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*European Standard (Telecommunications series)*

**Integrated Services Digital Network (ISDN);  
Terminal Portability (TP) supplementary service;  
Digital Subscriber Signalling System No. one (DSS1) protocol;  
Part 1: Protocol specification**

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*European Telecommunications Standards Institute*

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## Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Signalling Protocols and Switching (SPS), and is now submitted for the ETSI standards One-step Approval Procedure.

The present document is part 1 of a multi-part standard covering the Digital Subscriber Signalling System No. one (DSS1) protocol specification for the Integrated Services Digital Network (ISDN) Terminal Portability (TP) supplementary service, as described below:

**Part 1: "Protocol specification";**

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

The present document contains no parts related directly to conformance testing. All procedures related to the TP supplementary service are contained within basic call control and consequently all conformance testing requirements are specified within the basic call control test specifications. The optional call rearrangement procedures within the basic call control become mandatory for the TP supplementary service and the support, or otherwise, of these procedures is the determining factor in assessing an implementation's conformance to the present document.

In accordance with CCITT Recommendation I.130, the following three level structure is used to describe the supplementary telecommunications services as provided by European public telecommunications operators under the pan-European Integrated Services Digital Network (ISDN):

- Stage 1: is an overall service description, from the user's standpoint;
- Stage 2: identifies the functional capabilities and information flows needed to support the service described in stage 1; and
- Stage 3: defines the signalling system protocols and switching functions needed to implement the service described in stage 1.

The present document details the stage 3 aspects (signalling system protocols and switching functions) needed to support the Terminal Portability (TP) supplementary service. The stage 1 and stage 2 aspects are detailed in ETS 300 053 and ETS 300 054, respectively.

The present version updates the references to the basic call specifications.

<b>Proposed national transposition dates</b>	
Date of latest announcement of this EN (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this EN (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 first part of EN 300 055 specifies the stage three of the Terminal Portability (TP) supplementary service for the pan-European Integrated Services Digital Network (ISDN) as provided by European public telecommunications operators at the T reference point or coincident S and T reference point (as defined in CCITT Recommendation I.411 [1]) by means of the Digital Subscriber Signalling System No. one (DSS1). Stage three identifies the protocol procedures and switching functions needed to support a telecommunications service (see CCITT Recommendation I.130 [2]).

In addition, the present document specifies the protocol requirements at the T reference point where the service is provided to the user via a private ISDN.

The present document does not specify the additional protocol requirements where the service is provided to the user via a telecommunications network that is not an ISDN.

The TP supplementary service allows a user to move one terminal from one socket to another within one given basic access during the active state of a call. It also allows a user to move a call from one terminal to another terminal within one given basic access during the active phase of a call.

The portability of a terminal during the idle state is part of the basic access capabilities and does not require any procedure.

The portability of a terminal in the call establishment and in the call clearing phases is not possible.

The TP supplementary service applies to some interactive circuit-switched telecommunication services requiring the attendance of a human being, such as telephony, videotelephony, etc.

The TP supplementary service does not apply to non-interactive services such as facsimile, teletex, mixed-mode, computer communication, etc. However, the network will not take any action to restrict its applicability.

It is a user's responsibility to resume the call with a terminal which is compatible both with the remote terminal and the type of connection previously established.

Further parts of the present document specify the method of testing required to identify conformance to the present document.

The present document is applicable to equipment supporting the TP supplementary service to be attached at either side of a T reference point or coincident S and T reference point when used as an access to the public ISDN.

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# 2 Normative references

References may be made to:

- a) specific versions of publications (identified by date of publication, edition number, version number, etc.), in which case, subsequent revisions to the referenced document do not apply; or
- b) all versions up to and including the identified version (identified by "up to and including" before the version identity); or
- c) all versions subsequent to and including the identified version (identified by "onwards" following the version identity); or
- d) publications without mention of a specific version, in which case the latest version applies.

A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

[1] CCITT Recommendation I.411 (1988): "ISDN user-network interfaces - Reference configurations".

[2] CCITT Recommendation I.130 (1988): "Method for the characterisation of telecommunication services supported by an ISDN and network capabilities of an ISDN".

- [3] ETS 300 053: "Integrated Services Digital Network (ISDN); Terminal Portability (TP) supplementary service; Service description".
- [4] EN 300 403-1: "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Signalling network layer for circuit-mode basic call control; Part 1: Protocol specification [ITU-T Recommendation Q.931 (1993), modified]".
- [5] CCITT Recommendation T.50 (1988): "International Alphabet No. 5".
- [6] EN 300 195-1: "Integrated Services Digital Network (ISDN); Supplementary service interactions; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [7] EN 300 403-2: "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Signalling network layer for circuit-mode basic call control; Part 2: Specification and Description Language (SDL) diagrams".
- [8] CCITT Recommendation Q.9 (1988): "Vocabulary of switching and signalling terms".
- [9] CCITT Recommendation I.210: "Principles of telecommunication services supported by an ISDN and the means to describe them".
- [10] CCITT Recommendation I.112: "Vocabulary of terms for ISDNs".

### 3 Definitions

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

**basic access:** See CCITT Recommendation Q.9 [8], § 1, definition 1551.

**Integrated Services Digital Network (ISDN):** See CCITT Recommendation I.112 [10], § 2.3, definition 308.

**service; telecommunications service:** See CCITT Recommendation I.112 [10], § 2.2, definition 201.

**supplementary service:** See CCITT Recommendation I.210 [9], § 2.4.

**network:** The DSS1 protocol entity at the network side of the user-network interface.

**user:** The DSS1 protocol entity at the user side of the user-network interface.

**International Alphabet Number Five (IA5) characters:** See CCITT Recommendation T.50 [5].

### 4 Abbreviations

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

DSS1	Digital Subscriber Signalling System No. one
ISDN	Integrated Services Digital Network
TP	Terminal Portability
IA5	International Alphabet No. five
NT2	Network Termination two

### 5 Description

The general description of the TP supplementary service is specified in ETS 300 053 [3], clause 5.

