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European Standard (Telecommunications series)

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



Reference

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Contents

Intellectual Property Rights.....	4
Foreword	4
1 Scope.....	6
2 Normative references	6
3 Definitions.....	7
4 Abbreviations.....	7
5 Description.....	7
6 Operational requirements.....	8
6.1 Provision and withdrawal.....	8
6.2 Requirements on the originating network side.....	8
6.3 Requirements on the destination network side.....	8
7 Coding requirements	8
8 State definitions	8
9 Signalling procedures at the coincident S and T reference point	8
9.1 Activation, deactivation and registration	8
9.2 Actions at the destination user	8
9.2.1 Normal operation	8
9.2.2 Exceptional procedures	8
9.3 Actions at the destination local exchange	9
9.3.1 Normal operation	9
9.3.2 Exceptional procedures	9
9.4 Actions at the originating local exchange	9
9.4.1 Normal operation	9
9.4.2 Exceptional procedures	9
10 Procedures for interworking with private ISDNs	9
11 Interaction with other networks	9
12 Interaction with other supplementary services.....	9
13 Parameter values (timers).....	10
14 Dynamic description (SDL diagrams)	10
Annex A (informative): Signalling flows	11
Annex B (informative): Terminal interchangeability between public and private ISDNs	12
Annex C (informative): Changes with respect to the previous ETS 300 098-1	13
Annex D (informative): Bibliography.....	14
History	15

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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 Restriction (COLR) 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 Restriction (COLR) supplementary service. The stage one and stage two aspects are detailed in ETS 300 095 and ETS 300 096, 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

1 Scope

This first part of EN 300 098 specifies stage three of the Connected Line Identification Restriction (COLR) 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 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 COLR supplementary service enables the connected party to prevent presentation of its ISDN number to the calling 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 COLR 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] | 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]". |
| [6] | EN 300 195-1: "Integrated Services Digital Network (ISDN); Supplementary service interactions; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification". |
| [7] | ETS 300 095 (1992): "Integrated Services Digital Network (ISDN); Connected Line Identification Restriction (COLR) supplementary service; Service description". |

- [8] EN 300 097-1: "Integrated Services Digital Network (ISDN); Connected Line Identification Presentation (COLP) supplementary service; Digital Subscriber Signalling System No. one (DSS1) protocol; Part 1: Protocol specification".
- [9] CCITT Recommendation I.210: "Principles of telecommunication services supported by an ISDN and the means to describe them".
- [10] CCITT Recommendation Z.100 (1988): "Functional Specification and Description Language (SDL)".

3 Definitions

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

calling user: The initiator of a call, received by the served user, on which the COLR supplementary service has been activated.

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

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

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

served user: The user of a particular ISDN number who has subscribed to the restriction of the connected line identification information (on a permanent or on a per-call basis) in association with incoming calls. The served user is also known as the connected user.

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

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

supplementary service: See CCITT Recommendation I.210 [9] § 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
ISDN	Integrated Services Digital Network.

5 Description

The COLR supplementary service is a supplementary service offered to the connected party. It restricts presentation of the connected party's ISDN number and subaddress to the calling party.

When the COLR supplementary service is applicable and activated, the destination network shall provide the originating network with the indication that the connected user's ISDN number and subaddress information (if provided by the connected user) is not allowed to be presented to the calling user. In this case no connected party number shall be included in the call connected information to the calling user.

The presentation restriction function shall not influence the forwarding of the connected number within the network as part of the basic service procedures.

6 Operational requirements

6.1 Provision and withdrawal

See ETS 300 095 [7], subclause 6.1.

6.2 Requirements on the originating network side

See subclause 9.4.

6.3 Requirements on the destination network side

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

7 Coding requirements

See EN 300 097-1 [8], subclause 7.1 which gives the coding for the Connected number information element.

8 State definitions

No specific state definitions are required.

9 Signalling procedures at the coincident S and T reference point

9.1 Activation, deactivation and registration

Not applicable.

9.2 Actions at the destination user

9.2.1 Normal operation

If the COLR supplementary service is requested by a user on a per-call basis and the user wishes to override the default setting, the user shall include the Connected number information element in the CONNECT message sent to the network, with the presentation indicator set to "presentation restricted" or "presentation allowed".

9.2.2 Exceptional procedures

Not applicable.

9.3 Actions at the destination local exchange

9.3.1 Normal operation

If the connected user has subscribed to the COLR supplementary service permanent mode, then the network shall ignore the presentation indicator received in the CONNECT message. The network shall set the presentation indicator to "presentation restricted".

The number digits, if included, shall be treated according to tables 1 and 2 of EN 300 097-1 [8].

If the COLR supplementary service is requested by the user on a per-call basis, and the Connected number information element containing a presentation indicator is included in the CONNECT message, then the destination network shall set the presentation indicator according to that in the received Connected number information element.

If the COLR supplementary service is requested by the user on a per-call basis, and no presentation indicator is included in the CONNECT message, then the destination network shall set the presentation indicator according to the subscribed default value.

The presentation indicator shall be forwarded to the origination network in association with the basic call response.

9.3.2 Exceptional procedures

Not applicable.

9.4 Actions at the originating local exchange

9.4.1 Normal operation

The actions to be performed at the originating local exchange are specified in EN 300 097-1 [8], subclause 9.5.1.

9.4.2 Exceptional procedures

Not applicable.

10 Procedures for interworking with private ISDNs

The procedures specified in clause 9 shall be used.

11 Interaction with other networks

On calls to, or via, non-ISDNs, it cannot be assured that a restriction indication can be carried to the originating network. As a network option, the destination network may restrict any information identifying the connected user from being returned to the originating network when the COLR supplementary service is applicable. For further information see clause 11 of EN 300 097-1 [8].

