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# Integrated Services Digital Network (ISDN);
# Call Hold (HOLD) supplementary service;
# Digital Subscriber Signalling System No. one (DSS1) protocol;
# Part 5: Test Suite Structure and Test Purposes (TSS&TP)
# specification for the network

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## Foreword

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

This ETS is part 5 of a multi-part standard covering the Digital Subscriber Signalling System No. one (DSS1) protocol specification for the Integrated Services Digital Network (ISDN) Call Hold (HOLD) supplementary service, as described below:

Part 1:     "Protocol specification";

Part 2:     "Protocol Implementation Conformance Statement (PICS) proforma specification";

Part 3:     "Test Suite Structure and Test Purposes (TSS&TP) specification for the user";

Part 4:     "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for the user";

**Part 5:     "TSS&TP specification for the network";**

Part 6:     "ATS and partial PIXIT proforma specification for the network".

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

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# 1 Scope

This fifth part of ETS 300 141 specifies the Test Suite Structure and Test Purposes (TSS&TP) for the Network side of the T reference point or coincident S and T reference point (as defined in ITU-T Recommendation I.411 [7]) of implementations conforming to the stage three standard for the Call Hold (HOLD) supplementary service for the pan-European Integrated Services Digital Network (ISDN) by means of the Digital Subscriber Signalling System No. one (DSS1) protocol, ETS 300 141-1 [1].

A further part of this ETS specifies the Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma based on this ETS. Other parts specify the TSS&TP and the ATS and partial PIXIT proforma for the User side of the T reference point or coincident S and T reference point of implementations conforming to ETS 300 141-1 [1].

# 2 Normative references

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

[1]  ETS 300 141-1 (1993): "Integrated Services Digital Network (ISDN); Call Hold (HOLD) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".

[2]  ETS 300 141-2: "Integrated Services Digital Network (ISDN); Call Hold (HOLD) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 2: Protocol Implementation Conformance Statement (PICS) proforma specification".

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

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

[5]  ISO/IEC 9646-3: "Information Technology - OSI Conformance Testing Methodology and Framework; Part 3: The Tree and Tabular Combined Notation".

[6]  ETS 300 196-1 (1993): "Integrated Services Digital Network (ISDN); Generic functional protocol for the support of supplementary services; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".

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

[8]  ETS 300 102-1: "Integrated Services Digital Network (ISDN); User-network interface layer 3; Specifications for basic call control".

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

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

[11]  ITU-T Recommendation I.210 (1993): "Principles of the telecommunication services supported by an ISDN and the means to describe them".

# 3 Definitions

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

## 3.1 Definitions related to conformance testing

**abstract test case:** Refer to ISO/IEC 9646-1 [3].

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

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

**implicit send event:** Refer to ISO/IEC 9646-3 [5].

**lower tester:** Refer to ISO/IEC 9646-1 [3].

**point of control and observation:** Refer to ISO/IEC 9646-1 [3].

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

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

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

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

**system under test:** Refer to ISO/IEC 9646-1 [3].

**Test Purpose (TP):** Refer to ISO/IEC 9646-1 [3].

## 3.2 Definitions related to ETS 300 141-1

**Call Held auxiliary state:** See ETS 300 196-1 [6], subclause 7.1.2.

**call reference:** See ETS 300 102-1 [8], subclause 4.3.

**component:** See ETS 300 196-1 [6], subclause 11.2.2.1.

**Idle auxiliary state:** See ETS 300 196-1 [6], subclause 7.1.2.

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

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

**invoke component:** See ETS 300 196-1 [6], subclause 11.2.2.1.

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

**network (S/T):** The DSS1 protocol entity at the network side of the user-network interface where a coincident S and T reference point applies.

