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Digitalno omrežje z integriranimi storitvami (ISDN) - Dopolnilna storitev: | akajo| i klic (CW) - Protokol digitalne naro| niške signalizacije št. 1 (DSS1) - 1. del: Specifikacija protokola

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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European Standard (Telecommunications series)

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

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) 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: "Test Suite Structure and Test Purposes (TSS&TP) specification for the network";

Part 6: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (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.

The present document 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 and ETS 300 057, respectively.

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

National transposition dates	
Date of adoption of this EN:	19 June 1998
Date of latest announcement of this EN (doa):	30 September 1998
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 March 1999
Date of withdrawal of any conflicting National Standard (dow):	31 March 1999

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1 Scope

This first part of EN 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 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 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 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 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.

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2 Normative references

References may be made to:

[SIST EN 300 058-1 V1.2.4:2005](https://standards.iteh.ai/catalog/standards/sist/f764a58c-c8f3-41dc-9465-3c51d4be6bb0/sist-en-300-058-1-v1-2-4-2005)

- 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] EN 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] 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] EN 300 195-1: "Integrated Services Digital Network (ISDN); Supplementary service interactions; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".

- [6] EN 300 403-2: "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: "Vocabulary of terms for ISDNs".
- [8] CCITT Recommendation I.221 (1988): "Common specific characteristics of services".
- [9] CCITT Recommendation I.210: "Principles of telecommunication services supported by an ISDN and the means to describe them".
- [10] EN 300 141-1: "Integrated Services Digital Network (ISDN); Call Hold (HOLD) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol".

3 Definitions

For the purposes of the present document, 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 Abbreviations

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

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