



**SLOVENSKI STANDARD**  
**SIST ETS 300 364 E1:2005**  
**01-maj-2005**

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**Zasebno telekomunikacijsko omrežje (PTN) – Medcentralni signalizacijski protokol**  
**- Dopolnilna storitev: ne moti in razveljavi storitev ne moti**

Private Telecommunication Network (PTN); Inter-exchange signalling protocol; Do not disturb and do not disturb override supplementary services

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**Private Telecommunication Network (PTN);  
Inter-exchange signalling protocol  
Do not disturb and do not disturb override  
supplementary services**

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## Foreword

This European Telecommunication Standard (ETS) has been produced by the European Computer Manufacturers Association (ECMA) on behalf of its members and those of the European Telecommunications Standards Institute (ETSI).

This ETS is one of a series of standards defining services and signalling protocols applicable to Private Telecommunication Networks (PTNs). The series uses the ISDN concepts as developed by the ITU-T (formerly CCITT) and is also within the framework of standards for open systems interconnection as defined by ISO.

This ETS specifies the signalling protocol for use at the Q reference point in support of the Do Not Disturb (DND) and Do Not Disturb Override (DNDO) supplementary services.

The ETS is based upon the practical experience of ECMA member companies and the results of their active and continuous participation in the work of ISO, ITU-T (formerly CCITT), ETSI and other international and national standardisation bodies. It represents a pragmatic and widely based consensus.

This ETS was produced by ECMA using the ECMA guidelines for the production of standards and using the ECMA stylesheet. In order to avoid undue delays in the approval process for this ETS it has been agreed that this ETS will not be converted to the ETSI stylesheet.

Transposition dates	
Date of latest announcement of this ETS (doa):	28 February 1995
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	31 August 1995
Date of withdrawal of any conflicting National Standard (dow):	31 August 1995

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## 1 Scope

This European Telecommunication Standard (ETS) specifies the signalling protocol for the support of the Do Not Disturb and Do Not Disturb Override supplementary services (SS-DND and SS-DNDO) at the Q reference point between Private Telecommunication Network Exchanges (PTNXs) connected together within a Private Telecommunication Network (PTN).

SS-DND is a supplementary service which enables a served user to cause the PTN to reject any calls, or just those associated with a specified basic service, addressed to the served user's PTN number. The calling user is given an indication. Incoming calls are rejected as long as the service is active. The served user's outgoing service is unaffected.

SS-DNDO is a supplementary service which enables a served user to override SS-DND at a called number; that is, to allow the call to proceed as if the called user had not activated SS-DND.

The Q reference point is defined in IS 11579.

Service specifications are produced in three stages and according to the method specified in ETS 300 387. This ETS contains the stage 3 specification for the Q reference point and satisfies the requirements identified by the stage 1 and stage 2 specifications in ETS 300 363.

The signalling protocols for SS-DND(O) operate on top of the signalling protocol for basic circuit switched call control, as specified in ETS 300 172, and use certain aspects of the generic procedures for the control of supplementary services specified in ETS 300 239.

The impact on the protocol of interactions between SS-DND and other supplementary services and SS-DNDO and other supplementary services is outside the scope of this ETS.

This ETS is applicable to PTNXs which can interconnect to form a PTN.

## 2 Conformance

In order to conform to this ETS, a PTNX shall satisfy the requirements identified in the Protocol Implementation Conformance Statement (PICS) proforma in annex B applies.

