / subclauses 6.3.16 & 6.6.24, annex B, clauses B.1 & B.2).  
keywords: Sending CProceedingInd Message, Display parameter.  
Verify that if on state 1 and on receipt of a CALL PROCEEDING ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF indicates to the PUF that no more establishment information shall be accepted, in the overlap sending case by making available an CProceedingInd message including the NCOID parameter and the Display parameter according to the CALL PROCEEDING Display IE.

A2.2.6 (reference ETS 300 325 [1] / subclauses 6.3.16 & 6.6.53, annex B, clauses B.1 & B.2).

keywords: Sending CProceedingInd Message, ProgressIndicator parameter.

Verify that if on state 1 and on receipt of a CALL PROCEEDING ETS 300 102-1 [5] message from the network, containing a Progress indicator IE, the NAF indicates to the PUF that no more establishment information is needed, in the overlap sending case by making available an CProceedingInd message including the NCOID parameter and the ProgressIndicator parameter according to the CALL PROCEEDING Progress indicator IE.

### A.2.3 Class 3 - User-to-user information transfer

A2.3.1 (reference ETS 300 325 [1] / subclauses 6.3.17 & 6.6.66, annex B, clauses B.1 & B.2).

keywords: Receiving CUserInfoReq Message, UserToUserInfo parameter.

Verify that if on state 4 and on receipt of a valid CUserInfoReq message from the PUF, containing an UserToUserInfo parameter, the NAF sends to the network a correct USER INFORMATION ETS 300 102-1 [5] message including the User-user IE according to the UserToUserInfo parameter of the received CUserInfoReq.

A2.3.2 (reference ETS 300 325 [1] / subclauses 6.3.17 & 6.6.48, annex B, clauses B.1 & B.2).

keywords: Receiving CUserInfoReq Message, MoreData parameter.

Verify that if on state 4 and on receipt of a valid CUserInfoReq message from the PUF, containing a MoreData parameter, the NAF sends to the network a correct USER INFORMATION ETS 300 102-1 [5] message including the More Data IE according to the MoreData parameter of the received CUserInfoReq.

A2.3.3 (reference ETS 300 325 [1] / subclauses 6.3.18 & 6.6.66, annex B, clauses B.1 & B.2).

keywords: Sending CUserInfoInd Message, UserToUserInfo parameter.

Verify that on receipt of an USER INFORMATION ETS 300 102-1 [5] message from the network, containing an User-User IE, the NAF presents to the PUF the received user-user information by making available an CUserInfoInd message including the UserToUserInfo parameter as provided in the USER INFORMATION User-user IE.

A2.3.4 (reference ETS 300 325 [1] / subclauses 6.3.18 & 6.6.48, annex B, clauses B.1 & B.2).

keywords: Sending CUserInfoInd Message, MoreData parameter.

Verify that on receipt of an USER INFORMATION ETS 300 102-1 [5] message from the network, containing an More Data IE, the NAF presents to the PUF the received user-user information by making available an CUserInfoInd message including the MoreData parameter as provided in the USER INFORMATION More Data IE.

A2.3.5 (reference ETS 300 325 [1] / subclauses 6.3.19 & 6.6.20, annex B, clauses B.1 & B.2).

keywords: Receiving CCongestionControlReq Message, CongestionLevel parameter.

Verify that if on state 4 and on receipt of a valid CCongestionControlReq message from the PUF, containing a CongestionLevel parameter, the NAF sends to the network a correct CONGESTION CONTROL ETS 300 102-1 [5] message including a Congestion level IE according to the CongestionLevel parameter of the received CCongestionControlReq.

A2.3.6 (reference ETS 300 325 [1] / subclauses 6.3.19 & 6.6.14, annex B, clauses B.1 & B.2).

keywords: Receiving CCongestionControlReq Message, CauseToNAF parameter.

Verify that if on state 4 and on receipt of a valid CCongestionControlReq message from the PUF, containing a CauseToNAF parameter, the NAF sends to the network a correct CONGESTION CONTROL ETS 300 102-1 [5] message including a Cause IE according to the CauseToNAF parameter of the received CCongestionControlReq.

A2.3.7 (reference ETS 300 325 [1] / subclauses 6.3.20 & 6.6.18, annex B, clauses B.1 & B.2).

keywords: Sending CCongestionControlInd Message, CongestionLevel parameter.

Verify that on receipt of a CONGESTION CONTROL ETS 300 102-1 [5] message from the network, containing a Congestion level IE, the NAF presents to the PUF the received user-user information by making available an CUserInfoInd message including the CongestionLevel parameter as provided in the CONGESTION CONTROL Congestion level IE.



A2.3.8 (reference ETS 300 325 [1] / subclauses 6.3.20 & 6.6.15, annex B, clauses B.1 & B.2).

keywords: Sending CCongestionControlInd Message, CauseToPUF parameter.

Verify that on receipt of a CONGESTION CONTROL ETS 300 102-1 [5] message from the network, containing a Cause IE, the NAF presents to the PUF the received user-user information by making available an CUserInfoInd message including the CauseToPUF parameter as provided in the CONGESTION CONTROL Cause IE.

