ECMA

EUROPEAN COMPUTER MANUFACTURERS ASSOCIATION

STANDARD ECMA-157

PROTOCOL FOR SIGNALLING OVER THE D-CHANNEL OF INTERFACES AT THE S REFERENCE POINT BETWEEN TERMINAL EQUIPMENT AND PRIVATE TELECOMMUNICATION NETWORKS FOR THE SUPPORT OF IDENTIFICATION SUPPLEMENTARY SERVICES

June 1991

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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. The series uses the ISDN concepts as developed by CCITT and is also within the framework of standards for open systems interconnection as defined by ISO. It has been produced under ITSTC work item M-IT-05 (Issue 1, November 1989) 4.3.3, with the intention of submitting to ETSI as a proposed ETS.

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 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, CCITT, ETSI and various national standardisation bodies in Europe and in the USA. It represents a pragmatic and widely based consensus.

The protocol defined in this ECMA Standard is based upon that specified in prETS 300092, prETS 300093, prETS 300097 and prETS 300098. 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.

Adopted as an ECMA Standard by the General Assembly of June 1991.

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1 SCOPE

This ECMA 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 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).

A PTN consists of one or more interconnected Private Telecommunication Network Exchanges (PTNX), and therefore an interface at the S reference point is actually between a TE and a PTNX. The S reference point is defined in Standard ECMA-133. Other ECMA Standards will define protocols for use at other reference points, notably the Q reference point between two interconnected PTNXs within a PTN.

Service specifications are produced in three stages and according to the method specified in ENV 41005. This Standard is an output from stage 3, the definition of signalling protocols, and therefore satisfies the requirements identified by the stage 1 and stage 2 specifications in Standard 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 at least the mandatory 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 at least the mandatory requirements identified in the Protocol Implementation Conformance Statement (PICS) Proforma in clause B.4 of Annex B.

3 REFERENCES

ECMA-106 Layer 3 Protocol for Signalling over the D-Channel of Interfaces at the S Reference Point between Terminal Equipment and Private Telecommunication Networks for the Control of Circuit-Switched Calls, 2nd. Edition, 1991

ECMA-133 Reference Configurations for Calls through Exchanges of Private Telecommunication Networks, April 1989

ECMA-148 Specification, Functional Model and Information Flows for Identification Supplementary Services in Private Telecommunication Networks, 1990

ECMA-155 Addressing in Private Telecommunication Networks, 1991

prETS 300102-1 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

CCITT Rec. I.112 Vocabulary of Terms for ISDNs, "Blue Book", 1988

ENV 41005 Method for the Specification of Basic and Supplementary Services of Private Telecommunication Networks, 1989

4 DEFINITIONS

4.1 General

For the purpose of this Standard, the terminology defined in ENV 41007 and Rec. I.112 applies. If there is conflict, the definitions in ENV 41007 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 ECMA-106.

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 ECMA-155).

6.2.3 Requirements on the Destination Network Side

The special requirements detailed in clause 6.5 for SS-CLIP are in addition to the basic call procedures specified in ECMA-106.

6.3 SS-CLIP Coding Requirements

The Calling party number information element shall be encoded as specified in ECMA-106, 11.5.10. 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 prETS 300102-1, 4.5.11. This information element can occur in the SETUP message in the direction PTN to TE for the support of SS-CLIP.

NOTE 2:

ECMA-106 refers to prETS 300102-1 for the coding of the Calling party subaddress information element. Therefore prETS 300102-1 is referred to directly here rather than indirectly via ECMA-106.

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 and Registration

Not applicable.

6.5.2 Actions at the Originating TE

Not applicable.

6.5.3 Actions at the Originating PTNX

Not applicable.

6.5.4 Actions at the Destination PTNX

6.5.4.1 Normal Procedures

NOTE 3:

The text of this sub-clause is based upon that of 9.5.1 of prETS 300092. Differences are indicated by emboldening.

When a SETUP message is sent to the called TE according to the procedures of ECMA-106, and if the called **PTN** user is provided with the CLIP supplementary service, the **PTN** shall check to see if the calling party number is available.