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

**return error component:** See ETS 300 196-1 [6], subclause 11.2.2.1.

**return result component:** See ETS 300 196-1 [6], subclause 11.2.2.1.

**served user:** The served user is the user who invokes the HOLD supplementary service.

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

**supplementary service:** See CCITT Recommendation I.210 [11], subclause 2.4.

## 4       Abbreviations

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

| | |
|---|---|
| ATM | Abstract Test Method |
| ATS | Abstract Test Suite |
| DSS1 | Digital Subscriber Signalling System No. one |
| HOLD | Call Hold |
| ISDN | Integrated Services Digital Network |
| IUT | Implementation Under Test |
| N00 | Null call state |
| N02 | Overlap Sending call state |
| N03 | Outgoing Call Proceeding call state |
| N04 | Call Delivered call state |
| N06 | Call Present call state |
| N07 | Call Received call state |
| N08 | Connect Request call state |
| N09 | Incoming Call Proceeding call state |
| N10 | Active call state |
| N12 | Disconnect Indication call state |
| N19 | Release Request call state |
| N25 | Overlap Receiving call state |
| PICS | Protocol Implementation Conformance Statement |
| PIXIT | Protocol Implementation eXtra Information for Testing |
| TP | Test Purpose |
| TSS | Test Suite Structure |

## 5       Test Suite Structure (TSS)
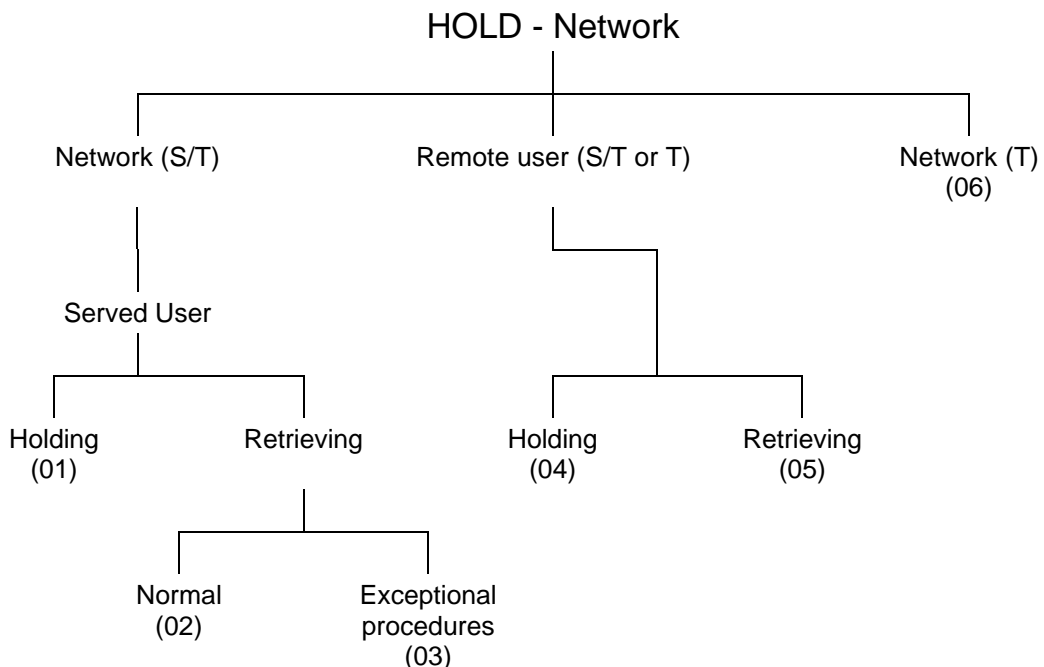


NOTE:       Numbers in brackets represent group numbers and are used in TP identifiers.

**Figure 1: Test suite structure**

# 6 Test Purposes (TP)

## 6.1 Introduction

For each test requirement a TP is defined.

### 6.1.1 TP naming convention

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

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

| | | | | |
|---|---|---|---|---|
| Identifier: | **<ss>_<iut><group>_<nnn>** | | | |
| <ss> | = | supplementary service: e.g. "HOLD" | | |
| <iut> | = | type of IUT: | U | User |
| | | | N | Network |
| <group> | = | group | 2 digit field representing group reference according to TSS | |
| <nnn> | = | sequential number | (001-999) | |

### 6.1.2 Source of TP definition

The TPs are based on ETS 300 141-1 [1], clauses 9, 10 and 14.