A2.3.9 (reference ETS 300 325 [1] / subclauses 6.3.20 & 6.6.24, annex B, clauses B.1 & B.2).

keywords: Sending CCongestionControlInd Message, Display parameter.

Verify that on receipt of a CONGESTION CONTROL ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF presents to the PUF the received user-user information by making available an CUserInfoInd message including the Display parameter as provided in the CONGESTION CONTROL Display IE.

#### **A.2.4 Class 4 - Adjourment of calls**

A2.4.1 (reference ETS 300 325 [1] / subclauses 6.3.22 & 6.6.19, annex B, clauses B.1 & B.2).

keywords: Sending CSuspendCnf Message - case 1, CompletionStatus parameter.

Verify that on receipt of a SUSPEND ACKNOWLEDGE ETS 300 102-1 [5] message from the network, the NAF answers the previously received CSuspendReq message from the PUF, by making available an CSuspendCnf message including the CompletionStatus parameter indicating "success".

A2.4.2 (reference ETS 300 325 [1] / subclauses 6.3.22 & 6.6.24, annex B, clauses B.1 & B.2).

keywords: Sending CSuspendCnf Message - case 1, Display parameter.

Verify that on receipt of a SUSPEND ACKNOWLEDGE ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF answers the previously received CSuspendReq message from the PUF, by making available an CSuspendCnf message including the Display parameter according to the SUSPEND ACKNOWLEDGE Display IE.

A2.4.3 (reference ETS 300 325 [1] / subclauses 6.3.22 & 6.6.19, annex B, clauses B.1 & B.2).

keywords: Sending CSuspendCnf Message - case 2, CompletionStatus parameter.

Verify that on receipt of a SUSPEND REJECT ETS 300 102-1 [5] message from the network, the NAF answers the previously received CSuspendReq message from the PUF, by making available an CSuspendCnf message including the CompletionStatus parameter indicating "operation failed".

A2.4.4 (reference ETS 300 325 [1] / subclauses 6.3.22 & 6.6.15, annex B, clauses B.1 & B.2).

keywords: Sending CSuspendCnf Message - case 2, CauseToPUF parameter.

Verify that on receipt of a SUSPEND REJECT ETS 300 102-1 [5] message from the network, the NAF answers the previously received CSuspendReq message from the PUF, by making available an CSuspendCnf message including the CauseToPUF parameter corresponding to the value of the SUSPEND REJECT Cause IE.

A2.4.5 (reference ETS 300 325 [1] / subclauses 6.3.22 & 6.6.24, annex B, clauses B.1 & B.2).

keywords: Sending CSuspendCnf Message - case 2, Display parameter.

Verify that on receipt of a SUSPEND REJECT ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF answers the previously received CSuspendReq message from the PUF, by making available an CSuspendCnf message including the Display parameter according to the SUSPEND REJECT Display IE.

A2.4.6 (reference ETS 300 325 [1] / subclauses 6.3.24 & 6.6.19, annex B, clauses B.1 & B.2).

keywords: Sending CResumeCnf Message - case 1, CompletionStatus parameter.

Verify that on receipt of a RESUME ACKNOWLEDGE ETS 300 102-1 [5] message from the network, the NAF answers the previously received CResumeReq message from the PUF, by making available an CResumeCnf message including the CompletionStatus parameter indicating "success".

A2.4.7 (reference ETS 300 325 [1] / subclauses 6.3.24 & 6.6.24, annex B, clauses B.1 & B.2).

keywords: Sending CResumeCnf Message - case 1, Display parameter.

Verify that on receipt of a RESUME ACKNOWLEDGE ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF answers the previously received CResumeReq message from the PUF, by making available an CResumeCnf message including a Display parameter according to the RESUME ACKNOWLEDGE Display IE.

A2.4.8 (reference ETS 300 325 [1] / subclauses 6.3.24 & 6.6.19, annex B, clauses B.1 & B.2).

keywords: Sending CResumeCnf Message - case 2, CompletionStatus parameter.

Verify that on receipt of a RESUME REJECT ETS 300 102-1 [5] message from the network, the NAF answers the previously received CResumeReq message from the PUF, by making available an CResumeCnf message including the CompletionStatus parameter indicating "operation failed".

A2.4.9 (reference ETS 300 325 [1] / subclauses 6.3.24 & 6.6.15, annex B, clauses B.1 & B.2).

keywords: Sending CResumeCnf Message - case 2, CauseToPUF parameter.

Verify that on receipt of a RESUME REJECT ETS 300 102-1 [5] message from the network, the NAF answers the previously received CResumeReq message from the PUF, by making available an CResumeCnf message including the CauseToPUF parameter corresponding to the value of the RESUME REJECT Cause IE.

A2.4.10 (reference ETS 300 325 [1] / subclauses 6.3.24 & 6.6.24, annex B, clauses B.1 & B.2).

keywords: Sending CResumeCnf Message - case 2, Display parameter.