12 Interaction with other supplementary services

The interaction of the COLR supplementary service with other supplementary services shall be as specified in EN 300 195-1 [6].

13 Parameter values (timers)

No specific timers are required.

14 Dynamic description (SDL diagrams)

The dynamic description is specified in figure 1 according to CCITT Recommendation Z.100 [10].

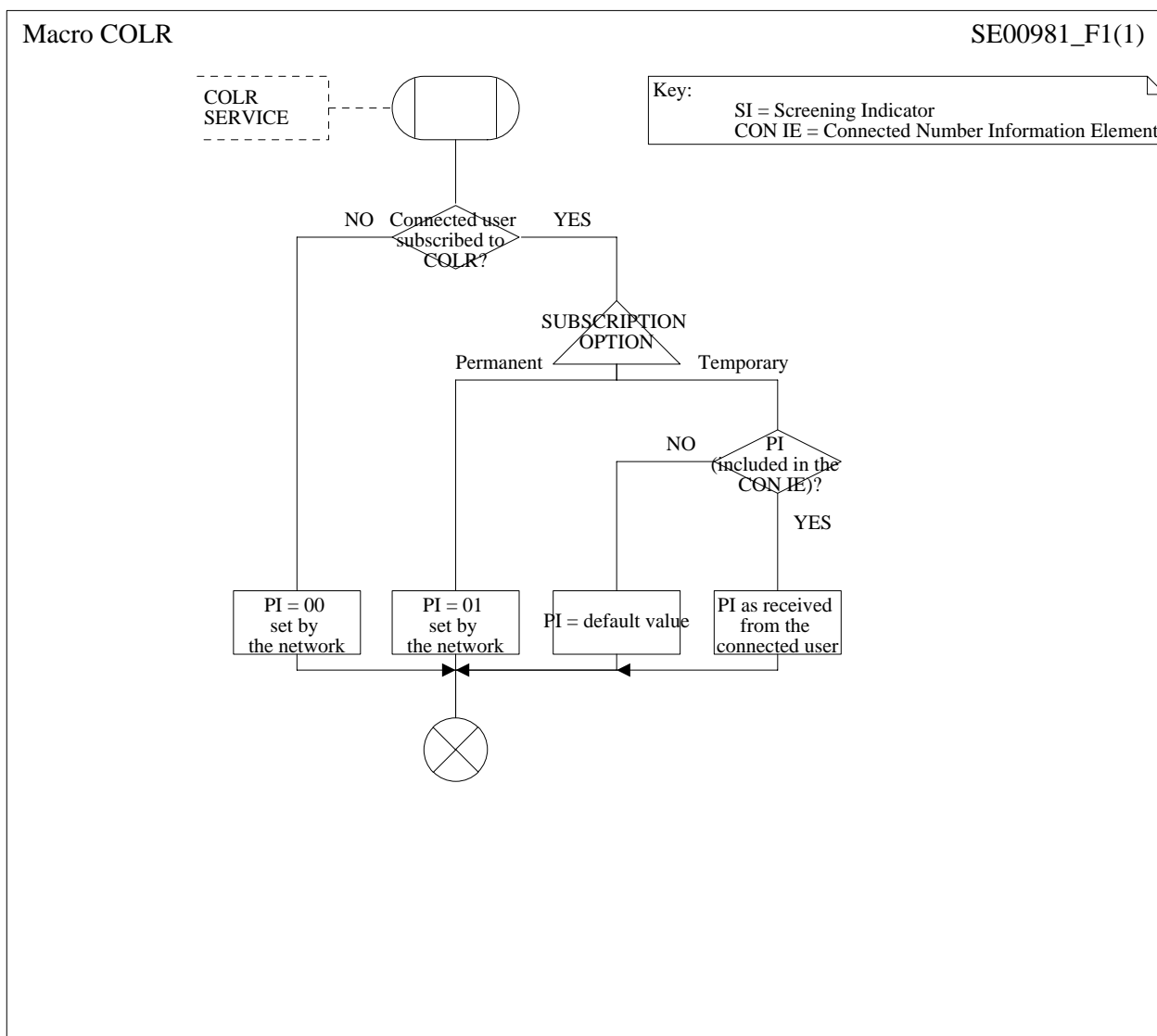


Figure 1: Destination network side dynamic description

Annex A (informative): Signalling flows

No COLR supplementary service specific signalling flow is necessary in addition to basic call control according to EN 300 403-1 [5].

Annex B (informative): Terminal interchangeability between public and private ISDNs

Terminals conforming to EN 300 098-1 are also compatible with private ISDNs offering interfaces conforming to Calling Line Identification Restriction and Connected Line Identification Restriction aspects of ETS 300 191.

NOTE: To prevent presentation of the connected user's subaddress to the calling user, the terminal equipment should not include the Connected subaddress information element in the CONNECT message sent to the private ISDN. Presentation of the subaddress is not subject to restriction in a private network.

Terminals conforming to the Calling Line Identification Restriction and Connected Line Identification Restriction aspects of ETS 300 191 are also compatible with public ISDNs offering interfaces conforming to the present document.

Annex C (informative): Changes with respect to the previous ETS 300 098-1

The following changes have been done:

- conversion to EN layout;
- replacement of references to ETS 300 102 with EN 300 403;
- substitution of non-specific references to basic standards where the intention is to refer to the latest version.

Annex D (informative): Bibliography

- ETS 300 191: "Private Telecommunications Network (PTN); Signalling protocol at the S-reference point; Identification supplementary services".

History

Document history		
Edition 1	May 1992	Publication as ETS 300 098-1
V1.2.3	February 1998	One-step Approval Procedure OAP 9824: 1998-02-13 to 1998-06-12
V1.2.4	June 1998	Publication