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Integrated Services Digital Network (ISDN); Explicit Call Transfer (ECT) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 3: Test Suite Structure and Test Purposes (TSS&TP) specification for the user

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Foreword

This European Telecommunication Standard (ETS) has been produced by the Signalling Protocols and Switching (SPS) Technical Committee of the European Telecommunications Standards Institute (ETSI).

This ETS is part 3 of a multi-part standard covering the Digital Subscriber Signalling System No. one (DSS1) protocol specification for the Integrated Services Digital Network (ISDN) Explicit Call Transfer (ECT) 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".

Transposition dates	
Date of adoption of this ETS:	4 October 1996
Date of latest announcement of this ETS (doa):	31 January 1997
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	31 July 1997
Date of withdrawal of any conflicting National Standard (dow):	31 July 1997

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1 Scope

This third part of ETS 300 369 specifies the Test Suite Structure and Test Purposes (TSS&TP) for the User side of the T reference point or coincident S and T reference point (as defined in ITU-T Recommendation I.411 [7]) of implementations conforming to the stage three standard for the Explicit Call Transfer (ECT) supplementary service for the pan-European Integrated Services Digital Network (ISDN) by means of the Digital Subscriber Signalling System No. one (DSS1) protocol, ETS 300 369-1 [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 Network side of the T reference point or coincident S and T reference point of implementations conforming to ETS 300 369-1 [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 300 369-1 (1995): "Integrated Services Digital Network (ISDN); Explicit Call Transfer (ECT) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".

[2] ETS 300 369-2 (1996): "Integrated Services Digital Network (ISDN); Explicit Call Transfer (ECT) 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-T 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-T 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 300 369-1

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

Call Reference (CR): 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.

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 ECT supplementary service.

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

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

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

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

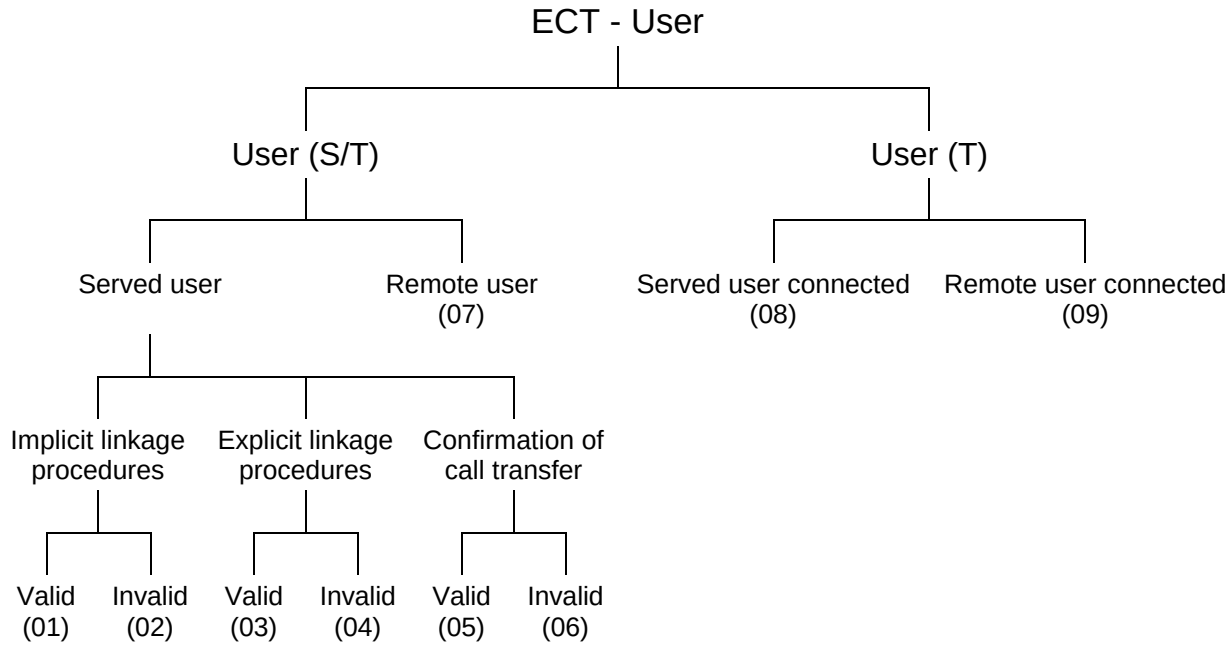
user (T): The DSS1 protocol entity at the User side of the user-network interface where a T reference point applies (User is the Private ISDN).