### 6.1.3 TP structure

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

**Table 2: Structure of a single TP**

| TP part | Text | Example |
|---|---|---|
| Header | **\<Identifier\>** *tab*<br>**\<paragraph number in base ETS\>** *tab*<br>**\<type of test\>** *tab*<br>**\<condition\>** *CR.* | see table 1<br>**subclause 0.0.0**<br>**valid, invalid, inopportune**<br>**mandatory, optional, conditional** |
| Stimulus | Ensure that the IUT in the<br> \<basic call state\><br>and \<supplementary service state\><br>\<trigger\> *see below for message structure*<br>*or* \<goal\> | <br>N00, N10, etc.<br>and Hold Requested, ...<br>receiving a XXXX message<br>to request a ... |
| Reaction | \<action\><br>\<conditions\><br>*if the action is sending*<br> *see below for message structure*<br>\<next action\>, *etc.*<br>and remains in the same state<br>*or* and enters state \<state\> | sends, saves, does, etc.<br>using en-bloc sending, ... |
| Message structure | \<message type\><br>message containing a<br>*a)* \<info element\><br>information element with<br>*b)* a \<field name\><br>encoded as *or* including<br>\<coding of the field\> and *back to a or b,* | SETUP, FACILITY, CONNECT, ...<br><br>Bearer capability, Facility, ... |
| NOTE: | Text in italics will not appear in TPs and text between \<\> is filled in for each TP and may differ from one TP to the next. | |

## 6.1.4 Test strategy

As the base standard ETS 300 141-1 [1] contains no explicit requirements for testing, the TPs were generated as a result of an analysis of the base standard and the PICS specification ETS 300 141-2 [2]. The criteria applied included the following:

- only the requirements from the point of view of the T or coincident S and T reference point are considered;

- whether or not a test case can be built from the TP is not considered.

## 6.2 Network TPs for HOLD

All PICS items referred to in this subclause are as specified in ETS 300 141-2 [2] unless indicated otherwise by another numbered reference. Where not stated otherwise, PICS item R 1 ("support the HOLD supplementary service") is required to be supported.

### 6.2.1 Network (S/T)

**Selection**: IUT supports combined S and T reference point procedures. PICS: R 3.1.

#### 6.2.1.1 Served User

##### 6.2.1.1.1 Holding

**HOLD_N01_001**      **subclause 9.1.1, 2nd paragraph**      **valid**      **optional**
Ensure that the IUT, while in the Call Delivered call state N04 and Idle auxiliary state, receiving a HOLD message,
> sends a HOLD ACKNOWLEDGE and enters the Call Held auxiliary state.
> **Selection:** IUT supports the holding of a call in the Call Delivered call state. PICS: MC 3.2.

**HOLD_N01_002**      **subclause 9.1.1, 2nd paragraph**      **valid**      **mandatory**
Ensure that the IUT, while in the Active call state N10 and Idle auxiliary state, receiving a HOLD message,
> sends a HOLD ACKNOWLEDGE and enters the Call Held auxiliary state.

**HOLD_N01_003**      **subclause 9.1.2**      **valid**      **optional**
Ensure that the IUT, while in the Call Delivered call state N04 and Idle auxiliary state, receiving a HOLD message when the HOLD supplementary service is not subscribed to,
> sends a HOLD REJECT message cause #50 "requested facility not subscribed" and remains in the Idle auxiliary state.
> **Selection:** IUT supports the holding of a call in the Call Delivered call state. PICS: MC 3.2.
> **Selection:** IUT supports provision of the service on a subscription basis.

**HOLD_N01_004**      **subclause 9.1.2**      **valid**      **optional**
Ensure that the IUT, while in the Active call state N10 and Idle auxiliary state, receiving a HOLD message when the HOLD supplementary service is not subscribed to,
> sends a HOLD REJECT message cause #50 "requested facility not subscribed" and remains in the Idle auxiliary state.
> **Selection:** IUT supports provision of the service on a subscription basis.

**HOLD_N01_005**      **subclause 9.1.2**      **inopportune**      **mandatory**
Ensure that the IUT, while in the Null call state N00 and Idle auxiliary state, receiving a HOLD message,
> sends a HOLD REJECT message cause #101 "message not compatible with call state" and remains in the Idle auxiliary state.

**HOLD_N01_006**      **subclause 9.1.2**      **inopportune**      **mandatory**
Ensure that the IUT, while in the Overlap Sending call state N02 and Idle auxiliary state, receiving a HOLD message,
> sends a HOLD REJECT message cause #101 "message not compatible with call state" and remains in the Idle auxiliary state.