## 3 References

- |               |  |
|---------------|--|
| IS 11579      | Information Technology - Telecommunications and Information Exchange Between Systems - Private Integrated Services Network - Reference Configurations for PISN Exchanges (1993).                                       |
| ETS 300 171   | Private Telecommunication Network (PTN); Specification, functional model and information flows, Control aspects of circuit mode basic services (1993).   |
| ETS 300 172   | Private Telecommunication Network (PTN); Inter-exchange signalling protocol, Circuit mode basic services (1993).   |
| ETS 300 196-1 | 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 (1993). |
| ETS 300 239   | Private Telecommunication Network (PTN); Inter-exchange signalling, Generic functional protocol for the support of supplementary services (1993).  |
| ETS 300 363   | Private Telecommunication Network (PTN); Specification, functional model and information flows, Do not disturb and do not disturb override supplementary services (1994).  |

- ETS 300 387 Private Telecommunication Network (PTN); Method for the specification of basic and supplementary services (1994).
- ENV 41007-1 Definition of terms in private telecommunication networks (1989).
- CCITT Rec. I.112 Vocabulary of terms for ISDNs (1988).
- CCITT Rec. I.210 Principles of telecommunication services supported by an ISDN and the means to describe them (1988).
- CCITT Rec. Z.100 Specification and description language (1988).

## 4 Definitions

For the purpose of this ETS the following definitions apply.

### 4.1 External definitions

This ETS uses the following terms defined in other documents:

- Application Protocol Data Unit (APDU) (ETS 300 239);
- Basic Service (CCITT Recommendation I.210);
- Coordination Function (ETS 300 239);
- End PTNX (ETS 300 239);
- Gateway PTNX (ETS 300 172);
- Interpretation APDU (ETS 300 239);
- Network Facility Extension (NFE) (ETS 300 239);
- Originating PTNX (ETS 300 239);
- Private (ENV 41007-1);
- Private Telecommunication Network Exchange (PTNX) (ENV 41007-1);
- Public ISDN (ENV 41007-1);
- Served user (ETS 300 363)
- Signalling (CCITT Recommendation I.112);
- Supplementary Service (CCITT Recommendation I.210);
- Supplementary Service Control Entity (ETS 300 239);
- Telecommunication Network (ENV 41007-1);
- Terminal (ENV 41007-1);
- Terminating PTNX (ETS 300 239);
- Transit PTNX (ETS 300 239);
- User (ETS 300 171).

### 4.2 Activating PTNX

The PTNX serving the activating user.

**4.3 Deactivating PTNX**

The PTNX serving the deactivating user.

**4.4 Inter-PTNX link**

The totality of a signalling channel and a number of information channels at the Q reference point.

**4.5 Interrogating PTNX**

The PTNX serving the interrogating user.

**4.6 Path retention**

The retaining of the network connection between the Originating PTNX and the Terminating PTNX so that a supplementary service (such as SS-DNDO) can be invoked without establishing a new connection.

**4.7 Served user PTNX**

The PTNX serving the served user.

**5 List of acronyms**

APDU	Application Protocol Data Unit
ASN.1	Abstract Syntax Notation no. 1
DNDOCL	DNDO Capability Level
DNDPL	DND Protection Level
ISDN	Integrated Services Digital Network
NFE	Network Facility Extension
PICS	Protocol Implementation Conformance Statement
PTN	Private Telecommunication Network
PTNX	Private Telecommunication Network Exchange
SDL	Specification and Description Language
SS-DND	Supplementary Service Do Not Disturb
SS-DNDO	Supplementary Service Do Not Disturb Override
TE	Terminal Equipment

**6 Signalling protocol for the support of SS-DND and SS-DNDO****6.1 SS-DND and SS-DNDO description**

SS-DND is a supplementary service which enables a served user to cause the PTN to reject any calls, or just those associated with a specified basic service, addressed to the served user's PTN number. The calling user is given an appropriate indication. Incoming calls are rejected as long as the service is active. The served user's outgoing service is unaffected.

SS-DNDO is a supplementary service which enables a calling user to override SS-DND at a called user allowing the call to proceed as if the called user had not activated SS-DND.

Both SS-DND and SS-DNDO are applicable to all circuit mode basic services defined in ETS 300 171.

## 6.2 SS-DND and SS-DNDO operational requirements

### 6.2.1 Provision/withdrawal

#### 6.2.1.1 Provision/withdrawal of SS-DND

SS-DND is provided or withdrawn after pre-arrangement with the service provider.