4 Abbreviations

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

(Held)	Call Held auxiliary state
(Idle)	Idle auxiliary state
ATM	Abstract Test Method
ATS	Abstract Test Suite
CR	Call Reference
CR1	CR one (held or idle)
CR2	CR two (held or idle)
CR3	CR three (held, with CR1 and CR2 idle)
DSS1	Digital Subscriber Signalling System No. one
ECT	Explicit Call Transfer
ISDN	Integrated Services Digital Network
IUT	Implementation Under Test
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation eXtra Information for Testing
TP	Test Purpose
TSS	Test Suite Structure
U04	Call Delivered call state
U10	Active call state
U19	Release Request call state

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. "ECT"	
<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 300 369-1 [1].

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* **<paragraph number in base ETS>** *tab* **<type of test>** *tab* **<condition>** *CR.*	see table 1 **subclause 0.0.0** **valid, invalid, inopportune** **mandatory, optional, conditional**
Stimulus	Ensure that the IUT in the <supplementary service state> and with CR1 in <basic call state> (<auxiliary state>) and with CR2 in <basic call state> (<auxiliary state>) and with CR3 in <basic call state> (<auxiliary state>) <trigger> *see below for message structure* *or* <goal>	 ECT Implicit Request state U10 (Idle), U10 (Held), etc. " " receiving a XXXX message to request a ...
Reaction	<action> <conditions> *if the action is sending* *see below for message structure* <next action>, *etc.* and enters <supplementary service state> *and/or* and remains in the same call state(s) *or* and enters call state <state> with CR<number(s)>	sends, saves, does, etc. using en-bloc sending, ...
Message structure	<message type> message containing a *a)* <info element> information element with *b)* a <field name> encoded as *or* including <coding of the field> and *back to a or b,*	SETUP, FACILITY, CONNECT, ... 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 300 369-1 [1] contained no explicit requirements for testing, the TPs were generated as a result of an analysis of the base standard and the PICS specification, ETS 300 369-2 [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 User TPs for ECT

6.2.1 User (S/T)

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

6.2.1.1 Served user

Selection: IUT can handle two calls.
Selection: IUT supports Call hold supplementary service.

6.2.1.1.1 Implicit linkage procedures

6.2.1.1.1.1 Valid

ECT_U01_001 subclause 9.2.1.1 valid mandatory
Ensure that the IUT in the ECT Idle state, with CR1 in call state U10 (Held) and CR2 in call state U10 (Idle) to request ECT using implicit linkage procedure,
sends a FACILITY message with CR1 containing a Facility information element with an EctExecute invoke component and enters the ECT Implicit Request state and remains in the same call states.

ECT_U01_002 subclause 9.2.1.1 valid optional
Ensure that the IUT in the ECT Idle state, with CR1 in call state U10 (Held) and CR2 in call state U04 (Idle) to request ECT using implicit linkage procedure,
sends a FACILITY message with CR1 containing a Facility information element with an EctExecute invoke component and enters the ECT Implicit Request state and remains in the same call states.
Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U01_003 subclause 9.2.1.1 valid optional
Ensure that the IUT in the ECT Idle state, with CR2 in call state U10 (Idle) and CR1 in call state U04 (Held) to request ECT using implicit linkage procedure,
sends a FACILITY message with CR1 containing a Facility information element with an EctExecute invoke component and enters the ECT Implicit Request state and remains in the same call states.
Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U01_004 subclause 9.2.1.2 valid mandatory
Ensure that the IUT in the ECT Implicit Request state, with CR1 in call state U10 (Held) and CR2 in call state U10 (Idle) receiving a valid FACILITY message with CR1 containing a Facility information element with an EctExecute return error component,
enters the ECT Idle state and remains in the same call states.

ECT_U01_005 subclause 9.2.1.2 valid optional
Ensure that the IUT in the ECT Implicit Request state, with CR1 in call state U10 (Held) and CR2 in call state U04 (Idle) receiving a valid FACILITY message with CR1 containing a Facility information element with an EctExecute return error component,
enters the ECT Idle state and remains in the same call states.
Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U01_006 subclause 9.2.1.2 valid optional
Ensure that the IUT in the ECT Implicit Request state, with CR2 in call state U10 (Idle) and CR1 in call state U04 (Held) receiving a valid FACILITY message with CR1 containing a Facility information element with an EctExecute return error component,
enters the ECT Idle state and remains in the same call states.
Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U01_007 subclause 9.2.1.2 valid mandatory
Ensure that the IUT in the ECT Implicit Request state, with CR1 in call state U10 (Held) and CR2 in call state U10 (Idle) receiving a valid FACILITY message with CR1 containing a Facility information element with a reject component,
enters the ECT Idle state and remains in the same call states.