**HOLD_N01_007**      **subclause 9.1.2**      **inopportune**      **mandatory**
Ensure that the IUT, while in the Outgoing Call Proceeding call state N03 and Idle auxiliary state, receiving a HOLD message,
> sends a HOLD REJECT message cause #101 "message not compatible with call state" and remains in the Idle auxiliary state.

**HOLD_N01_008**      **subclause 9.1.2**      **inopportune**      **mandatory**
Ensure that the IUT, while in the Call Present call state N06 and Idle auxiliary state, receiving a HOLD message,
> sends a HOLD REJECT message cause #101 "message not compatible with call state" and remains in the Idle auxiliary state.

**HOLD_N01_009**          **subclause 9.1.2**                              **inopportune**          **mandatory**
Ensure that the IUT, while in the Call Received call state N07 and Idle auxiliary state, receiving a HOLD message,
> sends a HOLD REJECT message cause #101 "message not compatible with call state" and remains in the Idle auxiliary state.

**HOLD_N01_010**          **subclause 9.1.2**                              **inopportune**          **mandatory**
Ensure that the IUT, while in the Connect Request call state N08 and Idle auxiliary state, receiving a HOLD message,
> sends a HOLD REJECT message cause #101 "message not compatible with call state" and remains in the Idle auxiliary state.

**HOLD_N01_011**          **subclause 9.1.2**                              **inopportune**          **mandatory**
Ensure that the IUT, while in the Incoming Call Proceeding call state N09 and Idle auxiliary state, receiving a HOLD message,
> sends a HOLD REJECT message cause #101 "message not compatible with call state" and remains in the Idle auxiliary state.

**HOLD_N01_012**          **subclause 9.1.2**                              **inopportune**          **mandatory**
Ensure that the IUT, while in the Disconnect Indication call state N12 and Idle auxiliary state, receiving a HOLD message,
> does not respond and remains in the Idle auxiliary state.

**HOLD_N01_013**          **subclause 9.1.2**                              **inopportune**          **mandatory**
Ensure that the IUT, while in the Release Request call state N19 and Idle auxiliary state, receiving a HOLD message,
> does not respond and remains in the Idle auxiliary state.

**HOLD_N01_014**          **subclause 9.1.2**                              **inopportune**          **mandatory**
Ensure that the IUT, while in the Overlap Receiving call state N25 and Idle auxiliary state, receiving a HOLD message,
> sends a HOLD REJECT message cause #101 "message not compatible with call state" and remains in the Idle auxiliary state.

**HOLD_N01_015**          **subclause 9.1.2**                              **invalid**          **mandatory**
Ensure that the IUT, while in the Active call state N10 and Idle auxiliary state, receiving a HOLD message with a call reference which identifies a call which is not a circuit mode call,
> sends a HOLD REJECT message cause #57 "bearer capability not authorized" and remains in the Idle auxiliary state.

**HOLD_N01_016**          **subclause 9.1.2**                              **invalid**          **optional**
Ensure that the IUT, while in the Call Delivered call state N04 and Idle auxiliary state, receiving a HOLD message when the network does not support the HOLD supplementary service,
> sends a HOLD REJECT message cause #69 "requested facility not implemented" and remains in the Idle auxiliary state.
> **Selection:** IUT does not support the HOLD supplementary service. PICS: NOT R 1.

**HOLD_N01_017**          **subclause 9.1.2**                              **invalid**          **mandatory**
Ensure that the IUT, while in the Active call state N10 and Idle auxiliary state, receiving a HOLD message when the network does not support the HOLD supplementary service,
> sends a HOLD REJECT message cause #69 "requested facility not implemented" and remains in the Idle auxiliary state.
> **Selection**:   IUT does not support the HOLD supplementary service. PICS: NOT R 1.

**6.2.1.1.2          Retrieving**

**6.2.1.1.2.1          Normal**

**HOLD_N02_001          subclause 9.3.1                              valid          mandatory**
Ensure that the IUT, while in the Active call state N10 and Call Held auxiliary state, receiving a RETRIEVE message,
        sends a RETRIEVE ACKNOWLEDGE and enters the Idle auxiliary state.