These procedures shall make use of the suspend and resume functions as described in EN 300 403-1 [4].

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## 6 Operational requirements

### 6.1 Provision and withdrawal

This service may be provided by a prior arrangement with the service provider or may be generally available. Withdrawal shall be at the request of the customer or for administrative reasons.

### 6.2 Requirements on the originating network side

The procedures according to EN 300 403-1 [4], subclause 5.6, shall apply.

### 6.3 Requirements on the destination network side

The procedures according to EN 300 403-1 [4], subclause 5.6, shall apply.

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## 7 Coding requirements

All parameters or parameter values required for the TP supplementary service are specified in EN 300 403-1 [4]. If the user provides IA5 characters in the Call identity information element, these shall be encoded with bit eight of octet three set to "0".

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## 8 State definitions

The states associated with basic call control according to EN 300 403-1 [4] shall apply.

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## 9 Signalling procedures at the coincident S and T reference point

The procedures for the TP supplementary service are described in EN 300 403-1 [4], subclause 5.6.

NOTE: During an interim period of time some networks may not support the sending of notifications to the remote user.

### 9.1 Activation, deactivation and registration

Not applicable.

### 9.2 Invocation and operation

#### 9.2.1 Normal operation

For call suspension EN 300 403-1 [4], subclauses 5.6.1 and 5.6.2, shall apply.

For call re-establishment EN 300 403-1 [4], subclause 5.6.4, shall apply.

## 9.2.2 Exceptional procedures

In addition to the situations listed below, the normal error handling procedures according to EN 300 403-1 [4], subclause 5.8, shall apply:

- for call suspend error, EN 300 403-1 [4], subclause 5.6.3, shall apply;
- for call resume error, EN 300 403-1 [4], subclause 5.6.5, shall apply;
- for double suspension, EN 300 403-1 [4], subclause 5.6.6, shall apply.

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## 10 Procedures for interworking with private ISDNs

The procedures of EN 300 403-1 [4], subclause 5.6.7, shall apply.

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## 11 Interactions with other networks

No impact on the protocol.

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## 12 Interactions with other supplementary services

The interactions of the TP supplementary service with other supplementary services shall be as specified in EN 300 195-1 [6].

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## 13 Parameter values (timers)

The following timers as specified in EN 300 403-1 [4], clause 9, shall be relevant in the context of the TP supplementary service:

- user timer T319;
- network timer T307;
- user timer T318.

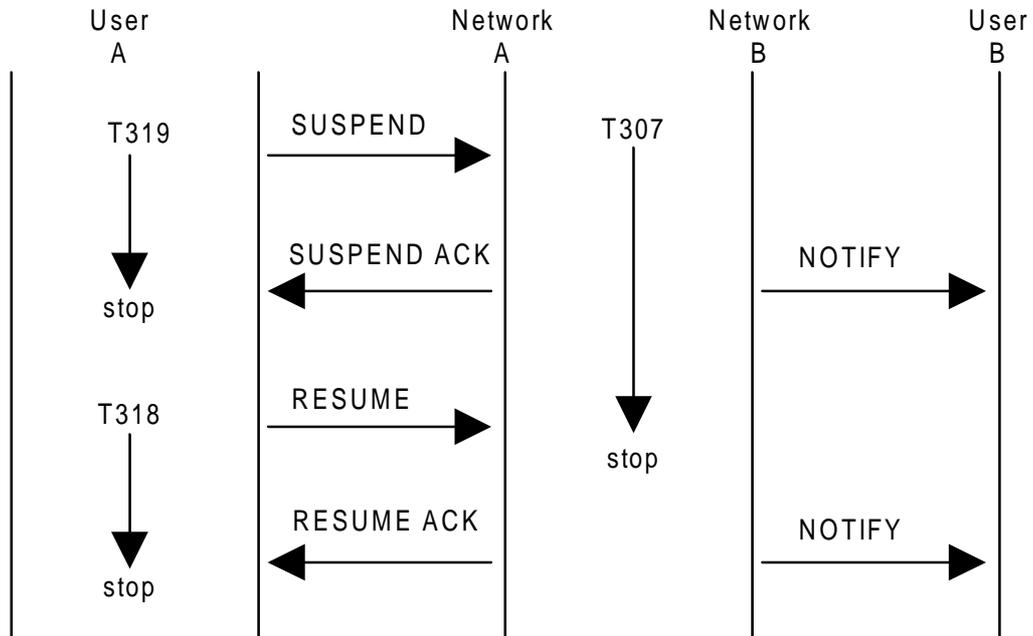
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## 14 Dynamic description (SDL diagrams)

EN 300 403-2 [7] shall apply.

## Annex A (Informative): Signalling flows

The signalling flows for normal procedures are shown in figure A.1.



**Figure A.1: Successful invocation and completion of the TP supplementary service**

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## Annex B (informative): Changes with respect to the previous ETS 300 055-1

The following changes have been done:

- conversion to EN layout;
- replacement of references to ETS 300 102 with EN 300 403;
- substitution of non-specific references to basic standards where the intention is to refer to the latest version.

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# History

<b>Document history</b>		
Edition 1	November 1991	Publication as ETS 300 055-1
V1.2.3	February 1998	One-step Approval Procedure      OAP 9824: 1998-02-13 to 1998-06-12