ECT_U01_008 subclause 9.2.1.2 valid optional
Ensure that the IUT in the ECT Implicit Request state, with CR1 in call state U10 (Held) and CR2 in call state U04 (Idle) receiving a valid FACILITY message with CR1 containing a Facility information element with a reject component,
enters the ECT Idle state and remains in the same call states.
Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U01_009 subclause 9.2.1.2 valid optional
Ensure that the IUT in the ECT Implicit Request state, with CR2 in call state U10 (Idle) and CR1 in call state U04 (Held) receiving a valid FACILITY message with CR1 containing a Facility information element with a reject component,
enters the ECT Idle state and remains in the same call states.
Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

6.2.1.1.1.2 Invalid

ECT_U02_001 subclause 7.2 invalid mandatory
Ensure that the IUT in the ECT Implicit Request state, with CR1 in call state U10 (Held) and CR2 in call state U10 (Idle) receiving a valid FACILITY message with CR1 containing a Facility information element with an invalid EctExecute return error component,
sends a FACILITY message containing a Facility information element with a reject component and remains in the same auxiliary and call states.

ECT_U02_002 subclause 7.2 invalid optional
Ensure that the IUT in the ECT Implicit Request state, with CR1 in call state U10 (Held) and CR2 in call state U04 (Idle) receiving a valid FACILITY message with CR1 containing a Facility information element with an invalid EctExecute return error component,
sends a FACILITY message containing a Facility information element with a reject component and remains in the same auxiliary and call states.
Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U02_003 subclause 7.2 invalid optional
Ensure that the IUT in the ECT Implicit Request state, with CR2 in call state U10 (Idle) and CR1 in call state U04 (Held) receiving a valid FACILITY message with CR1 containing a Facility information element with an invalid EctExecute return error component,
sends a FACILITY message containing a Facility information element with a reject component and remains in the same auxiliary and call states.
Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

6.2.1.1.2 Explicit linkage procedures

Selection: IUT supports explicit linkage procedures. PICS: MC 2.

6.2.1.1.2.1 Valid

ECT_U03_001 subclause 9.2.2.1.1 valid mandatory
Ensure that the IUT in the ECT Idle state and with CR3 in call state U10 (Idle) and CR2 in call state U10 (Idle) and CR1 in call state U10 (Held) in order to initiate the explicit linkage procedure,
sends a FACILITY message with CR2 containing a Facility information element with an EctLinkIdRequest invoke component and enters ECT LinkId Request state and remains in the same call states.

ECT_U03_002 subclause 9.2.2.1.1 valid optional
Ensure that the IUT in the ECT Idle state and with CR3 in call state U10 (Idle) and CR2 in call state U04 (Idle) and CR1 in call state U10 (Held) in order to initiate the explicit linkage procedure,
sends a FACILITY message with CR2 containing a Facility information element with an EctLinkIdRequest invoke component and enters ECT LinkId Request state and remains in the same call states.
Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U03_003 subclause 9.2.2.1.1 valid mandatory
Ensure that the IUT in the ECT LinkId Request state (invoked via CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U10 (Idle) and CR1 in call state U10 (Held) receiving a valid FACILITY message with CR2 containing a Facility information element with a LinkId value in an EctLinkIdRequest return result component,
enters the ECT LinkId Assigned state and remains in the same call states.

ECT_U03_004 subclause 9.2.2.1.1 valid optional
Ensure that the IUT in the ECT LinkId Request state (invoked via CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U04 (Idle) and CR1 in call state U10 (Held) receiving a valid FACILITY message with CR2 containing a Facility information element with a LinkId value in an EctLinkIdRequest return result component,
enters the ECT Link Id Assigned state and remains in the same call states.
Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U03_005 subclause 9.2.2.1.2 valid mandatory
Ensure that the IUT in the ECT LinkId Request state (invoked via CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U10 (Idle) and CR1 in call state U10 (Held) receiving a valid FACILITY message with CR2 containing a Facility information element with an EctLinkIdRequest return error component,
enters the ECT Idle state and remains in the same call states.

