



SLOVENSKI STANDARD

DSIST EN 301 060-1:2003 - -

01-december-2003 - -

8 [[]HJbc`ca fYy`n]bHY[f]fUb]a]gfcf]hj Ua]fG8 BŁ!`Dfctc_c`X[[]HJbY`bUfc b]y_Y
g[[bU]nUWY`yH`r`%fB GG%Ł!`?fa]`Yb`Y`cgbcj bY[U_`]WU!`nVc`yUb`Y`i dcfUWY
cgbcj bY[U_`]WUj`j gfcdb]`hc _]`V`gfcf]hj Y`nUd`]_UWY`bUj]XYnbY[UnUgYVbY[U
ca fYy`UfU DBŁ!`%`XY.`GdYWZ_UWY`Udfctc_c`U

Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Basic call control; Enhancement at the b service entry point for Virtual Private Network (VPN) applications; Part 1: Protocol specification

Ta slovenski standard je istoveten z: EN 301 060-1 V1.2.2.2003 - , !\$(

ICS:

| | | |
|--------|---|--|
| 33.080 | Digitalno omrežje z integriranimi storitvami (ISDN) | Integrated Services Digital Network (ISDN) |
|--------|---|--|

DSIST EN 301 060-1:2003 - - en

EN 301 060-1 V1.2.2 (1998-04)

European Standard (Telecommunications series)

**Integrated Services Digital Network (ISDN);
Digital Subscriber Signalling System No. one (DSS1) protocol;
Basic call control;
Enhancement at the "b" service entry point for
Virtual Private Network (VPN) applications;
Part 1: Protocol specification**



Reference

DEN/SPS-05109-1 (9tc90ipc.PDF)

Keywords

Basic, DSS1, ISDN, VPN, Protocol

ETSI

Postal address

F-06921 Sophia Antipolis Cedex - FRANCE

Office address

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

Internet

secretariat@etsi.fr
<http://www.etsi.fr>
<http://www.etsi.org>

Copyright Notification

No part may be reproduced except as authorized by written permission.
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 1998.
All rights reserved.

Contents

| | |
|---|-----------|
| Intellectual Property Rights..... | 5 |
| Foreword | 5 |
| 1 Scope..... | 6 |
| 2 References..... | 6 |
| 2.1 Normative references | 7 |
| 2.2 Informative references | 7 |
| 3 Definitions..... | 7 |
| 4 Abbreviations | 9 |
| 5 Description..... | 9 |
| 5.1 VPN services in the context of CN | 9 |
| 5.2 Networking aspects - requirements | 11 |
| 5.2.1 Emulation of Transit PINX functionality and Gateway PINX functionality in the public network..... | 11 |
| 5.2.1.1 Support of multiple CNs..... | 12 |
| 5.2.2 Emulation of Originating and/or Terminating PINX functionality in the public network | 12 |
| 5.2.3 Provision of Relay Node functionality in the public network..... | 12 |
| 5.2.4 Connection requirements..... | 12 |
| 6 Operational requirements..... | 13 |
| 7 Coding requirements | 13 |
| 7.1 Additional messages and content..... | 13 |
| 7.1.1 SETUP message..... | 13 |
| 7.1.2 CONNECT message | 14 |
| 7.2 Additional information elements coding | 14 |
| 7.2.1 Called party number | 14 |
| 7.2.2 Calling party number..... | 16 |
| 7.2.3 Connected number..... | 17 |
| 7.2.4 Connected subaddress | 17 |
| 7.2.5 Progress indicator..... | 17 |
| 7.2.6 Transit counter | 18 |
| 7.2.7 VPN indicator | 18 |
| 8 Basic call states | 19 |
| 9 Circuit-switched call control procedures | 19 |
| 9.1 Distinction between public network and VPN context | 19 |
| 9.2 Procedures applicable for signalling in a public network context..... | 19 |
| 9.3 Procedures applicable for signalling in a VPN context..... | 20 |
| 9.3.1 Establishment of calls from a physical PINX..... | 20 |
| 9.3.1.1 Call request..... | 20 |
| 9.3.1.2 Call confirmation..... | 21 |
| 9.3.2 Establishment of calls towards a physical PINX | 21 |
| 9.3.2.1 Incoming call | 21 |
| 9.3.2.2 Call confirmation..... | 22 |
| 9.3.3 Notification of interworking and provision of in-band information | 22 |
| 9.3.3.1 Actions at a preceding PINX | 22 |
| 9.3.3.2 Actions at a subsequent PINX | 23 |
| 10 System parameters | 24 |
| Annex A (informative): Networking aspects - CN models | 25 |
| A.1 Representation of a CN in terms of functional groupings | 25 |
| A.1.1 Connections between PINXs | 25 |
| A.1.2 Structured overview of the functional groupings which may be involved in a call..... | 26 |
| A.1.3 Transit networking service provided by the public network | 27 |