Verify that on receipt of a RESUME REJECT ETS 300 102-1 [5] message from the network, containing a Display IE, the NAF answers the previously received CResumeReq message from the PUF, by making available an CResumeCnf message including the Display parameter according to the RESUME REJECT Display IE.

A2.4.11 (reference ETS 300 325 [1] / subclauses 6.3.25 & 6.6.51, annex B, clauses B.1 & B.2).

keywords: Sending CNotifyInd Message, NotificationIndicator parameter.

Verify that on receipt of a NOTIFY ETS 300 102-1 [5] message from the network indicating a new state for the connection, the NAF informs the PUF by making available an CNotifyInd message including the NotificationIndicator parameter as provided in the NOTIFY Notification indicator IE.

A2.4.12 (reference ETS 300 325 [1] / subclauses 6.3.25 & 6.6.24, annex B, clauses B.1 & B.2).

keywords: Sending CNotifyInd Message, Display parameter.

Verify that on receipt of a NOTIFY ETS 300 102-1 [5] message from the network indicating a new state for the connection, containing a Display IE, the NAF informs the PUF by making available an CNotifyInd message including the Display parameter according to the NOTIFY Display IE.

## **A.3 User Plane messages**

### **A.3.1 User Plane messages PUF co-ordination**

TP A3.1.1 (reference ETS 300 325 [1] / subclause 6.4.5, annex B, clause B.3).

keywords: U3ConnectRsp case 1b.

Verify that if the PUF sends a U3ConnectRsp to the NAF which contains:

- NCOID;
- CalledDTEAddress,

then the NAF sends a Call Accepted packet to the network which contains:

- called-DTE address.

TP A3.1.2 (reference ETS 300 325 [1] / subclause 6.4.5, annex B, clause B.3).

keywords: U3ConnectRsp case 1c.

Verify that if the PUF sends a U3ConnectRsp to the NAF which contains:

- NCOID;
- CalledDTEAddressExt,

then the NAF sends a Call Accepted packet to the network which contains:

- a facility field for called address extension.

TP A3.1.3 (reference ETS 300 325 [1] / subclause 6.4.5, annex B, clause B.3).

keywords: U3ConnectRsp case 1d.

Verify that if the PUF sends a U3ConnectRsp to the NAF which contains:

- NCOID;
- CallingDTEAddress,

then the NAF sends a Call Accepted packet to the network which contains:

- calling-DTE address.

TP A.3.1.4 (reference ETS 300 325 [1] / subclause 6.4.5, annex B, clause B.3).

keywords: U3ConnectRsp case 1e.

Verify that if the PUF sends a U3ConnectRsp to the NAF which contains:

- NCOID;
- CallingDTEAddressExt,

then the NAF sends a Call Accepted packet to the network which contains:

- a facility field for calling address extension.

TP A.3.1.5 (reference ETS 300 325 [1] / subclause 6.4.5, annex B, clause B.3, ISO/IEC 8878, subclause 6.1).

keywords: U3ConnectRsp case 1h.

Verify that if the PUF sends a U3ConnectRsp to the NAF which contains:

- NCOID;
- ReceiptConfirm,

then the NAF sends a Call Accepted packet to the network which contains:

- bit 7 of the GFI set.

TP A.3.1.6 (reference ETS 300 325 [1] / subclause 6.4.5, annex B, clause B.3, ISO/IEC 8878, subclause 6.1).

keywords: U3ConnectRsp case 1i.

Verify that if the PUF sends a U3ConnectRsp to the NAF which contains:

- NCOID;
- ExpeditedData,

then the NAF sends a Call Accepted packet to the network which contains:

- Expedited data negotiation facility.

TP A.3.1.7 (reference ETS 300 325 [1] / subclause 6.4.5, annex A, clause B.3, ISO/IEC 8878, subclause 6.1).

keywords: U3ConnectRsp case 1j.

Verify that if the PUF sends a U3ConnectRsp to the NAF which contains:

- NCOID;
- QOSParameters,

then the NAF sends a Call Accepted packet to the network which contains:

- the facility fields for the QOS parameters.

TP A.3.1.8 (reference ETS 300 325 [1] / subclause 6.4.5, annex B, clause B.3, ISO/IEC 8878, subclause 6.1).

keywords: U3ConnectRsp case 1k.

Verify that if the PUF sends a U3ConnectRsp to the NAF which contains:

- NCOID;
- UserData of maximum length 16, or 128 if FastSelect parameter was present on U3ConnectReq, then the NAF sends a Call Accepted packet to the network which contains:
- Called user data field.

TP A.3.1.9 (reference ETS 300 325 [1] / subclause 6.4.5, annex B, clause B.3, ISO/IEC 8878, subclause 6.1, CCITT Recommendation X.25, § 6.12).

keywords: U3ConnectRsp case 1l.

Verify that if the PUF sends a U3ConnectRsp to the NAF which contains:

- NCOID;
- PacketSize,

then the NAF sends a Call Accepted packet to the network which contains:

- a facility code indicating the packet size.