SS-DND is provided on a per PTN number basis and per basic service basis. For each PTN number, the supplementary service can be subscribed to for every basic service subscribed to by that PTN number, or for only some of the basic services subscribed to by that PTN number.

SS-DND subscription parameters may apply separately to each basic service to which SS-DND is subscribed, or for all the basic services to which SS-DND is subscribed.

If SS-DNDO is implemented then the subscription parameter "DND protection level" (DNDPL) shall be provided. The DNDPL has a value in the range 0 to 3 where 0 means no protection against DNDO and 3 means total protection against DNDO. The values 0 and 3 shall be offered. The values 1 and 2 may, as an implementation option, be offered. The effect of the subscription parameter DNDPL shall be as described in subclause 6.3.10 of ETS 300 363.

The subscription parameter "Served user notification of SS-DND" may be provided. If it is not provided, as an implementation option, the network may or may not notify the served user of DND invocation.

#### 6.2.1.2 Provision/withdrawal of SS-DNDO

SS-DNDO is provided or withdrawn after pre-arrangement with the service provider.

SS-DNDO is provided on a per PTN number basis and per basic service basis. For each PTN number, the supplementary service can be subscribed to for every basic service subscribed to by that PTN number, or for only some of the basic services subscribed to by that PTN number.

SS-DNDO subscription parameters may apply separately to each basic service to which SS-DNDO is subscribed, or for all the basic services to which SS-DNDO is subscribed.

The subscription parameter "DNDO capability level" (DNDOCL) shall be provided. The DNDOCL has a value in the range 1 (lowest capability) to 3 (highest capability). At least one of the DNDOCL levels shall be offered. The effect of the subscription parameter "DNDO capability level" shall be as described in subclause 6.3.10 of ETS 300 363.

### 6.2.2 Requirements on the Terminating PTNX

Call establishment procedures for the incoming side of an inter-PTNX link and call release procedures, as specified in ETS 300 172, shall apply.

Generic procedures for the call-related control of supplementary services, as specified in ETS 300 239 for an End PTNX, shall apply. In addition, the generic procedures for notification, as specified in ETS 300 239 for an End PTNX, shall apply.

### 6.2.3 Requirements on the Originating PTNX

Call establishment procedures for the outgoing side of an inter-PTNX link and call release procedures, as specified in ETS 300 172, shall apply.

Generic procedures for the call-related control of supplementary services, as specified in ETS 300 239 for an End PTNX, shall apply. In addition, the generic procedures for notification, as specified in ETS 300 239 for an End PTNX, shall apply.

**6.2.4 Requirements on the Activating PTNX**

Generic procedures for the call-independent control (connection oriented) of supplementary services, as specified in ETS 300 239 for an Originating PTNX, shall apply.

**6.2.5 Requirements on the Deactivating PTNX**

Generic procedures for the call-independent control (connection oriented) of supplementary services, as specified in ETS 300 239 for an Originating PTNX, shall apply.

**6.2.6 Requirements on the Interrogating PTNX**

Generic procedures for the call-independent control (connection oriented) of supplementary services, as specified in ETS 300 239 for an Originating PTNX, shall apply.

**6.2.7 Requirements on a SS-DND Served User PTNX**

Generic procedures for the call-independent control (connection oriented) of supplementary services, as specified in ETS 300 239 for a Terminating PTNX, shall apply.

**6.2.8 Requirements on a Transit PTNX**

The basic call procedures for call establishment and call clearing at a Transit PTNX, as specified in ETS 300 172, shall apply.

Generic procedures for the call-related control and call-independent control (connection oriented) of supplementary services, as specified in ETS 300 239 for a Transit PTNX, shall apply. In addition, the generic procedures for notification, as specified in ETS 300 239 for a Transit PTNX, shall apply.

**6.3 SS-DND and SS-DNDO coding requirements****6.3.1 Operations**

The operations defined in Abstract Syntax Notation number 1 (ASN.1) in table 1 shall apply.