If the calling user's number is available and presentation is allowed according to the presentation indicator supplied together with the calling party number, the **PTN** shall include the calling party number information element in the SETUP message sent to the called **TE. If available,** the **PTN** shall also include the calling party subaddress information element in the SETUP message. The presentation and screening indicators associated with the calling user's number received at the destination **PTNX** shall be passed transparently to

the called **TE. The numbering plan identifier and type of number fields shall be coded in accordance with ECMA-155.**

If the calling **user's** number is available, but presentation is not allowed according to the presentation indicator supplied together with the calling user's number, the **PTN** shall include the Calling party number information element in the SETUP message sent to the called **TE**. The presentation indicator in the calling party number information element shall indicate "presentation restricted". The type of number and the numbering plan identification shall be set to "unknown" and the number digits field shall not be included. The **PTN shall** include the Calling party subaddress information element, if **available**, in the SETUP message.

If the calling user's number is not available at the destination **PTNX** the **PTN** shall include the Calling party number information element in the SETUP message sent to the called **TE**. The presentation indicator shall be set to "number not available due to interworking" **or "presentation restricted", according to information available,** the screening indicator shall be set to "network provided", the type of number and the numbering plan identification shall be set to "unknown" and the number digits field shall not be included. The **PTN shall** include the Calling party subaddress information element, if **available**, in the SETUP message.

If the called **PTN** user is not provided with the CLIP supplementary service, then neither the Calling party number nor the Calling party subaddress information elements shall be included in the SETUP message sent to the called **TE**.

If presentation is restricted but the called **PTN** user has the override category (e.g., police or emergency service) marked in the destination **PTNX**, the **PTN** shall include the Calling party number information element, and Calling party subaddress information element if the subaddress was supplied by the calling PTN user, in the SETUP message. In this case, the presentation and screening indicators shall be passed transparently to the called **TE. The numbering plan identifier and type of number fields shall be coded in accordance with ECMA-155.**

NOTE 4:

If the presentation indicator in the Calling party number information element received by the TE is set to "number not available due to interworking" or "presentation restricted", the remaining information in the Calling party number information element should be ignored by the TE.

NOTE 5:

The Specification and Description Language (SDL) representation of the procedures at the destination PTNX is contained in C.1 of Annex C.

6.5.4.2 Exceptional Procedures

Not applicable.

6.5.5 Actions at the Destination TE

The use of the Calling party number and Calling party subaddress information elements, if present in a received SETUP message, is an implementation matter.

NOTE 6

If the presentation indicator in the Calling party number information element is set to "number not available due to interworking" or "presentation restricted", the remaining information in octets 3 and 3.1 of the Calling party number information element should be ignored, except where, in the context of the override category, number information in octet 4 has been provided.

6.6 SS-CLIP Impact of Interworking with Public ISDNs

The procedures specified in 6.5 shall be used.

NOTE 7:

In addition to other factors, the availability of the calling user's number and subaddress from the public ISDN will depend upon subscription to the public ISDN's SS-CLIP.

NOTE 8:

Some public ISDNs may provide two calling user numbers in some circumstances. The first of these numbers (i.e. the one appearing in the first Calling party number information element in the SETUP message received from the public ISDN) will be used for the provision of SS-CLIP to the called user.

6.7 SS-CLIP Impact of Interworking with Non-ISDNs

The procedures specified in 6.5 shall be used.

NOTE 9:

Some non-ISDNs are unable to provide the calling user's number and subaddress.

NOTE 10:

Some non-ISDNs can provide the calling user's number but without any indication of whether presentation is restricted. Whether the PTN presents such numbers to the called user is an implementation matter.

NOTE 11:

On outgoing calls to a public ISDN, the provision of t he calling user's DDI number to the public ISDN can assist in the provision of SS-CLIP to the called user.

6.8 SS-CLIP Parameter Values (Timers)

No specific timers are required.

7 SIGNALLING PROTOCOL FOR THE SUPPORT OF SS-COLP

7.1 SS-COLP Description

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

The PTN provides the calling user with the number of the called user when the called user connects to the incoming call (connected user identification). The number provided should be sufficient to enable the calling user to repeat the call.

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

7.2 SS-COLP Operational Requirements

7.2.1 Provision/Withdrawal

SS-COLP 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 connected line identification restriction.

7.2.2 Requirements on the Originating Network Side

The special requirements detailed in 7.5 for SS-COLP are in addition to the basic call procedures specified in ECMA-106.

7.2.3 Requirements on the Destination Network Side

There are no special requirements for SS-COLP beyond the basic call procedures specified in ECMA-106.