ECT_U03_006 subclause 9.2.2.1.2 valid optional
Ensure that the IUT in the ECT LinkId Request state (invoked via CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U04 (Idle) and CR1 in call state U10 (Held) receiving a valid FACILITY message with CR2 containing a Facility information element with an EctLinkIdRequest return error component,
enters the ECT Idle state and remains in the same call states.
Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U03_007 subclause 9.2.2.1.2 valid mandatory
Ensure that the IUT in the ECT LinkId Request state (invoked via CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U10 (Idle) and CR1 in call state U10 (Held) receiving a valid FACILITY message with CR2 containing a Facility information element with a reject component,
enters the ECT Idle state and remains in the same call states.

ECT_U03_008 subclause 9.2.2.1.2 valid optional
Ensure that the IUT in the ECT LinkId Request state (invoked via CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U04 (Idle) and CR1 in call state U10 (Held) receiving a valid FACILITY message with CR2 containing a Facility information element with a reject component,
enters the ECT Idle state and remains in the same call states.
Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U03_009 subclause 9.2.2.2.1 valid mandatory
Ensure that the IUT in the ECT LinkId Assigned state (invoked via CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U10 (Idle) and CR1 in call state U10 (Held) to request ECT using explicit linkage procedure,
sends a FACILITY message with CR1 containing a Facility information element with an ExplicitEctExecute invoke component including the previously received LinkId value and enters the ECT Explicit Request state and remains in the same call states.

ECT_U03_010 subclause 9.2.2.2.1 valid optional
Ensure that the IUT in the ECT LinkId Assigned state (invoked via CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U10 (Idle) and CR1 in call state U04 (Held) to request ECT using explicit linkage procedure,
sends a FACILITY message with CR1 containing a Facility information element with an ExplicitEctExecute invoke component including the previously received LinkId value and enters the ECT Explicit Request state and remains in the same call states.
Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U03_011 subclause 9.2.2.2.1 valid optional
Ensure that the IUT in the ECT LinkId Assigned state (invoked via CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U04 (Idle) and CR1 in call state U10 (Held) to request ECT using explicit linkage procedure,

sends a FACILITY message with CR1 containing a Facility information element with an ExplicitEctExecute invoke component including the previously received LinkId value and enters the ECT Explicit Request state and remains in the same call states.

Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U03_012 subclause 9.2.2.2.2 valid mandatory
Ensure that the IUT in the ECT Explicit Request state (invoked via CR1 and LinkId assigned via CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U10 (Idle) and CR1 in call state U10 (Held) receiving a FACILITY message with CR1 containing a Facility information element with an ExplicitEctExecute return error component,

enters the ECT Idle state and remains in the same call states.

ECT_U03_013 subclause 9.2.2.2.2 valid optional
Ensure that the IUT in the ECT Explicit Request state (invoked via CR1 and LinkId assigned via CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U10 (Idle) and CR1 in call state U04 (Held) receiving a FACILITY message with CR1 containing a Facility information element with an ExplicitEctExecute return error component,

enters the ECT Idle state and remains in the same call states.

Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U03_014 subclause 9.2.2.2.2 valid optional
Ensure that the IUT in the ECT Explicit Request state (invoked via CR1 and LinkId assigned via CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U04 (Idle) and CR1 in call state U10 (Held) receiving a FACILITY message with CR1 containing a Facility information element with an ExplicitEctExecute return error component,

enters the ECT Idle state and remains in the same call states.

Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U03_015 subclause 9.2.2.2.2 valid mandatory
Ensure that the IUT in the ECT Explicit Request state (invoked via CR1 and LinkId assigned via CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U10 (Idle) and CR1 in call state U10 (Held) receiving a FACILITY message with CR1 containing a Facility information element with a reject component,

enters the ECT Idle state and remains in the same call states.

ECT_U03_016 subclause 9.2.2.2.2 valid optional
Ensure that the IUT in the ECT Explicit Request state (invoked via CR1 and LinkId assigned via CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U10 (Idle) and CR1 in call state U04 (Held) receiving a FACILITY message with CR1 containing a Facility information element with a reject component,

enters the ECT Idle state and remains in the same call states.

Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U03_017 subclause 9.2.2.2.2 valid optional
Ensure that the IUT in the ECT Explicit Request state (invoked via CR1 and LinkId assigned via CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U04 (Idle) and CR1 in call state U10 (Held) receiving a FACILITY message with CR1 containing a Facility information element with a reject component,

enters the ECT Idle state and remains in the same call states.

Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

6.2.1.1.2.2 Invalid

ECT_U04_001 subclause 7.2 invalid mandatory
Ensure that the IUT in the ECT LinkId Request state (invoked via CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U10 (Idle) and CR1 in call state U10 (Held) receiving a valid FACILITY message with CR2 containing a Facility information element with an invalid EctLinkIdRequest return result component,

sends a FACILITY message with CR2 containing a Facility information element with a reject component and remains in the same auxiliary and call states.

ECT_U04_002 **subclause 7.2** **invalid** **optional**
Ensure that the IUT in the ECT LinkId Request state (invoked via CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U04 (Idle) and CR1 in call state U10 (Held) receiving a valid FACILITY message with CR2 containing a Facility information element with an invalid EctLinkIdRequest return result component,

sends a FACILITY message with CR2 containing a Facility information element with a reject component and remains in the same auxiliary and call states.

Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U04_003 **subclause 7.2** **invalid** **mandatory**
Ensure that the IUT in the ECT LinkId Request state (invoked via CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U10 (Idle) and CR1 in call state U10 (Held) receiving a valid FACILITY message with CR2 containing a Facility information element with an invalid EctLinkIdRequest return error component,

sends a FACILITY message with CR2 containing a Facility information element with a reject component and remains in the same auxiliary and call states.

ECT_U04_004 **subclause 7.2** **invalid** **optional**
Ensure that the IUT in the ECT LinkId Request state (invoked via CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U04 (Idle) and CR1 in call state U10 (Held) receiving a valid FACILITY message with CR2 containing a Facility information element with an invalid EctLinkIdRequest return error component,

sends a FACILITY message with CR2 containing a Facility information element with a reject component and remains in the same auxiliary and call states.

Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U04_005 **subclause 7.2** **invalid** **mandatory**
Ensure that the IUT in the ECT Explicit Request state (invoked via CR1, CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U10 (Idle) and CR1 in call state U10 (Held) receiving a valid FACILITY message with CR1 containing a Facility information element with an invalid ExplicitECTExecute return error component,

sends a FACILITY message with CR1 containing a Facility information element with a reject component and remains in the same auxiliary and call states.

ECT_U04_006 **subclause 7.2** **invalid** **optional**
Ensure that the IUT in the ECT Explicit Request state (invoked via CR1, CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U10 (Idle) and CR1 in call state U04 (Held) receiving a valid FACILITY message with CR1 containing a Facility information element with an invalid ExplicitECTExecute return error component,

sends a FACILITY message with CR1 containing a Facility information element with a reject component and remains in the same auxiliary and call states.

Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U04_007 **subclause 7.2** **invalid** **optional**
Ensure that the IUT in the ECT Explicit Request state (invoked via CR1, CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U04 (Idle) and CR1 in call state U10 (Held) receiving a valid FACILITY message with CR1 containing a Facility information element with an invalid ExplicitECTExecute return error component,

sends a FACILITY message with CR1 containing a Facility information element with a reject component and remains in the same auxiliary and call states.

Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

6.2.1.1.3 Confirmation of call transfer

6.2.1.1.3.1 Valid

ECT_U05_001 subclause 9.2.3.1 valid mandatory
Ensure that the IUT in the ECT Implicit Request state with CR2 in call state U10 (Idle) and CR1 in call state U10 (Held) receiving a DISCONNECT message with CR1 containing a Facility information element with EctExecute return result component and a DISCONNECT message without component for CR2,
enters the ECT Idle state, sends two RELEASE messages with CR1 and CR2 and enters call state U19 for both calls.

ECT_U05_002 subclause 9.2.3.1 valid optional
Ensure that the IUT in the ECT Implicit Request state with CR2 in call state U04 (Idle) and CR1 in call state U10 (Held) receiving a DISCONNECT message with CR1 containing a Facility information element with EctExecute return result component and a DISCONNECT message without component for CR2,
enters the ECT Idle state, sends two RELEASE messages with CR1 and CR2 and enters call state U19 for both calls.
Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U05_003 subclause 9.2.3.1 valid optional
Ensure that the IUT in the ECT Implicit Request state and with CR2 in call state U10 (Idle) and CR1 in call state U04 (Held) receiving a DISCONNECT message with CR1 containing a Facility information element with EctExecute return result component and a DISCONNECT message without component for CR2,
enters the ECT Idle state, sends two RELEASE messages with CR1 and CR2 and enters call state U19 for both calls.
Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U05_004 subclause 9.2.3.1 valid optional
Ensure that the IUT in the ECT Explicit Request state (invoked via CR1, CR2) with CR3 in call state U10 (Idle) and CR2 in call state U10 (Idle) and CR1 in call state U10 (Held) receiving a DISCONNECT message with CR1 containing a Facility information element with ExplicitEctExecute return result component and a DISCONNECT message without component for CR2,
enters the ECT Idle state, sends two RELEASE messages with CR1 and CR2 and enters call state U19 for both calls.
Selection: IUT supports explicit linkage procedures. PICS: MC 2.