TP A.3.1.10 (reference ETS 300 325 [1] / subclause 6.4.5, annex B, clause B.3, ISO/IEC 8878, subclause 6.1, CCITT Recommendation X.25, § 6.12).

keywords: U3ConnectRsp case 1m.

Verify that if the PUF sends a U3ConnectRsp to the NAF which contains:

- NCOID;
- WindowSize,

then the NAF sends a Call Accepted packet to the network which contains:

- a facility code indicating the window size

TP A.3.1.11 (reference ETS 300 325 [1] subclause 6.4.5, annex B, clause B.3).

keywords: U3ConnectRsp case 1n.

Verify that if the PUF sends a U3ConnectRsp to the NAF which contains:

- NCOID;
- FacilityData,

then the NAF sends a Call Accepted packet to the network which contains:

- facility data.

TP A3.1.12 (reference ETS 300 325 [1] / subclause 6.4.5, annex B, clause B.3, ISO/IEC 8878, subclause 6.1).

keywords: U3ConnectRsp, case 1f.

Verify that if the PUF sends a U3ConnectRsp to the NAF which contains:

- NCOID;
- RespondingDTEAddress,

then the NAF sends a Call Accepted packet to the network which contains:

- Called DTE-Address field set to the RespondingDTEAddress.

TP A3.1.13 (reference ETS 300 325 [1] / subclause 6.4.5, annex B, clause B.3, ISO/IEC 8878, subclause 6.1).

keywords: U3ConnectRsp case 1g.

Verify that if the PUF sends a U3ConnectRsp to the NAF which contains:

- NCOID;
- RespondingDTEAddressExt,

then the NAF sends a Call Accepted packet to the network which contains:

- Called Address extension facility set to the RespondingDTEAddressExt.

TP A3.1.14 (reference ETS 300 325 [1] / subclause 6.4.6, annex B, clause B.3).

keywords: U3ConnectCnf case 1a.

Verify that if the network sends a Call Connected packet to the NAF, then the NAF sends a U3ConnectCnf message to the PUF which contains:

- NCOID.

TP A3.1.15 (reference ETS 300 325 [1] / subclause 6.4.6, annex B, clause B.3).

keywords: U3ConnectCnf case 1b.

Verify that if the network sends a Call Connected packet to the NAF, then the NAF sends a U3ConnectCnf message to the PUF which contains:

- PacketSize.

TP A3.1.16 (reference ETS 300 325 [1] / subclause 6.4.6, annex B, clause B.3).

keywords: U3ConnectCnf case 1c.

Verify that if the network sends a Call Connected packet to the NAF, then the NAF sends a U3ConnectCnf message to the PUF which contains:

- WindowSize.

TP A.3.1.17 (reference ETS 300 325 [1] / subclause 6.4.6, annex B, clause B.3).

keywords: U3ConnectCnf case 1d.

Verify that if the network sends a Call Connected packet to the NAF which contains:

- Called DTE Address,

then the NAF sends a U3ConnectCnf message to the PUF which contains:

- NCOID;
- PacketSize;
- WindowSize;
- CalledDTEAddress.

TP A3.1.18 (reference ETS 300 325 [1] / subclause 6.4.6, annex B, clause B.3).

keywords: U3ConnectCnf case 1e.

Verify that if the network sends a Call Connected packet to the NAF which contains:

- Calling DTE Address,

then the NAF sends a U3ConnectCnf message to the PUF which contains:

- NCOID;
- PacketSize;
- WindowSize;
- CallingDTEAddress.

TP A3.1.19 (reference ETS 300 325 [1] / subclause 6.4.6, annex B, clause B.3).

keywords: U3ConnectCnf case 1f.

Verify that if the network sends a Call Connected packet to the NAF which contains:

- a facility field for Called DTE Address Extension,

then the NAF sends a U3ConnectCnf message to the PUF which contains:

- NCOID,
- PacketSize;
- WindowSize;
- CalledDTEAddressExt.

TP A.3.1.20 (reference ETS 300 325 [1] / subclause 6.4.6, annex B, clause B.3).

keywords: U3ConnectCnf case 1g.

Verify that if the network sends a Call Connected packet to the NAF which contains:

- a facility field for Calling DTE Address Extension,

then the NAF sends a U3ConnectCnf message to the PUF which contains:

- NCOID;
- PacketSize;
- WindowSize;
- CallingDTEAddressExt.

TP A3.1.21 (reference ETS 300 325 [1] / subclause 6.4.6, annex B, clause B.3).

keywords: U3ConnectCnf case 1j.

Verify that if the network sends a Call Connected packet to the NAF which contains:

- bit 7 of the GFI set,

then the NAF sends a U3ConnectCnf message to the PUF which contains:

- NCOID;
- PacketSize;
- WindowSize;
- ReceiptConfirm.

TP A3.1.22 (reference ETS 300 325 [1] / subclause 6.4.6, annex B, clause B.3).

keywords: U3ConnectCnf case 1k.