**HOLD_N02_002          subclause 9.3.1                              valid          optional**
Ensure that the IUT, while in the Call Delivered call state N04 and Call Held auxiliary state, receiving a RETRIEVE message,
        sends a RETRIEVE ACKNOWLEDGE and enters the Idle auxiliary state.
        **Selection:**  IUT supports the holding of a call in the Call Delivered call state. PICS: MC 3.2.

**6.2.1.1.2.2          Exceptional Procedures**

**HOLD_N03_001          subclauses 9.3.2 & [6] 7.4.2.2          valid          mandatory**
Ensure that the IUT, while in the Active call state N10 and Idle auxiliary state, receiving a RETRIEVE,
        sends a RETRIEVE REJECT message cause #101 "message not compatible with call state" and
        remains in the Idle auxiliary state.

**HOLD_N03_002          subclauses 9.3.2 & [6] 7.4.2.2          valid          optional**
Ensure that the IUT, while in the Call Delivered call state N04 and Call Held auxiliary state, receiving a RETRIEVE message with a Channel Identification information element indicating "B1 channel exclusive" where B1 is not available,
        sends a RETRIEVE REJECT message cause #44 "requested circuit/channel not available" and
        remains in the Call Held auxiliary state.
        **Selection:**  IUT supports the holding of a call in the Call Delivered call state. PICS: MC 3.2.

**HOLD_N03_003          subclauses 9.3.2 & [6] 7.4.2.2          valid          mandatory**
Ensure that the IUT, while in the Active call state N10 and Call Held auxiliary state, receiving a RETRIEVE message with a Channel Identification information element indicating "B1 channel exclusive" where B1 is not available,
        sends a RETRIEVE REJECT message cause #44 "requested circuit/channel not available" and
        remains in the Call Held auxiliary state.

**HOLD_N03_004          subclauses 9.3.2 & [6] 7.4.2.2          inopportune          mandatory**
Ensure that the IUT, while in the Null call state N00, receiving a RETRIEVE message,
        sends a RETRIEVE REJECT message cause #101 "message not compatible with call state" and
        remains in the Idle auxiliary state.

**HOLD_N03_005          subclauses 9.3.2 & [6] 7.4.2.2          inopportune          mandatory**
Ensure that the IUT, while in the Overlap Sending call state N02, receiving a RETRIEVE message,
        sends a RETRIEVE REJECT message cause #101 "message not compatible with call state" and
        remains in the Idle auxiliary state.

**HOLD_N03_006          subclauses 9.3.2 & [6] 7.4.2.2          inopportune          mandatory**
Ensure that the IUT, while in the Outgoing Call Proceeding call state N03, receiving a RETRIEVE message,
        sends a RETRIEVE REJECT message cause #101 "message not compatible with call state" and
        remains in the Idle auxiliary state.

**HOLD_N03_007          subclauses 9.3.2 & [6] 7.4.2.2          inopportune          mandatory**
Ensure that the IUT, while in the Call Present call state N06, receiving a RETRIEVE message,
        sends a RETRIEVE REJECT message cause #101 "message not compatible with call state" and
        remains in the Idle auxiliary state.

**HOLD_N03_008          subclauses 9.3.2 & [6] 7.4.2.2          inopportune          mandatory**
Ensure that the IUT, while in the Call Received call state N07, receiving a RETRIEVE message,
        sends a RETRIEVE REJECT message cause #101 "message not compatible with call state" and
        remains in the Idle auxiliary state.

**HOLD_N03_009**          **subclauses 9.3.2 & [6] 7.4.2.2**          **inopportune**          **mandatory**
Ensure that the IUT, while in the Connect Request call state N08, receiving a RETRIEVE message,
     sends a RETRIEVE REJECT message cause #101 "message not compatible with call state" and
     remains in the Idle auxiliary state.

**HOLD_N03_010**          **subclauses 9.3.2 & [6] 7.4.2.2**          **inopportune**          **mandatory**
Ensure that the IUT, while in the Incoming Call Proceeding call state N09, receiving a RETRIEVE
message,
     sends a RETRIEVE REJECT message cause #101 "message not compatible with call state" and
     remains in the Idle auxiliary state.

