



**SLOVENSKI STANDARD**  
**SIST ETS 300 058-1 E1:2005**

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8 [[ ]HJbc`ca fYy`Y`n`]bH[ f]fUb]a ]gfcf]Hj Ua ]fG8 BŁ!`8 cdc`b] bUgfcf]Hj .` U\_Uc ]  
\_`]Wf7 K Ł!`Dfctc\_c`X[[ ]HJbY`bUfc b]y\_Y`g[[ bU]nUW]Y`ýH`%fB GG%Ł!`%`XY .  
GdYV]Z\_UW]Udfctc\_c`U

Integrated Services Digital Network (ISDN); Call Waiting (CW) supplementary service;  
Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol  
specification

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**ICS:**

33.080	Digitalno omrežje z integriranimi storitvami (ISDN)	Integrated Services Digital Network (ISDN)
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**Integrated Services Digital Network (ISDN);  
Call Waiting (CW) supplementary service;  
Digital subscriber Signalling System No. one (DSS1) protocol;  
Part 1: Protocol specification**

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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 1 of a multi-part standard covering the Digital Subscriber Signalling System No. one (DSS1) protocol specification for the Integrated Services Digital Network (ISDN) Call Waiting (CW) 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".

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.

This ETS details the stage 3 aspects (signalling system protocols and switching functions) needed to support the Call Waiting (CW) supplementary service. The stage 1 and stage 2 aspects are detailed in ETS 300 056 (1991) and ETS 300 057 (1991), respectively.

This reprint includes all previous Corrigenda as shown in the History box at the last page.

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## 1 Scope

This first part of ETS 300 058 specifies the stage three of the Call Waiting (CW) 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 3 identifies the protocol procedures and switching functions needed to support a telecommunications service (see CCITT Recommendation I.130 [2]).

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

This standard 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 CW supplementary service permits a user to be informed of an incoming call (as per basic call procedures) with an indication that no interface information channel is available. The user has then the choice of accepting, rejecting or ignoring the waiting call (as per basic call procedures).

The CW supplementary service is considered meaningful when applied to the telephony teleservice and the speech and 3,1 kHz audio bearer services. Furthermore, it can be applied to other circuit-switched services.

Further parts of this standard specify the method of testing required to identify conformance to this standard.

This standard is applicable to equipment supporting the CW 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.

## 2 Normative references

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This ETS incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications 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] 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 300 196-1: "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".
- [4] ETS 300 102-1 (1990): "Integrated Services Digital Network (ISDN); User-network interface layer 3; Specifications for basic call control".
- [5] ETS 300 195-1: "Integrated Services Digital Network (ISDN); Supplementary service interactions; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [6] ETS 300 102-2 (1990): "Integrated Services Digital Network (ISDN); User-network interface layer 3; Specification for basic call control; Specification Description Language (SDL) diagrams".

- [7] CCITT Recommendation I.112 (1988): "Vocabulary of terms for ISDNs".
- [8] CCITT Recommendation I.221 (1988): "Common specific characteristics of services".
- [9] CCITT Recommendation I.210 (1988): "Principles of telecommunication services supported by an ISDN and the means to describe them".
- [10] ETS 300 141: "Integrated Services Digital Network (ISDN); Call Hold (HOLD) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol".

### 3 Definitions

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

**Integrated Services Digital Network (ISDN):** see CCITT Recommendation I.112 [7], § 2.3, definition 308.

**Service; telecommunications service:** see CCITT Recommendation I.112 [7], § 2.2, definition 201.

**Supplementary service:** see CCITT Recommendation I.210 [9], § 2.4.

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

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

**Channels busy:** see CCITT Recommendation I.221 [8], § 3.1.3.

**Network determined user busy:** see CCITT Recommendation I.221 [8], §§ 3.1.4.

**Information channel control:** a user having information channel control is a user in one of the following states : Overlap Sending (U2); Outgoing Call Proceeding (U3); Call Delivered (U4); Call Received (U7)(Note); Connect Request (U8)(Note); Incoming Call Proceeding (U9)(Note); Active (U10); Disconnect Request (U11); Disconnect Indication (U12); Release Request (U19).

NOTE : Applicable only if a point-to-point configuration exists.

**Subscriber B:** subscriber B is the subscriber who is provided by the network with the CW supplementary service on a particular interface.

**User A:** user A is a user who is engaged in a call with user B.

**User B:** user B is the user who reacts to the call waiting at subscriber B.

**User C:** user C is the user who has originated a call to subscriber B which causes the CW supplementary service to be invoked.

## 4 Symbols and abbreviations

CW	Call Waiting
DSS1	Digital Subscriber Signalling System No. one
ISDN	Integrated Services Digital Network

## 5 Description

The CW supplementary service allows notification to subscriber B of the incoming call.

The CW supplementary service shall operate when all appropriate B-channels of the access to the terminals of subscriber B are busy. When at least one B-channel is free, any user B who is compatible and busy can respond to an incoming call according to the procedures of ETS 300 102-1 [4], subclause 5.2.

The network shall not provide audible in-band tone to subscriber B, but the terminals of subscriber B may generate locally an audible in-band indication.

## 6 Operational requirements

### 6.1 Provision and withdrawal

This service may be provided by prior arrangement with the administration, or may be available on a general basis.

Withdrawal shall be at the request of the customer or for administrative reasons.

### 6.2 Requirements on the originating network side

Not applicable.

### 6.3 Requirements on the destination network side

Not applicable.

## 7 Coding requirements

The notification to the calling party shall be included in the Notification indicator information element specified in ETS 300 102-1 [4], subclause 4.5.21. It shall be coded as shown in table 1.

**Table 1**

bits	Meaning
7 6 5 4 3 2 1	
1 1 0 0 0 0 0	Call is a waiting call

## 8 State definitions

The states associated with basic call control according to ETS 300 102-1 [4] shall apply.