Verify that if the network sends a Call Connected packet to the NAF which contains:

- expedited data negotiation facility,

then the NAF sends a U3ConnectCnf message to the PUF which contains:

- NCOID;
- PacketSize;
- WindowSize;
- ExpediteData.

TP A3.1.23 (reference ETS 300 325 [1] / subclause 6.4.6, annex B, clause B.3, ISO/IEC 8878, subclause 6.1).

keywords: U3ConnectCnf case 1l.

Verify that if the network sends a Call Connected packet to the NAF which contains:

- QOS parameters,

then the NAF sends a U3ConnectCnf message to the PUF which contains:

- NCOID;
- PacketSize;
- WindowSize;
- QOSParameters.

TP A3.1.24 (reference ETS 300 325 [1] / subclause 6.4.6, annex B, clause B.3, ISO/IEC 8878, subclause 6.1).

keywords: U3ConnectCnf case 1m.

Verify that if the network sends a Call Connected packet to the NAF which contains:

- Called User Data Field,

then the NAF sends a U3ConnectCnf message to the PUF which contains:

- NCOID;
- PacketSize;
- WindowSize;
- UserData.

TP A3.1.25 (reference ETS 300 325 [1] / subclause 6.4.6, annex B, clause B.3, ISO/IEC 8878, subclause 6.1).

keywords: U3ConnectCnf case 1n.

Verify that if the network sends a Call Connected packet to the NAF which contains:

- facility data,

then the NAF sends a U3ConnectCnf message to the PUF which contains:

- NCOID;
- PacketSize;
- WindowSize;
- FacilityData.

TP A3.1.26 (reference ETS 300 325 [1] / subclause 6.4.6, annex B, clause B.3).

keywords: U3ConnectCnf case 1h.

Verify that if the network sends a Call Connected packet to the NAF which contains:

- a Called address facility,

then the NAF sends a U3ConnectCnf message to the PUF which contains:

- NCOID;
- PacketSize;
- WindowSize;
- RespondingDTEAddress.

TP A3.1.27 (reference ETS 300 325 [1] / subclause 6.4.6, annex B, clause B.3).

keywords: U3ConnectCnf case 1i.

Verify that if the network sends a Call Connected packet to the NAF which contains:

- a Called address extension facility,

then the NAF sends a U3ConnectCnf message to the PUF which contains:

- NCOID;
- PacketSize;
- WindowSize;
- RespondingDTEAddressExt.

TP A3.1.28 (reference ETS 300 325 [1] / subclause 6.4.7, annex B, clause B.3, CCITT Recommendation X.25, § 5.2.4).

keywords: U3DisconnectReq case 1b.

Verify that if the PUF sends a U3DisconnectReq message to the NAF containing:

- RespondingDTEAddress,

then the NAF sends a Clear Request packet to the network containing:

- address block containing called DTE address information.

TP A3.1.29 (reference ETS 300 325 [1] / subclause 6.4.7, annex B, clause B.3, CCITT Recommendation X.25, § 5.2.4).

keywords: U3DisconnectReq case 1bi.

Verify that if the PUF sends a U3DisconnectReq message to the NAF containing:

- RespondingDTEAddressExt,

then the NAF sends a Clear Request packet to the network containing:

- Called Address Extension Facility.

TP A3.1.30 (reference ETS 300 325 [1] / subclause 6.4.7, annex B, clause B.3, CCITT Recommendation X.25, § 5.2.4).

keywords: U3DisconnectReq case 1d.

Verify that if the PUF sends a U3DisconnectReq message to the NAF containing:

- X25Cause;

- X25Diagnostic;

then the NAF sends a Clear Request packet to the network containing:

- a diagnostic code.

TP A3.1.31 (reference ETS 300 325 [1] / subclause 6.4.7, annex B, clause B.3, CCITT Recommendation X.25, § 5.2.4).

keywords: U3DisconnectReq case 1e.

Verify that if the PUF, on a call which had specified the FastSelect parameter during the user connect establishment, sends a U3DisconnectReq message to the NAF containing:

- UserData,

then the NAF sends a Clear Request packet to the network containing:

- Clear User Data.

TP A3.1.32 (reference ETS 300 325 [1] / subclause 6.4.7, annex B, clause B.3, CCITT Recommendation X.25, § 5.2.4).

keywords: U3DisconnectReq case 1f.

Verify that if the PUF, sends a U3DisconnectReq message to the NAF containing:

- FacilityData,

then the NAF sends a Clear Request packet to the network containing:

- facilities.

TP A3.1.33 (reference ETS 300 325 [1] / subclause 6.4.8, annex B, clause B.3).

keywords: U3DisconnectInd case 1a.

Verify that if the network sends a DCE Clear Indicate packet to the NAF, the NAF sends a U3DisconnectInd message to the PUF containing:

- NCOID.

TP A3.1.34 (reference ETS 300 325 [1] / subclause 6.4.8, annex B, clause B.3).

keywords: U3DisconnectInd case 1b.

Verify that if the network sends a DCE Clear Indicate packet to the NAF, the NAF sends a U3DisconnectInd message to the PUF containing:

- X213Origin.