ECT_U05_005 subclause 9.2.3.1 valid optional
Ensure that the IUT in the ECT Explicit Request state (invoked via CR1, CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U10 (Idle) and CR1 in call state U04 (Held) receiving a DISCONNECT message with CR1 containing a Facility information element with ExplicitEctExecute return result component and a DISCONNECT message without component for CR2,
enters the ECT Idle state, sends two RELEASE messages with CR1 and CR2 and enters call state U19 for both calls.
Selection: IUT supports explicit linkage procedures. PICS: MC 2.
Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U05_006 subclause 9.2.3.1 valid optional
Ensure that the IUT in the ECT Explicit Request state (invoked via CR1, CR2) and with CR3 in call state U10 (Idle) and CR2 in call state U04 (Idle) and CR1 in call state U10 (Held) receiving a DISCONNECT message with CR1 containing a Facility information element with ExplicitEctExecute return result component and a DISCONNECT message without component for CR2,
enters the ECT Idle state, sends two RELEASE messages with CR1 and CR2 and enters call state U19 for both calls.
Selection: IUT supports explicit linkage procedures. PICS: MC 2.
Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

6.2.1.1.3.2 Invalid

ECT_U06_001 subclause 7.2 invalid mandatory
Ensure that the IUT in the ECT Implicit Request state with CR2 in call state U10 (Idle) and CR1 in call state U10 (Held) receiving a DISCONNECT message for CR1 containing a Facility information element with an invalid EctExecute return result component,

sends a RELEASE message with CR1 containing a Facility information element with a reject component and enters call state U19 for CR1 and remains in the same call state for CR2,

or

sends a FACILITY message with CR1 containing a Facility information element with a reject component, subsequently a RELEASE message with CR1 and enters call state U19 for CR1 and remains in the same call state for CR2.

ECT_U06_002 subclause 7.2 invalid optional
Ensure that the IUT in the ECT Implicit Request state with CR2 in call state U04 (Idle) and CR1 in call state U10 (Held) receiving a DISCONNECT message for CR1 containing a Facility information element with an invalid EctExecute return result component,

sends a RELEASE message with CR1 containing a Facility information element with a reject component and enters call state U19 for CR1 and remains in the same call state for CR2,

or

sends a FACILITY message with CR1 containing a Facility information element with a reject component, subsequently a RELEASE message with CR1 and enters call state U19 for CR1 and remains in the same call state for CR2.

Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U06_003 subclause 7.2 invalid optional
Ensure that the IUT in the ECT Implicit Request state with CR2 in call state U10 (Idle) and CR1 in call state U04 (Held) receiving a DISCONNECT message for CR1 containing a Facility information element with an invalid EctExecute return result component,

sends a RELEASE message with CR1 containing a Facility information element with a reject component and enters call state U19 for CR1 and remains in the same call state for CR2,

or

sends a FACILITY message with CR1 containing a Facility information element with a reject component, subsequently a RELEASE message with CR1 and enters call state U19 for CR1 and remains in the same call state for CR2.

Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U06_004 subclause 7.2 invalid optional
Ensure that the IUT in the ECT Explicit Request state (invoked via CR1, CR2) for explicit linkage procedures and with CR3 in call state U10 (Idle) and CR2 in call state U10 (Idle) and CR1 in call state U10 (Held) receiving a DISCONNECT message with CR1 containing a Facility information element with an invalid ExplicitEctExecute return result component,

sends a RELEASE message with CR1 containing a Facility information element with a reject component and enters call state U19 for CR1 and remains in the same call states for CR2 and CR3,

or

sends a FACILITY message with CR1 containing a Facility information element with a reject component, subsequently a RELEASE message with CR1 and enters call state U19 for CR1 and remains in the same call states for CR2 and CR3.

Selection: IUT supports explicit linkage procedures. PICS: MC 2.