NOTE 12:

As part of basic call procedures at the destination TE-PTN interface, the TE may supply a connected number and/or connected subaddress to the PTN. The PTN can use this information to derive the information needed to provide SS-COLP at the originating TE-PTN interface (see ECMA-155).

7.3 SS-COLP Coding Requirements

The Connected number information element shall be encoded as specified in ECMA-106, 11.5.14. This information element can occur in the CONNECT message in the direction PTN to TE for the support of SS-COLP.

The Connected subaddress information element shall be encoded as specified in ECMA-106, 11.5.15. This information element can occur in the CONNECT message in the direction PTN to TE for the support of SS-COLP.

7.4 SS-COLP State Definitions

No specific state definitions are required.

7.5 SS-COLP Signalling Procedures at the S Reference Point

7.5.1 Activation, Deactivation and Registration

Not applicable.

7.5.2 Actions at the Originating TE

The use of the Connected number and Connected subaddress information elements, if present in a received CONNECT message, is an implementation matter.

NOTE 13:

If the presentation indicator in the Connected party number information element is set to "number not available due to interworking" or "presentation restricted", the remaining information in octets 3 and 3.1 of the Connected party number information element should be ignored, except where, in the context of the override category, number information in octet 4 has been provided.

7.5.3 Actions at the Originating PTNX

7.5.3.1 Normal Procedures

NOTE 14:

The text of this sub-clause is based upon that of 9.5.1 of prETS 300097. Differences are indicated by emboldening.

When a CONNECT message is sent to the calling TE according to the procedures of ECMA-106, if the calling user is provided with the COLP supplementary service, the **PTN** shall check to see if the connected number is available.

If the connected number is available and presentation is allowed according to the presentation indicator supplied together with the connected number, the **PTN** shall include the Connected number information element in the CONNECT message sent to the calling **TE.** If **available,** the **PTN** shall also include the Connected subaddress information element in the CONNECT message. The presentation and screening indicators associated with the connected number received at the originating **PTNX** shall be passed transparently to the calling **TE. The numbering plan identifier and type of number fields shall be coded in accordance with ECMA-155.**

If the connected number is available, but presentation is not allowed according to the presentation indicator supplied together with the connected number, the **PTN** shall include the Connected number information element in the CONNECT message sent to the calling **TE.** The presentation indicator in the Connected number information element shall indicate "presentation restricted". The type of number and the numbering plan identification shall be set to "unknown" and the number digits field shall not be included . The **PTN shall** include the Connected subaddress information element, if **available,** in the CONNECT message.

If the connected number is not available at the originating **PTNX** the **PTN** shall include the Connected number information element in the CONNECT message sent to the calling **TE.** The presentation indicator shall be set to "number not available due to interworking" **or "presentation restricted", according to information available,** the screening indicator shall be set to "network provided", the type of number and the numbering plan identification shall be set to "unknown" and the number digits field shall not be included. The **PTN shall** include the Connected subaddress information element, if **available,** in the CONNECT message.

If the calling **PTN** user is not provided with the COLP supplementary service, then neither the Connected number nor the Connected subaddress information elements shall be included in the CONNECT message sent to the calling **TE.**

If presentation is restricted but the calling **PTN** user has the override category (e.g., police or emergency service) marked in the originating **PTNX,** the **PTN** shall include the Connected number information element, and Connected subaddress information element if the subaddress was supplied by the connected user, in the CONNECT message. In this case, the presentation and screening indicators shall be passed transparently to the calling **TE. The numbering plan identifier and type of number fields shall be coded in accordance with ECMA-155.**

NOTE 15:

If the presentation indicator in the Connected number information element received by the TE is set to "number not available due to interworking" or "presentation restricted", the remaining information in the Connected number information element should be ignored by the TE.

NOTE 16:

The Specification and Description Language (SDL) representation of the procedures at the originating PTNX is contained in C.2 of Annex C.

7.5.3.2 Exceptional Procedures

Not applicable.

7.5.4 Actions at the Destination PTNX

Not applicable.

7.5.5 Actions at the Destination TE

Not applicable.

7.6 SS-COLP Impact of Interworking with Public ISDNs

The procedures specified in clause (?) shall be used.

NOTE 17:

In addition to other factors, the availability of the connected number and subaddress from the public ISDN will depend upon subscription to the public ISDN's SS-COLP.

NOTE 18:

On incoming calls to a public ISDN, the provision of the connected user's DDI number to the public ISDN can assist in the provision of SS-COLP to the calling user.

