



SLOVENSKI STANDARD

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8 [[]HJbc`ca fYy`Y`n`]bH[f]fUb]a]glcf]Hj Ua]fG8 BŁ!`8 cdc`b] bUglcf]Hj .`df] Un
]XYb]H]H]df]`1 _Uj`nj Yn]`f C @Ł!`Dfclc`c`X][]HJbY`bUfc b]y`Y`g][bU]nUW]Y`y`H`
%fB GG%Ł!`%`XY.`GdYW]Z_UW]Udfclc`c`U

Integrated Services Digital Network (ISDN); Connected Line Identification Presentation (COLP) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification

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European Standard (Telecommunications series)

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Connected Line Identification Presentation (COLP)
supplementary service;
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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) Connected Line Identification Presentation (COLP) 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 three aspects (signalling system protocols and switching functions) needed to support the Connected Line Identification Presentation (COLP) supplementary service. The stage one and stage two aspects are detailed in ETS 300 094 and ETS 300 096, respectively.

The present version updates the references to the basic call specifications and incorporates all previous amendments and corrigenda.

National transposition dates

| | |
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1 Scope

This first part of EN 300 097 specifies the stage three of the Connected Line Identification Presentation (COLP) 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) protocol. 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 COLP supplementary service provides the calling party with the possibility to receive identification of the connected party, and is applicable to all circuit-switched telecommunications 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 COLP 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

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 characterisation of telecommunications services supported by an ISDN and network capabilities of an ISDN".
- [3] CCITT Recommendation I.112: "Vocabulary of terms for ISDNs".
- [4] CCITT Recommendation E.164: "Numbering plan for the ISDN era".
- [5] CCITT Recommendation E.163 (1988): "Numbering plan for the international telephone service".
- [6] 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]".
- [7] EN 300 195-1: "Integrated Services Digital Network (ISDN); Supplementary service interactions; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [8] CCITT Recommendation I.210: "Principles of telecommunication services supported by an ISDN and the means to describe them".

- [9] ETS 300 094 (1992): "Integrated Services Digital Network (ISDN); Connected Line Identification Presentation (COLP) supplementary service; Service description".
- [10] CCITT Recommendation T.50 (1988): "International Alphabet No. 5".
- [11] CCITT Recommendation Z.100 (1988): "Functional Specification and Description Language (SDL)".
- [12] EN 300 098-1: "Integrated Services Digital Network (ISDN); Connected Line Identification Restriction (COLR) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".

3 Definitions

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

address: The ISDN number of the connected user, and a subaddress if provided by that user.

connected number: The ISDN number of the connected user.

connected user: It is the user that responded to the served user call request at the destination network and has been awarded the call by the network. The connected user need not have subscribed to the COLP supplementary service.

default number: An ISDN number registered within the public ISDN following prior agreement between the connected user and the public ISDN.

IA5 characters: See CCITT Recommendation T.50 [10].

Integrated Services Digital Network (ISDN): See CCITT Recommendation I.112 [3], § 2.3, definition 308.

international number: An ISDN number structured as specified in § 3.2 (the paragraphs relating to international number) of CCITT Recommendation E.164 [4].

ISDN number: A number conforming to the numbering plan and structure specified in CCITT Recommendation E.164 [4].

national number; national significant number: An ISDN number structured as specified in § 3.2 (the paragraphs relating to national significant number) of CCITT Recommendation E.164 [4].

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

served user: It is the user of a particular ISDN number who has subscribed to the presentation of the connected line identification information in association with outgoing calls. The served user is also known as the calling user.

service; telecommunications service: See CCITT Recommendation I.112 [3], § 2.2 definition 201.

special arrangement: An agreement between a customer and a public network operator whereby customer supplied connected numbers are not screened by the public ISDN.

subaddress: See CCITT Recommendation E.164 [4], § 11.2.

subscriber number: An ISDN number structured as specified in § 3.2 (the paragraphs relating to subscriber number) of CCITT Recommendation E.164 [4].

supplementary service: See CCITT Recommendation I.210 [8], § 2.4.

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

4 Abbreviations

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

| | |
|------|--|
| COLP | Connected Line Identification Presentation |
| COLR | Connected Line Identification Restriction |
| DSS1 | Digital Subscriber Signalling System No. one |
| IA5 | International Alphabet No. 5 |
| ISDN | Integrated Services Digital Network |

5 Description

The COLP supplementary service is a supplementary service offered to the calling user. It provides the connected user's ISDN number, possibly with subaddress information to the calling user.

The COLP supplementary service is not a dialling check but an indication to the calling subscriber of the connected address. In a full ISDN environment, the connected line identity shall include all the information necessary to unambiguously identify the connected line.

The connected line identity may include the Connected subaddress information element generated by the connected user which shall be transparently transported by the network. The network cannot be responsible for the content of this connected subaddress.

6 Operational requirements

6.1 Provision and withdrawal

See ETS 300 094 [9], subclause 6.1.

6.2 Requirements on the originating network side

See subclause 9.5.

6.3 Requirements on the destination network side

All information pertaining to the COLP supplementary service shall be inserted in the CONNECT message sent as part of the basic call procedures according to EN 300 403-1 [6], clause 5.

In the case where no information is provided by the connected user (as part of the basic call procedures) the network shall provide the default number associated with the connected user's access in the destination local exchange.

When the connected number information is provided by the connected user, the network can only verify that the number is within the set of numbers allocated to that user.

Where a special arrangement exists with the connected user, no verification shall be performed.

7 Coding requirements

This clause gives the coding for the Connected number and the Connected subaddress information elements which are required to support this service.

7.1 Connected number information element

The purpose of the Connected number information element is to indicate which number is connected to a call. The connected number(s) may be different from the called party number(s) because of changes (e.g. call diversion) during the lifetime of a call.

The Connected number information element is coded as shown in figure 1. The maximum length of this information element is 24 octets.

This information element belongs to codeset 0.

| | | | | | | | | |
|---|--------------------------------|---|---|-------------------------------|-------|---|---------------------|-----------|
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | |
| 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | octet 1 |
| Connected number information element identifier | | | | | | | | |
| Length of connected number contents | | | | | | | | 2 |
| 0/1 ext | Type of number | | | Numbering plan identification | | | | 3 |
| 1 ext | Presentation indicator | 0 | 0 | 0 | Spare | | Screening indicator | 3a* |
| 0 Spare | Number digits (IA5 characters) | | | | | | | 4 etc. |

Figure 1

The content of this information element is coded as defined in EN 300 403-1 [6], table 4.10.

7.2 Connected subaddress information element

The purpose of the Connected subaddress information element is to identify the subaddress of the connected user of a call. The connected subaddress may be different from a called user subaddress because of changes (e.g. call diversion) during the lifetime of the call.

The Connected subaddress information element is coded as shown in figure 2. The maximum length of this information element is 23 octets.

This information element belongs to codeset 0.

| | | | | | | | | |
|---|--------------------|---|----------------|---|---|-------|---|-----------|
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | |
| 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | octet 1 |
| Connected subaddress information element identifier | | | | | | | | |
| Length of connected subaddress contents | | | | | | | | 2 |
| 1 ext | Type of subaddress | | Odd/ev. indic. | 0 | 0 | Spare | | 3 |
| Subaddress information | | | | | | | | 4 etc. |

Figure 2

The content of this information element is coded as defined in EN 300 403-1 [6], table 4.11.

8 State definitions

No specific state definitions are required.