ECT_U06_005 subclause 7.2 invalid optional
Ensure that the IUT in the ECT Explicit Request state (invoked via CR1, CR2) for explicit linkage procedures and with CR3 in call state U10 (Idle) and CR2 in call state U10 (Idle) and CR1 in call state U04 (Held) receiving a DISCONNECT message with CR1 containing a Facility information element with an invalid ExplicitEctExecute return result component,

sends a RELEASE message with CR1 containing a Facility information element with a reject component and enters call state U19 for CR1 and remains in the same call states for CR2 and CR3,

or

sends a FACILITY message with CR1 containing a Facility information element with a reject component, subsequently a RELEASE message with CR1 and enters call state U19 for CR1 and remains in the same call states for CR2 and CR3.

Selection: IUT supports explicit linkage procedures. PICS: MC 2.
Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

ECT_U06_006 subclause 7.2 invalid optional
Ensure that the IUT in the ECT Explicit Request state (invoked via CR1, CR2) for explicit linkage procedures and with CR3 in call state U10 (Idle) and CR2 in call state U04 (Idle) and CR1 in call state U10 (Held) receiving a DISCONNECT message with CR1 containing a Facility information element with an invalid ExplicitEctExecute return result component,

sends a RELEASE message with CR1 containing a Facility information element with a reject component and enters call state U19 for CR1 and remains in the same call states for CR2 and CR3,

or

sends a FACILITY message with CR1 containing a Facility information element with a reject component, subsequently a RELEASE message with CR1 and enters call state U19 for CR1 and remains in the same call states for CR2 and CR3.

Selection: IUT supports explicit linkage procedures. PICS: MC 2.
Selection: IUT supports transfer with one answered and one alerting call. PICS: MC 3.

6.2.1.2 Remote user

Selection: IUT supports sending of subaddress information. PICS: MC 4.

ECT_U07_001 subclause 9.2.4 valid optional
Ensure that the IUT in the active call state (U10) receiving a FACILITY message containing a RequestSubaddress invoke component,

sends a FACILITY message containing a Facility information element with its subaddress in a SubaddressTransfer invoke component.

6.2.2 User (T)

6.2.2.1 Served user connected

Selection: IUT can handle two calls.
Selection: IUT supports Hold supplementary service.
Selection: T reference point procedures supported. PICS: R 3.2.

ECT_U08_001 subclause 10.3.1.1 valid optional
Ensure that the IUT with CR1 in call state U10 and CR2 in call state U10, where one of the calls is in the Held auxiliary state, before transfer of the calls to the remote users,

sends a FACILITY message with CR1 containing a Facility information element with an EctLoopTest invoke component;

sends a FACILITY message with CR2 containing a Facility information element with an EctLoopTest invoke component;

and remains in the same call states.

Selection: IUT supports the "mechanism to avoid looping of uncontrolled circuits". PICS: MC 6.

ECT_U08_002 subclause 10.3.1.2 valid optional
Ensure that the IUT with CR1 in call state U10 and CR2 in call state U10, where one of the calls is in the Held auxiliary state, before transfer of the calls to the remote users, having sent a FACILITY message containing a Facility information element with an EctLoopTest invoke component for one of the call references, on receipt of a FACILITY message with the same call reference containing a Facility information element with a reject component,

sends no message and remains in the same call states.

Selection: IUT supports the "mechanism to avoid looping of uncontrolled circuits". PICS: MC 6.

ECT_U08_003 subclause 10.1.1 valid mandatory
Ensure that the IUT with CR1 in call state U10 and CR2 in call state U10, where one of the calls is in the Held auxiliary state, after transfer of the calls to the remote users,

sends a FACILITY message with CR1 containing a Facility information element with an EctInform invoke component indicating that the other call is "active" and containing the redirectionNumber parameter;

sends a FACILITY message with CR2 containing a Facility information element with an EctInform invoke component indicating that the other call is "active" and containing the redirectionNumber parameter;

and remains in the same call states.

ECT_U08_004 subclause 10.1.1 valid mandatory
Ensure that the IUT with CR1 in call state U10 and CR2 in call state U04, where one of the calls is in the Held auxiliary state, after transfer of the calls to the remote users,

sends a FACILITY message with CR1 containing a Facility information element with an EctInform invoke component indicating that the other call is "alerting";

sends a FACILITY message with CR2 containing a Facility information element with an EctInform invoke component indicating that the other call is "active" and containing the redirectionNumber parameter;

and remains in the same call states.