**HOLD_N03_011**          **subclauses 9.3.2 & [6] 7.4.2.2**          **inopportune**          **mandatory**
Ensure that the IUT, while in the Disconnect Indication call state N12, receiving a RETRIEVE message,
     sends a RETRIEVE REJECT message cause #101 "message not compatible with call state" and
     remains in the Idle auxiliary state.

**HOLD_N03_012**          **subclauses 9.3.2 & [6] 7.4.2.2**          **inopportune**          **mandatory**
Ensure that the IUT, while in the Overlap Receiving call state N25, receiving a RETRIEVE message,
     sends a RETRIEVE REJECT message cause #101 "message not compatible with call state" and
     remains in the Idle auxiliary state.

### 6.2.2          Remote user

> NOTE:          This group of TPs are relevant for both the combined S and T reference point and the
> T reference point.

### 6.2.2.1          Holding

**HOLD_N04_001**          **subclauses 9.2.1 & 10.2.1**          **valid**          **mandatory**
Ensure that the IUT, while in the Active call state N10, to notify the non-served user that the call is held,
     sends a NOTIFY or FACILITY message with a notification indicator coded as "remote hold" and
     remains in the Active call state.

**HOLD_N04_002**          **subclauses 9.2.1 & 10.2.1**          **valid**          **optional**
Ensure that the IUT, while in the Call Received call state N07, to notify the non-served user that the call is
held,
     sends a NOTIFY or FACILITY message with a notification indicator coded as "remote hold" and
     remains in the Call Received call state.
     **Selection:** IUT supports the holding of a call in the Call Delivered call state (served user side).
               PICS MC 3.2.

### 6.2.2.2          Retrieving

**HOLD_N05_001**          **subclauses 9.4.1 & 10.2.1**          **invalid**          **optional**
Ensure that the IUT, while in the Call Received call state N07, to notify the non-served user that the call
has been retrieved,
     sends a NOTIFY or FACILITY message with a notification indicator coded as "remote retrieval" and
     remains in the Call Received call state.
     **Selection:** IUT supports the holding of a call in the Call Delivered call state (served user side).
               PICS MC 3.2.

**HOLD_N05_002**          **subclauses 9.4.1 & 10.2.1**          **valid**          **mandatory**
Ensure that the IUT, while in the Active call state N10, to notify the non-served user that the call has been
retrieved,
     sends a NOTIFY or FACILITY message with a notification indicator coded as "remote retrieval" and
     remains in the Active call state.

### 6.2.3 Network (T)

**Selection:** IUT supports T reference point procedures. PICS R 3.2.

**HOLD_N06_001**　　　**subclause 10.1.1, 1st paragraph**　　　**valid**　　　**mandatory**
Ensure that the IUT, while in the Call Delivered call state N04, receiving a NOTIFY message with Notification Indicator information element coded as "remote hold",
　　accepts the message and remains in the same state.

**HOLD_N06_002**　　　**subclause 10.1.1, 1st paragraph**　　　**valid**　　　**mandatory**
Ensure that the IUT, while in the Active call state N10, receiving a NOTIFY message with Notification Indicator information element coded as "remote hold",
　　accepts the message and remains in the same state.

**HOLD_N06_003**　　　**subclause 10.1.1, 1st paragraph**　　　**valid**　　　**mandatory**
Ensure that the IUT, while in the Call Delivered call state N04, receiving a NOTIFY message with Notification Indicator information element coded as "remote retrieval",
　　accepts the message and remains in the same state.

**HOLD_N06_004**　　　**subclause 10.1.1, 1st paragraph**　　　**valid**　　　**mandatory**
Ensure that the IUT, while in the Active call state N10, receiving a NOTIFY message with Notification Indicator information element coded as "remote retrieval",
　　accepts the message and remains in the same state.

**HOLD_N06_005**　　　**subclause 10.1.2, 1st paragraph**　　　**invalid**　　　**optional**
Ensure that the IUT, while in the Call Delivered call state N04 receiving a HOLD message,
　　sends either a STATUS message cause #97 "message type non-existent or not implemented", #98 "message not compatible with call state or message type non-existent or not implemented" or #101 "message not compatible with call state", or a STATUS ENQUIRY message and remains in the same state.
　　**Selection:** HOLD and RETRIEVE messages are not implemented by the network. PICS: NOT R 1.