A.1.4 Transit and terminating functions provided by the public network..... 27

History29

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETR 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available **free of charge** from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<http://www.etsi.fr/ipr> or <http://www.etsi.org/ipr>).

Pursuant to the ETSI Interim IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETR 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Signalling Protocols and Switching (SPS).

The present document defines the Digital Subscriber Signalling System No. one (DSS1) extensions to the basic call to support the Private Signalling System No. one (PSS1) information flow (see ISO/IEC 11572 [7]) in Virtual Private Network (VPN) applications. The relevant requirements and other information that affect DSS1 are defined in the present document.

The present document is part 1 of a multi-part European Standard (Telecommunications series) covering the Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Basic call applications: enhancement at the "b" service entry point for Virtual Private Network (VPN) applications, as identified below:

- Part 1: "Protocol specification";**
- Part 2: "PICS proforma specification";
- Part 3: "Test Suite Structure and Test Purposes (TSS&TP), user";
- Part 4: "Abstract Test Suite (ATS), user";
- Part 5: "Test Suite Structure and Test Purposes (TSS&TP), network";
- Part 6: "Abstract Test Suite (ATS), network".

| National transposition dates | |
|--|-----------------|
| Date of adoption of this EN: | 3 April 1998 |
| Date of latest announcement of this EN (doa): | 31 July 1998 |
| Date of latest publication of new National Standard or endorsement of this EN (dop/e): | 31 January 1999 |
| Date of withdrawal of any conflicting National Standard (dow): | 31 January 1999 |

1 Scope

The present document specifies the extensions of the protocol for basic call control for the pan-European Integrated Services Digital Network (ISDN). These extensions are applicable at the "b" service entry point (as defined in clause 5 of the present document). It is part of the Digital Subscriber Signalling System No. One (DSS1) protocol. The present document contains only additional requirements to those in the main body of ETS 300 403-1 [2].

The present document is applicable only to point-to-point access configurations.

The present document specifies additional protocol elements and call control procedures for the handling of calls between users in a Corporate telecommunication Network (CN) at the "b" service entry point. The functionality provided by the public network may be:

- the emulation of an Originating Private Integrates services Network Exchange (PINX);
- the emulation of a Terminating PINX;
- the emulation of a Transit PINX;
- the emulation of a Relay Node;
- the emulation of an Incoming Gateway PINX;
- the emulation of an Outgoing Gateway PINX;
- the emulation of a combination of two or more of the above.

The support of these capabilities is a network option.

The present document does not cover the requirements for support of the "a" service entry point.

The specification included in the present document does not imply any specific implementation technology or platform.

NOTE: Calls/connections relating to the "b" service entry point are distinguished from calls that are accessing the public network at the T reference point. Calls relating to the T reference point are supported in accordance with the requirements of EN 300 403-1 [2]. Calls relating to the "b" service entry point are supported in accordance with the requirements of the present document. The requirements have been defined such that both contexts can coexist on the same access, and this is expected to be a typical implementation. There is no requirement that when the provisions of the present document are implemented, calls at the T reference point also need to be implemented on the same access. Where both contexts are implemented, the access resources are common to both contexts.

2 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.