ECT_U08_005 subclause 10.1.2 valid mandatory
Ensure that the IUT with CR1 in call state U10 and CR2 in call state U10, where one of the calls is in the Held auxiliary state, after transfer of the calls to the remote users, having sent a FACILITY message containing a Facility information element with an EctInform invoke component for one of the call references, on receipt of a FACILITY message for the same call reference containing a Facility information element with a reject component,

sends no message and remains in the same call states.

ECT_U08_006 subclause 10.1.2 valid mandatory
Ensure that the IUT with CR1 in call state U10 and CR2 in call state U04, where one of the calls is in the Held auxiliary state, after transfer of the calls to the remote users, having sent a FACILITY message containing a Facility information element with an EctInform invoke component for one of the call references, on receipt of a FACILITY message for the same call reference containing a Facility information element with a reject component,

sends no message and remains in the same call states.

ECT_U08_007 subclause 10.1.1 valid mandatory
Ensure that the IUT with CR1 in call state U10 and CR2 in call state U10, where one of the calls is in the Held auxiliary state, after transfer of the calls to the remote users, on receipt of a FACILITY message with CR1 containing a Facility information element with a SubaddressTransfer invoke component,

sends a FACILITY message with CR2 containing a Facility information element with a SubaddressTransfer invoke component containing the subaddress as in the received SubaddressTransfer invoke component.

ECT_U08_008 subclause 10.1.1 valid mandatory
Ensure that the IUT with CR1 in call state U04 and CR2 in call state U10, where one of the calls is in the Held auxiliary state, after the transfer of the calls to the remote users has been performed and FACILITY messages containing a Facility information element with an EctInform invoke component for the two call references have been sent, on receipt of a CONNECT message with CR1,

sends a FACILITY message with CR2 containing a Facility information element with an EctInform invoke component indicating that the other call is "active", and containing a redirectionNumber parameter.

ECT_U08_009 subclause 10.1.1 valid mandatory
Ensure that the IUT with CR1 in call state U04 and CR2 in call state U10, where one of the calls is in the Held auxiliary state, after the transfer of the calls to the remote users has been performed and FACILITY messages containing a Facility information element with an EctInform invoke component for the two call references have been sent, on receipt of a CONNECT message with CR1 containing the subaddress of the remote user associated with CR1,

sends a FACILITY message with CR2 containing a Facility information element with a SubaddressTransfer invoke component indicating the previously received subaddress.

6.2.2.2 Remote user connected

ECT_U09_001 subclause 10.3.2 valid optional
Ensure that the IUT with CR1 in call state U10, on receipt of a FACILITY message with CR1 containing a Facility information element with an EctLoopTest invoke component,

sends a FACILITY message with CR1 containing a Facility information element with an EctLoopTest return result component and remains in the same call state,

or, if it cannot support the loop checking for this particular call,

sends a FACILITY message with CR1 containing a Facility information element with an EctLoopTest return error component indicating "notAvailable" and remains in the same call state.

Selection: IUT supports the "mechanism to avoid looping of uncontrolled circuits". PICS: MC 6.

ECT_U09_002 subclause 10.3.2 valid optional
Ensure that the IUT with CR1 in call state U04, on receipt of a FACILITY message with CR1 containing a Facility information element with an EctLoopTest invoke component,

sends a FACILITY message with CR1 containing a Facility information element with an EctLoopTest return result component and remains in the same call state,

or, if it cannot support the loop checking for this particular call,

sends a FACILITY message with CR1 containing a Facility information element with an EctLoopTest return error component indicating "notAvailable" and remains in the same call state.

Selection: IUT supports the "mechanism to avoid looping of uncontrolled circuits". PICS: MC 6.

ECT_U09_003 subclause 10.2.1 valid optional
Ensure that the IUT with CR1 in call state U10,having received a FACILITY message with CR1 containing a Facility information element with an EctInform invoke component, to send to the other user the subaddress of the user associated with CR1,

sends a FACILITY message with CR1 containing a Facility information element with a SubaddressTransfer invoke component containing the subaddress of the user associated with CR1.

Selection: IUT is capable of sending its user's subaddress. PICS: MC 4.

ECT_U09_004 subclause 10.2.1 valid optional
Ensure that the IUT with CR1 in call state U04, having received a FACILITY message with CR1 containing a Facility information element with an EctInform invoke component, to send to the other user the subaddress of the user associated with CR1,

sends a FACILITY message with CR1 containing a Facility information element with a SubaddressTransfer invoke component containing the subaddress of the user associated with CR1.

Selection: IUT is capable of sending its user's subaddress. PICS: MC 4.

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 user equipment claiming conformance to ETS 300 369-1 [1].

History

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