TP A3.1.35 (reference ETS 300 325 [1] / subclause 6.4.8, annex B, clause B.3).

keywords: U3DisconnectInd case 1d.

Verify that if the network sends a DCE Clear Indicate packet to the NAF containing

- Called DTE Address,

the NAF sends a U3DisconnectInd message to the PUF containing:

- NCOID;

- X213Origin;

- RespondingDTEAddress.

TP A3.1.36 (reference ETS 300 325 [1] / subclause 6.4.8, annex B, clause B.3).

keywords: U3DisconnectInd case 1e.

Verify that if the network sends a DCE Clear Indicate packet to the NAF containing:

- Called DTE Address Ext,

the NAF sends a U3DisconnectInd message to the PUF containing:

- NCOID;

- X213Origin;

- RespondingDTEAddressExt.

TP A3.1.37 (reference ETS 300 325 [1] / subclause 6.4.8, annex B, clause B.3).

keywords: U3DisconnectInd case 1f.

Verify that if the network sends a DCE Clear Indicate packet to the NAF containing:

- Clearing Cause,

the NAF sends a U3DisconnectInd message to the PUF containing:

- NCOID;

- X213Origin;

- X25Cause if present in the Clear Indicate packet, or X213Cause.

TP A.3.1.38 (reference ETS 300 325 [1] / subclause 6.4.8, annex B, clause B.3).

keywords: U3DisconnectInd case 1g.

Verify that if the network sends a DCE Clear Indicate packet to the NAF containing:

- Diagnostic code,

the NAF sends a U3DisconnectInd message to the PUF containing:

- NCOID;

- X213Origin;

- X25Diagnostic.



TP A3.1.39 (reference ETS 300 325 [1] / subclause 6.4.8, annex B, clause B.3).

keywords: U3DisconnectInd case 1h.

Verify that if the network sends a DCE Clear Indicate packet to the NAF containing:

- Facility data,

the NAF sends a U3DisconnectInd message to the PUF containing:

- NCOID;
- X213Origin;
- FacilityData.

TP A3.1.40 (reference ETS 300 325 [1] / subclause 6.4.8, annex B, clause B.3).

keywords: U3DisconnectInd case 1i.

Verify that if the network sends a DCE Clear Indicate packet to the NAF containing:

- Clear User Data,

the NAF sends a U3DisconnectInd message to the PUF containing:

- NCOID;
- X213Origin;
- UserData.

TP A3.1.41 (reference ETS 300 325 [1] / subclause 6.4.9, annex B, clause B.3).

keywords: U3DataReq case 1a.

Verify that if the PUF sends a U3DataReq message to the NAF, the NAF sends a DTE data packet to the network containing:

- user data from the data buffer.

TP A3.1.42 (reference ETS 300 325 [1] / subclause 6.4.9, annex B, clause B.3).

keywords: U3DataReq case 1b.

Verify that if the PUF sends a U3DataReq message to the NAF containing:

- Bit\_DQM,

the NAF sends a DTE data packet to the network containing:

- user data from the data buffer;
- the D bit mapped from the DQM\_bit of the U3DataReq message.

TP A3.1.43 (reference ETS 300 325 [1] / subclause 6.4.9, annex B, clause B.3).

keywords: U3DataReq case 1c.

Verify that if the PUF sends a U3DataReq message to the NAF containing:

- Bit\_DQM,

the NAF sends a DTE data packet to the network containing:

- user data from the data buffer;
- the Q bit mapped from the DQM\_bit of the U3DataReq message.

TP A3.1.44 (reference ETS 300 325 [1] / subclause 6.4.9, annex B, clause B.3).

keywords: U3DataReq case 1d.

Verify that if the PUF sends a U3DataReq message to the NAF containing:

- Bit\_DQM,

the NAF sends a DTE data packet to the network containing:

- user data from the data buffer;
- the M bit mapped from the DQM\_bit of the U3DataReq message.

TP A3.1.45 (reference ETS 300 325 [1] / subclause 6.4.10, annex B, clause B.3).

keywords: U3DataInd case 1a.

Verify that if the network sends a DCE data packet to the NAF, then the NAF sends a U3DataInd packet to the PUF containing:

- NCOID.

TP A3.1.46 (reference ETS 300 325 [1] / subclause 6.4.10, annex B, clause B.3).

keywords: U3DataInd case 1b.

Verify that if the network sends a DCE data packet to the NAF, then the NAF sends a U3DataInd packet to the PUF containing:

- NCOID,
- the data received in the data buffer.

TP A.3.1.47 (reference ETS 300 325 [1] / subclause 6.4.10, annex B, clause B.3).

keywords: U3DataInd case 1c.

Verify that if the network sends a DCE data packet to the NAF with the need for receipt of data, the qualifier bit or the more bit set, then the NAF sends a U3DataInd packet to the PUF containing:

- NCOID;
- the data received in the data buffer;
- Bit\_DQM.