7.7 SS-COLP Impact of Interworking with Non-ISDNs

The procedures specified in 7.5 shall be used.

NOTE 19:

Some non-ISDNs are unable to provide the connected number and subaddress.

NOTE 20:

Some non-ISDNs can provide the connected number but without any indication of whether presentation is restricted. Whether the PTN presents such numbers to the calling user is an implementation matter.

7.8 SS-COLP Parameter Values (Timers)

No specific timers are required.

8 SIGNALLING PROTOCOL FOR THE SUPPORT OF SS-CLIR

8.1 SS-CLIR Description

Calling/connected Line Identification Restriction (SS-CLIR) is a supplementary service offered to a user to restrict presentation of that user's number to another user.

When SS-CLIR is invoked, the served user's number is marked as presentation restricted.

NOTE 21:

When SS-CLIR is invoked on behalf of the calling user, the calling user's number will not be presented to the called user. If SS-CLIP applies at the called user, the called user will receive only an indication that presentation is restricted. When SS-CLIR is invoked on behalf of the connected user, the connected user's number will not be presented to the calling user. If SS-COLP applies at the calling user, the calling user will receive only an indication that presentation is restricted.

8.2 SS-CLIR Operational Requirements

8.2.1 Provision/Withdrawal

SS-CLIR shall be provided on a service profile basis.

A PTN shall support one or both of the following modes:

- permanent mode (automatically invoked for all calls);
- temporary mode (invoked on a per call basis according to user requirements).

A PTN which supports temporary mode shall support one or both of the following defaults for use when the user does not specify requirements:

- presentation restricted;

- presentation not restricted.

Each PTN user provided with SS-CLIR shall be provided with the service in one of the following forms:

- permanent mode;
- temporary mode with default "presentation restricted";
- temporary mode with default "presentation not restricted".

NOTE 22:

The permanent mode option has no impact on the TE.

8.2.2 Requirements on the Originating Network Side

The special requirements detailed in 8.5 for SS-CLIR are in addition to the basic call procedures specified in ECMA-106.

8.2.3 Requirements on the Destination Network Side

The special requirements detailed below for SS-CLIR are in addition to the basic call procedures specified in ECMA-106.

8.3 SS-CLIR Coding Requirements

SS-CLIR makes use of the presentation indicator field of the Calling party number information element when used in the SETUP message in the direction TE to PTN and of the presentation indicator field of the Connected number information element when used in the CONNECT message in the direction TE to PTN.

The Calling party number and Connected number information elements are specified in 11.5.10 and 11.5.14 respectively of ECMA-106.

8.4 SS-CLIR State Definitions

No specific state definitions are required.

8.5 SS-CLIR Signalling Procedures at the S Reference Point

8.5.1 Activation, Deactivation and Registration

Not applicable.

8.5.2 Actions at the Originating TE

8.5.2.1 Normal Procedures

NOTE 23:

The text of this sub-clause is based upon that of 9.2.1 of prETS 300093. Differences are indicated by emboldening.

If the **calling user** wishes to override the default setting **for SS-CLIR temporary mode**, the **TE** shall include the Calling party number information element in the SETUP message sent to the **PTN**, with the presentation indicator set to "presentation restricted" or "presentation allowed".

8.5.2.2 Exceptional Procedures

Not applicable.

8.5.3 Actions at the Originating PTNX

8.5.3.1 Normal Procedures

NOTE 24:

The text of this sub-clause is based upon that of 9.3.1 of prETS 300093. Differences are indicated by emboldening.

If the calling user has subscribed to the **SS-CLIR** permanent mode, then the **PTN** shall ignore the presentation indicator received in the SETUP message. The presentation indicator forwarded through the network shall indicate "presentation restricted".

If the calling user has subscribed to SS-CLIR temporary mode, and no Calling party number information element is included in the SETUP message, then the **PTN** shall **forward through the network** a presentation indicator corresponding to the subscribed default value.

If the calling user has subscribed to SS-CLIR temporary mode, and the Calling party number information element is included in the SETUP message, the PTN shall forward through the network the presentation indicator received in that information element.

NOTE 25:

The presentation indicator is forwarded to the destination in association with the basic call request.

NOTE 26:

The treatment of the presentation indicator associated with the Connected number at the Originating PTNX is part of SS-COLP.