**HOLD_N06_006**　　　**subclause 10.1.2, 1st paragraph**　　　**invalid**　　　**optional**
Ensure that the IUT, while in the Call Delivered call state N04 receiving a RETRIEVE message,
　　sends either a STATUS message cause #97 "message type non-existent or not implemented", #98 "message not compatible with call state or message type non-existent or not implemented" or #101 "message not compatible with call state", or a STATUS ENQUIRY message and remains in the same state.
　　**Selection:** HOLD and RETRIEVE messages are not implemented by the network. PICS: NOT R 1.

**HOLD_N06_007**　　　**subclause 10.1.2, 1st paragraph**　　　**invalid**　　　**optional**
Ensure that the IUT, while in the Active call state N10 receiving a HOLD message,
　　sends either a STATUS message cause #97 "message type non-existent or not implemented", #98 "message not compatible with call state or message type non-existent or not implemented" or #101 "message not compatible with call state", or a STATUS ENQUIRY message and remains in the same state.
　　**Selection:** HOLD and RETRIEVE messages are not implemented by the network. PICS: NOT R 1.

**HOLD_N06_008**　　　**subclause 10.1.2, 1st paragraph**　　　**invalid**　　　**optional**
Ensure that the IUT, while in the Active call state N10 receiving a RETRIEVE message,
　　sends either a STATUS message cause #97 "message type non-existent or not implemented", #98 "message not compatible with call state or message type non-existent or not implemented" or #101 "message not compatible with call state", or a STATUS ENQUIRY message and remains in the same state.
　　**Selection:** HOLD and RETRIEVE messages are not implemented by the network. PICS: NOT R 1.

**HOLD_N06_009**　　　**subclause 10.1.2, 2nd paragraph**　　　**invalid**　　　**mandatory**
Ensure that the IUT, while in the Call Delivered call state N04, receiving a HOLD message,
　　sends a HOLD REJECT message cause #29 "facility rejected" and remains in the same state.

**HOLD_N06_010**  **subclause 10.1.2, 2nd paragraph**  **invalid**  **mandatory**
Ensure that the IUT, while in the Active call state N10, receiving a HOLD message,
  sends a HOLD REJECT message cause #29 "facility rejected" and remains in the same state.

**HOLD_N06_011**  **subclause 10.1.2, 2nd paragraph**  **invalid**  **mandatory**
Ensure that the IUT, while in the Call Delivered call state N04, receiving a RETRIEVE message,
  sends a RETRIEVE REJECT message cause #29 "facility rejected" and remains in the same state.

**HOLD_N06_012**  **subclause 10.1.2, 2nd paragraph**  **invalid**  **mandatory**
Ensure that the IUT, while in the Active call state N10, receiving a RETRIEVE message,
  sends a RETRIEVE REJECT message cause #29 "facility rejected" and remains in the same state.

# 7 Compliance

An ATS which complies with this TSS&TP specification shall:

a)  consist of a set of test cases corresponding to the set or to a subset of the TPs specified in clause 6;
b)  use a TSS which is an appropriate subset of the whole of the TSS specified in clause 5;
c)  use the same naming conventions for the test groups and test cases;
d)  maintain the relationship specified in clause 6 between the test groups and TPs and the entries in the PICS proforma to be used for test case deselection;
e)  comply with ISO/IEC 9646-2 [4].

In the case of a) or b) above, a subset shall be used only where a particular Abstract Test Method (ATM) makes some TPs untestable. All testable TPs from clause 6 shall be included in a compliant ATS.

# 8 Requirements for a comprehensive testing service

As a minimum the Remote test method, as specified in ISO/IEC 9646-2 [4], shall be used by any organization claiming to provide a comprehensive testing service for network equipment claiming conformance to ETS 300 141-1 [1].

**History**

| Document history | | | |
|---|---|---|---|
| October 1995 | Public Enquiry | PE 94: | 1995-10-23 to 1996-02-16 |
| August 1996 | Vote | V 108: | 1996-08-05 to 1996-09-27 |
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