

ECMA

EUROPEAN COMPUTER MANUFACTURERS ASSOCIATION

STANDARD ECMA-157

PRIVATE TELECOMMUNICATION NETWORKS

-

SIGNALLING PROTOCOL AT THE S REFERENCE POINT

-

**IDENTIFICATION SUPPLEMENTARY SERVICES
(PTN SSIG-ID)**

2nd Edition - June 1993

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Brief History

This Standard is one of a series of ECMA standards defining services and signalling protocols applicable to Private Telecommunication Networks (PTNs). The series uses the ISDN concepts as developed by the ITU-TS and is also within the framework of standards for open systems interconnection as defined by ISO. It has been produced under Bon de commande 75D.6.

This particular Standard specifies the signalling protocol for use at the S reference point in support of the Calling Line Identification Presentation, Connected Line Identification Presentation and Calling/Connected Line Identification Restriction supplementary services.

The protocol defined in this Standard is based upon that specified in ETS 300 092, ETS 300 093, ETS 300 097 and ETS 300 098. Those four ETSs are applicable to interfaces to public ISDNs at the T reference point, or at coincident S and T reference points if there is no NT2 function. The major part of the protocol specified in this Standard is identical to that specified in those four ETSs, enabling TEs to be designed which can be connected to PTNs and to public ISDNs. Annex A gives further information on terminal interchangeability.

This Standard is based upon the practical experience of ECMA member companies and the results of their active and continuous participation in the work of ISO/IEC JTC1, ITU-TS, ETSI and other international and national standardization bodies. It represents a pragmatic and widely based consensus.

Compared to the 1st Edition of Standard ECMA-157 (published by ECMA in June 1991), various changes have been made in order to achieve alignment with ETS 300 191 (which is based on the 1st Edition of ECMA-157 but modified during Public Enquiry and published by ETSI in December 1992).

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1 Scope

This Standard specifies the signalling protocol for the support of identification supplementary services at an interface at the S reference point between a Terminal Equipment (TE) and a Private Telecommunication Network (PTN). The Protocol specified in this Standard is an extension of the layer 3 protocol for the support of circuit mode basic services, as specified in ETS 300 192. The identification supplementary services concerned are Supplementary Service Calling Line Identification Presentation (SS-CLIP), Supplementary Service Connected Line Identification Presentation (SS-COLP) and Supplementary Service Calling / Connected Line Identification Restriction (SS-CLIR).

Service specifications are produced in three stages, according to the method specified in ENV 41005. This Standard satisfies the requirements identified by the stage 1 and stage 2 specifications in ECMA-148. This Standard is applicable to user accesses of PTNXs and to TEs which are intended for connection to PTNs.

The impact on the protocol of interactions between the supplementary services specified in this Standard and other supplementary services is outside the scope of this Standard.

2 Conformance

In order to conform to this Standard, a PTNX shall satisfy the requirements identified in the Protocol Implementation Conformance Statement (PICS) proforma in clause B.3 of annex B.

In order to conform to this Standard, a TE shall satisfy the requirements identified in the Protocol Implementation Conformance Statement (PICS) proforma in clause B.4 of annex B.

3 References

ECMA-148	Private Telecommunication Networks (PTN) - Specification, Functional Model and Information Flows - Identification Supplementary Services (ISSD) (1993)
ETS 300 102-1	Integrated Services Digital Network (ISDN); User-network interface layer 3; Specification for basic call control; Application of CCITT Rec. Q.930/I.450 and Rec. Q.931/I.451 (1990)
ETS 300 189	Private Telecommunication Network (PTN); Addressing (1992)
ETS 300 192	Private Telecommunication Network (PTN); Signalling protocol at the S-reference point; Circuit mode basic services (1992)
ENV 41005	Method for the specification of basic and supplementary services of private telecommunication networks (1990)
ENV 41007-1	Definition of terms in private telecommunication networks, Part 1: Definition of general terms (1991)
CCITT Rec. I.112	Vocabulary of terms for ISDNs (1988)

4 Definitions

4.1 General

For the purpose of this Standard, the terminology defined in ENV 41007-1 and Rec. I.112 applies. If there is conflict, the definitions in ENV 41007-1 shall take precedence. In addition the following definitions apply.

4.2 Incoming call

A call presented to the TE by the PTN.

4.3 Outgoing call

A call presented to the PTN by the TE.

5 List of acronyms

ISDN	Integrated Services Digital Network
PICS	Protocol Implementation Conformance Statement
PTN	Private Telecommunication Network

PTNX	Private Telecommunication Network Exchange
SS-CLIP	Supplementary Service Calling Line Identification Presentation
SS-CLIR	Supplementary Service Calling / Connected Line Identification Restriction
SS-COLP	Supplementary Service Connected Line Identification Presentation
TE	Terminal Equipment

6 Signalling protocol for the support of SS-CLIP

6.1 SS-CLIP description

Calling Line Identification Presentation (SS-CLIP) is a supplementary service which is offered to the called user and which provides the calling user's number, and subaddress if available, to the called user.

The PTN provides the called user with the number of the calling user whenever an incoming call is presented. The number provided should be sufficient to enable the called user to return the call.

The calling user's number may be accompanied by a subaddress.

6.2 SS-CLIP operational requirements

6.2.1 Provision/withdrawal

SS-CLIP shall be available to all PTN users with the ability to receive this information. There is no need for service profile control.

Some PTN users may be given a service profile which permits the override of calling line identification restriction.

6.2.2 Requirements on the Originating Network Side

There are no special requirements for SS-CLIP beyond the basic call procedures specified in ETS 300 192.

NOTE 1

As part of basic call procedures at the Originating TE-PTN interface, the TE may supply the calling user's number and/or the calling user's subaddress to the PTN. The PTN can use this information to derive the information needed to provide SS-CLIP at the Destination TE-PTN interface (see ETS 300 189).

6.2.3 Requirements on the Destination Network Side

The special requirements detailed in subclause 6.5 for SS-CLIP are in addition to the basic call procedures specified in ETS 300 192.

6.3 SS-CLIP coding requirements

The Calling party number information element shall be encoded as specified in ETS 300 192, subclause 12.5.10. This information element can occur in the SETUP message in the direction PTN to TE for the support of SS-CLIP.

The Calling party subaddress information element shall be encoded as specified in ETS 300 192, subclause 12.5.11. This information element can occur in the SETUP message in the direction PTN to TE for the support of SS-CLIP.

6.4 SS-CLIP state definitions

No specific state definitions are required.

6.5 SS-CLIP signalling procedures at the S reference point

6.5.1 Activation, deactivation, registration and interrogation

Not applicable.

6.5.2 Actions at the Originating TE

Not applicable.

6.5.3 Actions at the Originating PTNX

Not applicable.