NOTE 27:

The Specification and Description Language (SDL) representation of the procedures at the originating PTNX is contained in C.3 of Annex C.

8.5.3.2 Exceptional Procedures

Not applicable.

8.5.4 Actions at the Destination PTNX

8.5.4.1 Normal Procedures

NOTE 28:

The text of this sub-clause is based upon that of 9.3.1 of prETS 300098. Differences are indicated by emboldening.

If the connected user has subscribed to **SS-CLIR** permanent mode, then the **PTN** shall ignore the presentation indicator received in the CONNECT message. The presentation indicator forwarded through the network shall indicate "presentation restricted".

If the connected user has subscribed to SS-CLIR temporary mode, and no Connected number information element is included in the CONNECT message, then the **PTN** shall **forward through the network** a presentation indicator corresponding to the subscribed default value.

If the connected user has subscribed to SS-CLIR temporary mode, and the Connected number information element is included in the CONNECT message, the PTN shall forward through the network the presentation indicator received in that information element.

NOTE 29:

The presentation indicator is forwarded to the Originating PTNX in association with the basic call response.

NOTE 30:

The treatment of the presentation indicator associated with the Calling party number at the Destination PTNX is part of SS-CLIP.

NOTE 31:

The Specification and Description Language (SDL) representation of the procedures at the originating PTNX is contained in C.4 of Annex C.

8.5.4.2 Exceptional Procedures

Not applicable.

8.5.5 Actions at the Destination TE

8.5.5.1 Normal Procedures

NOTE 32:

The text of this sub-clause is based upon that of 9.2.1 of prETS 300098. Differences are indicated by emboldening.

If the connected user wishes to override the default setting **for SS-CLIR temporary mode,** the **TE** shall include the Connected number information element in the CONNECT message sent to the **PTN**, with the presentation indicator set to "presentation restricted" or "presentation allowed".

8.5.5.2 Exceptional Procedures

Not applicable.

8.6 SS-CLIR Impact of Interworking with Public ISDNs

The procedures of 8.5 apply.

NOTE 33:

A calling user's number or a connected number with presentation indicator set to "presentation restricted" will not be presented to a public ISDN.

NOTE 34:

The presentation indicator associated with a calling user's number or a connected number, if delivered to a public ISDN, will be ignored unless there is subscription to the temporary mode of the public ISDN's CLIR or COLR supplementary service, respectively.

8.7 SS-CLIR Impact of Interworking with Non-ISDNs

The procedures of 8.5 apply.

NOTE 35:

A calling user's number or connected number with presentation indicator set to "presentation restricted" will not be presented to a non-ISDN.

8.8 SS-CLIR Parameter Values (Timers)

No specific timers are required.

ANNEX A

(informative)

TERMINAL INTERCHANGEABLITY BETWEEN PUBLIC AND PRIVATE ISDNS

Terminals conforming to ECMA-157 are also compatible with public ISDNs offering interfaces conforming to prETS 300092, prETS 300093, prETS 300097 and prETS 300098.

Terminals conforming to prETS 300092 are also compatible with private ISDNs offering interfaces conforming to the SS-CLIP aspects of ECMA-157, provided the terminal is able to accept the Calling party number information element with the numbering plan identifier coded as "PTN numbering plan".

Terminals conforming to prETS 300097 are also compatible with private ISDNs offering interfaces conforming to the SS-COLP aspects of ECMA-157, provided the terminal is able to accept the Connected number information element with the numbering plan identifier coded as "PTN numbering plan".

Terminals conforming to prETS 300093 are also compatible with private ISDNs offering interfaces conforming to the SS-CLIR aspects of ECMA-157.

NOTE A.1:

To prevent presentation of the calling user's subaddress to the called user, the TE should not include the Calling party subaddress information element in the SETUP message sent to a private ISDN. Presentation of the subaddress is not subject to SS-CLIR in a private ISDN.

Terminals conforming to prETS 300098 are also compatible with private ISDNs offering interfaces conforming to the SS-CLIR aspects of ECMA-157.

NOTE A.2:

To prevent presentation of the connected user's subaddress to the calling user, the TE should not include the Connected subaddress information element in the CONNECT message sent to a private ISDN. Presentation of the subaddress is not subject to SS-CLIR in private ISDN.