TP A3.1.48 (reference ETS 300 325 [1] / subclause 6.4.12, annex B, clause B.3).

keywords: U3ExpeditedDataInd case 1a.

Verify that if the network sends expedited data to the NAF, the data is passed to the PUF in a U3ExpeditedDataInd message that contains:

- NCOID.

TP A3.1.49 (reference ETS 300 325 [1] / subclause 6.4.12, annex B, clause B.3).

keywords: U3ExpeditedDataInd case 1b.

Verify that if the network sends expedited data to the NAF, the data is passed to the PUF in a U3ExpeditedDataInd message that contains:

- UserData.

TP A3.1.50 (reference ETS 300 325 [1] / subclause 6.4.14, annex B, clause B.3, CCITT Recommendation X.25, § 5.4.3).

keywords: U3ResetInd case 1a.

Verify that if the Network sends a Reset indication packet to the NAF, the NAF sends a U3ResetInd to the PUF containing:

- NCOID.

TP A3.1.51 (reference ETS 300 325 [1] / subclause 6.4.14, annex B, clause B.3, CCITT Recommendation X.25, § 5.4.3).

keywords: U3ResetInd case 1b.

Verify that if the Network sends a Reset indication packet to the NAF, the NAF sends a U3ResetInd to the PUF containing:

- X213Origin.

TP A3.1.52 (reference ETS 300 325 [1] / subclause 6.4.14, annex B, clause B.3, CCITT Recommendation X.25, § 5.4.3).

keywords: U3ResetInd case 1c.

Verify that if the Network sends a Reset indication packet to the NAF, the NAF sends a U3ResetInd to the PUF containing:

- NCOID;
- X213Origin;
- X25Cause.

TP A3.1.53 (reference ETS 300 325 [1] / subclause 6.4.14, annex B, clause B.3, CCITT Recommendation X.25, § 5.4.3).

keywords: U3ResetInd case 1d.

Verify that if the Network sends a Reset Indication packet to the NAF, the NAF sends a U3ResetInd to the PUF containing:

- NCOID;

- X213Origin;
- X25Cause;

and if the X25Cause is sent, then an X25Diagnostic is present if the Diagnostic code was present in the Reset Indication packet.

TP A3.1.54 (reference ETS 300 325 [1] / subclause 6.4.3, annex B, clause B.3).

keywords: U3ConnectReq case 13.

Verify that if the PUF sends a U3ConnectReq message to the NAF in state 1 which contains:

- NCOID;
- PacketSize;

then in the CALL REQUEST packet the PacketSize field has the same value as that of the U3ConnectReq message PacketSize field and this value overrides any value in the NCO.

TP A3.1.55 (reference ETS 300 325 [1] / subclause 6.4.3, annex B, clause B.3).

keywords: U3ConnectReq case 14.

Verify that if the PUF sends a U3ConnectReq message to the NAF in state 1 which contains:

- NCOID;
- WindowSize;

then in the CALL REQUEST packet the WindowSize field has the same value as that of the U3ConnectReq message WindowSize field and this value overrides any value in the NCO.

TP A3.1.56 (reference ETS 300 325 [1] / subclause 6.4.3, annex B, clause B.3).

keywords: U3ConnectReq case 16a.

Verify that if the PUF sends a U3ConnectReq message to the NAF in state 1 which contains:

- NCOID;
- FacilityData;
- Bcug;

then in the CALL REQUEST packet, the Bcug parameter of the U3ConnectReq message overrides the FacilityData parameter of the U3ConnectReq message.

TP A3.1.57 (reference ETS 300 325 [1] / subclause 6.4.3, annex B, clause B.3).

keywords: U3ConnectReq case 16b.

Verify that if the PUF sends a U3ConnectReq message to the NAF in state 1 which contains:

- NCOID;
- FacilityData;
- FastSelect;

then in the CALL REQUEST packet, the FastSelect parameter of the U3ConnectReq message overrides the FacilityData parameter of the U3ConnectReq message.

TP A3.1.58 (reference ETS 300 325 [1] / subclause 6.4.3, annex B, clause B.3).

keywords: U3ConnectReq case 16c.

Verify that if the PUF sends a U3ConnectReq message to the NAF in state 1 which contains:

- NCOID;
- FacilityData;
- CalledAddressExt;

then in the CALL REQUEST packet, the CalledAddressExt parameter of the U3ConnectReq message overrides the FacilityData parameter of the U3ConnectReq message.

TP A3.1.59 (reference ETS 300 325 [1] / subclause 6.4.3, annex B, clause B.3).

keywords: U3ConnectReq case 16d.

Verify that if the PUF sends a U3ConnectReq message to the NAF in state 1 which contains:

- NCOID;
- FacilityData;
- CallingAddressExt;

then in the CALL REQUEST packet, the CallingAddressExt parameter of the U3ConnectReq message overrides the FacilityData parameter of the U3ConnectReq message.

TP A3.1.60 (reference ETS 300 325 [1] / subclause 6.4.4, annex B, clause B.3).

keywords: U3ConnectInd case 1a.