ANNEX B

(normative)

PROTOCOL IMPLEMENTATION CONFORMANCE STATEMENT (PICS) PROFORMA

B.1 INTRODUCTION

The supplier of a protocol implementation which is claimed to conform to Standard ECMA-157 shall complete one of the following Protocol Implementation Conformance Statement (PICS) proformas. The PICS proforma in B.3 is for a PTNX. The PICS proforma in B.4 is for a TE.

A completed PICS proforma is the PICS for the implementation in question. The PICS is a statement of which capabilities and options of the protocol have been implemented. The PICS can have a number of uses, including use:

- by the protocol implementor, as a check list to reduce the risk of failure to conform to the standard through oversight;
- by the supplier and acquirer, or potential acquirer, of the implementation, as a detailed indication of the capabilities of the implementation, stated relative to the common basis for understanding provided by the Standard's PICS proforma;
- by the user or potential user of the implementation, as a basis for initially checking the possibility of interworking with another implementation;

  NOTE B.1:

  While interworking can never be guaranteed, failure to interwork can often be predicted from incompatible PICS's.
- by a protocol tester, as the basis for selecting appropriate tests against which to assess the claim for conformance of the implementation.

B.2 INSTRUCTIONS FOR COMPLETING THE PICS PROFORMA

B.2.1 General Structure of the PICS Proforma

The PICS proforma is a fixed format questionnaire divided into subclauses each containing a group of individual items. Each item is identified by an item number, the name of the item (question to be answered), and the reference(s) to the clause(s) that specifies (specify) the item in the main body of this Standard.

The "Status" column indicates whether an item is applicable and if so whether support is mandatory or optional. The following terms are used:

m	mandatory (the capability is required for conformance to the protocol);
o	optional (the capability is not required for conformance to the protocol, but if the capability is implemented it is required to conform to the protocol specifications);

o.<n> optional, but support of at least one of the group of options labelled by the same numeral <n> is required;

x prohibited;

c.<cond> conditional requirement, depending on support for the item or items listed in condition <cond>;

<item>:m simple conditional requirement, the capability being mandatory if item number <item> is supported, otherwise not applicable;

<item>:o simple conditional requirement, the capability being optional if item number <item> is supported, otherwise not applicable.

Answers to the questionnaire items are to be provided either in the "Support" column, by simply marking an answer to indicate a restricted choice (Yes or No), or in the "Not Applicable" column (N/A).

B.2.2 Additional Information

Items of Additional Information allow a supplier to provide further information intended to assist the interpretation of the PICS. It is not intended or expected that a large quantity will be supplied, and a PICS can be considered complete without any such information. Examples might be an outline of the ways in which a (single) implementation can be set up to operate in a variety of environments and configurations.

References to items of Additional Information may be entered next to any answer in the questionnaire, and may be included in items of Exception information.

B.2.3 Exception Information

It may occasionally happen that a supplier will wish to answer an item with mandatory or prohibited status (after any conditions have been applied) in a way that conflicts with the indicated requirement. No pre-printed answer will be found in the Support column for this. Instead, the supplier is required to write into the support column an x.<i> reference to an item of Exception Information, and to provide the appropriate rationale in the Exception item itself.

An implementation for which an Exception item is required in this way does not conform to Standard ECMA-157.

NOTE B.2:

A possible reason for the situation described above is that a defect in the Standard has been reported, a correction for which is expected to change the requirement not met by the implementation.

B.3 PICS PROFORMA FOR PTNX IMPLEMENTATIONS

B.3.1 Implementation Identification

Supplier	
Contact point for queries about the PICS	
Implementation Name(s) and Version(s)	
Other information necessary for full identification, e.g., name(s) and version(s) for machines and/or operating systems; system name(s)	

NOTE B.3:

Only the first three items are required for all implementations; other information may be completed as appropriate in meeting the requirement for full identification.

NOTE B.4:

The terms Name and Version should be interpreted appropriately to correspond with a supplier's terminology (e.g., Type, Series, Model).