Verify that if the NAF in state 1 receives an Incoming Call packet from the network, it sends a U3ConnectInd message to the PUF which contains:

- NCOID.

TP A3.1.61 (reference ETS 300 325 [1] / subclause 6.4.4, annex B, clause B.3).

keywords: U3ConnectInd case 1b.

Verify that if the NAF in state 1 receives an Incoming Call packet from the network, it sends a U3ConnectInd message to the PUF which contains:

- PacketSize.

TP A3.1.62 (reference ETS 300 325 [1] / subclause 6.4.4, annex B, clause B.3).

keywords: U3ConnectInd case 1c.

Verify that if the NAF in state 1 receives an Incoming Call packet from the network, it sends a U3ConnectInd message to the PUF which contains:

- WindowSize.

TP A3.1.63 (reference ETS 300 325 [1] / subclause 6.4.4, annex B, clause B.3).

keywords: U3ConnectInd case 2a.

Verify that if the NAF in state 1 receives an Incoming Call packet from the network containing a Called address, it sends a U3ConnectInd message to the PUF which contains:

- NCOID;
- PacketSize;
- WindowSize;
- CalledDTEAddress.

TP A3.1.64 (reference ETS 300 325 [1] / subclause 6.4.4, annex B, clause B.3).

keywords: U3ConnectInd case 2b.

Verify that if the NAF in state 1 receives an Incoming Call packet from the network containing a called address extension, it sends a U3ConnectInd message to the PUF which contains:

- NCOID;
- PacketSize;
- WindowSize;
- CalledDTEAddressExt.

TP A3.1.65 (reference ETS 300 325 [1] / subclause 6.4.4, annex B, clause B.3).

keywords: U3ConnectInd case 2c.

Verify that if the NAF in state 1 receives an Incoming Call packet containing a called address from the network, it sends a U3ConnectInd message to the PUF which contains:

- NCOID;
- PacketSize;
- WindowSize;
- CallingDTEAddress.

TP A3.1.66 (reference ETS 300 325 [1] / subclause 6.4.4, annex B, clause B.3).

keywords: U3ConnectInd case 2d.

Verify that if the NAF in state 1 receives an Incoming Call packet from the network containing a calling DTE address extension, it sends a U3ConnectInd message to the PUF which contains:

- NCOID;
- PacketSize;
- WindowSize;
- CallingDTEAddressExt.

TP A3.1.67 (reference ETS 300 325 [1] / subclause 6.4.4, annex B, clause B.3).

keywords: U3ConnectInd case 2e.

Verify that if the NAF in state 1 receives an Incoming Call packet from the network with the D bit on, it sends a U3ConnectInd message to the PUF which contains:

- NCOID;
- PacketSize;
- WindowSize;
- ReceiptConfirm.

TP A3.1.68 (reference ETS 300 325 [1] / subclause 6.4.4, annex B, clause B.3).

keywords: U3ConnectInd case 2f.

Verify that if the NAF in state 1 receives an Incoming Call packet requesting use of expedited data from the network, it sends a U3ConnectInd message to the PUF which contains:

- NCOID;
- PacketSize;
- WindowSize;
- ExpeditedData.

TP A3.1.69 (reference ETS 300 325 [1] / subclause 6.4.4, annex B, clause B.3).

keywords: U3ConnectInd case 2g.

Verify that if the NAF in state 1 receives an Incoming Call packet containing QOS information from the network, it sends a U3ConnectInd message to the PUF which contains:

- NCOID;
- PacketSize;
- WindowSize;
- QOSParameters.

TP A3.1.70 (reference ETS 300 325 [1] / subclause 6.4.4, annex B, clause B.3).

keywords: U3ConnectInd case 2h.

Verify that if the NAF in state 1 receives an Incoming Call packet containing user data from the network, it sends a U3ConnectInd message to the PUF which contains:

- NCOID;
- PacketSize;
- WindowSize;
- UserData of maximum length 16, or 128 if FastSelect parameter is also present.

TP A3.1.71 (reference ETS 300 325 [1] / subclause 6.4.4, annex B, clause B.3).

keywords: U3ConnectInd case 2i.

Verify that if the NAF in state 1 receives an Incoming Call packet containing Bcug information from the network, it sends a U3ConnectInd message to the PUF which contains:

- NCOID;
- PacketSize;
- WindowSize;
- Bcug.

TP A3.1.72 (reference ETS 300 325 [1] / subclause 6.4.4, annex B, clause B.3).

keywords: U3ConnectInd case 2j.

Verify that if the NAF in state 1 receives an Incoming Call packet containing fast select information from the network, it sends a U3ConnectInd message to the PUF which contains:

- NCOID;
- PacketSize;
- WindowSize;
- FastSelect.

## **Annex B (informative): Bibliography**

For the purposes of this I-ETS, the following recommendation has been used for information:

- 1) ITU-T Recommendation T.70 (1993): "Network-independent basic transport service for the telematic services".

## History

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July 1995	Public Enquiry	PE 87:	1995-07-10 to 1995-11-03
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