B.3.2 Protocol Summary

Protocol version	1.0
Addenda Implemented (if applicable)	
Amendments Implemented	
Have any exception items been required (see B.3.3) ?	No [] Yes [] (The answer Yes means that the implementation does not conform to ECMA-157)

Date of Statement	

B.3.3 Supplementary Services

Item	Question/feature	References	Status	N/A	Support
A1	Support of SS-CLIP	6	O.1		Yes[] No[]
A2	Support of SS-COLP	7	O.1		Yes[] No[]
A3	Support of SS-CLIR	8	O.1		Yes[] No[]

B.3.4 SS-CLIP

Item	Question/feature	References	Status	N/A	Support
B1	CC-CLIP coding requirements	6.3	A1:m	[ ]	m:Yes[]
B2	SS-CLIP procedures for sending Calling party number and Calling party subaddress information elements	6.5.4.1	A1:m	[ ]	m:Yes[]

B.3.5 SS-COLP

Item	Question/feature	References	Status	N/A	Support
C1	CC-COLP coding requirements	7.3	A2:m	[ ]	m:Yes[]
C2	SS-COLP procedures for sending Connected number and Connected subaddress information elements	7.5.3.1	A2:m	[ ]	m:Yes[]

B.3.6 SS-CLIR

Item	Question/feature	References	Status	N/A	Support
D1	Provision of SS-CLIR permanent mode	8.2.1	A3:O.2	[ ]	Yes[] No[]
D2	Provision of SS-CLIR temporary mode with default "presentation restricted"	8.2.1	A3:O.2	[ ]	Yes[] No[]
D3	Provision of SS-CLIR temporary mode with default "presentation not restricted"	8.2.1	A3:O.2	[ ]	Yes[] No[]
D4	Procedures for SS-CLIR permanent mode at the Originating PTNX	8.5.3.1	D1:m	[ ]	m:Yes[]
D5	Procedures for SS-CLIR temporary mode at the Originating PTNX	8.5.3.1	c.1	[ ]	m:Yes[]
D6	Procedures for SS-CLIR permanent mode at the Destination PTNX	8.5.4.1	D1:m	[ ]	m:Yes[]
D7	Procedures for SS-CLIR temporary mode at the Designation PTNX	8.5.4.1	c.1	[ ]	m:Yes[]

c.1: if D2 OR D3 then m else N/A

B.4 PICS PROFORMA FOR TE IMPLEMENTATIONS

B.4.1 Implementation Identification

Supplier	
Contact point for queries about the PICS	
Implementation Name(s) and Version(s)	
Other information necessary for full identification, e.g., name(s) and version(s) for machines and/or operating systems; system name(s)	

NOTE B.5:

Only the first three items are required for all implementations; other information may be completed as appropriate in meeting the requirement for full identification.

NOTE B.6:

The terms Name and Version should be interpreted appropriately to correspond with a suppliers terminology (e.g., Type, Series, Model).

B.4.2 Protocol Summary

Protocol version	1.0
Addenda Implemented (if applicable)	
Amendments Implemented	
Have any exception items been required (see B.3.3) ?	No [] Yes [] (The answer Yes means that the implementation does not conform to ECMA-157)

Date of Statement	

B.4.3 Supplementary Services

Item	Question/feature	References	Status	N/A	Support
E1	Support of SS-CLIP	6	O.3		Yes[] No[]
E2	Support of SS-COLP	7	O.3		Yes[] No[]
E3	Support of SS-CLIR	8	O.3		Yes[] No[]

B.4.4 SS-CLIP

Item	Question/feature	References	Status	N/A	Support
F1	Receipt of information elements relating to SS-CLIP	6.5.5	E1:m	[ ]	m:Yes[]

B.4.5 SS-COLP

Item	Question/feature	References	Status	N/A	Support
G1	Receipt of information elements relating to SS-COLP	7.5.2	E2:m	[ ]	m:Yes[]

B.4.6 SS-CLIR

Item	Question/feature	References	Status	N/A	Support
H1	Sending of presentation indicator in a SETUP message to override SS-CLIR temporary mode	8.5.2.1	E3:O.4	[ ]	Yes[] No[]
H2	Sending of presentation indicator in a CONNECT message to override SS-CLIR temporary mode	8.5.5.1	E3:O.4	[ ]	Yes[] No

ANNEX C

(informative)

SPECIFICATION AND DESCRIPTION LANGUAGE (SDL) REPRESENTATION OF PROCEDURES

C.1 SDL REPRESENTATION OF SS-CLIP AT THE DESTINATION PTNX

Figure 2 of clause 14 of prETS 300092 is an SDL representation of the behaviour of a destination node of a public ISDN in support of the public ISDN supplementary service CLIP. With the following amendment, that figure is also applicable to the support of SS-CLIP at a Destination PTNX,

- The Calling party subaddress information element, if provided, is sent to the user independently of whether the calling user's number is available and whether the number is subject to restriction.

C.2 SDL REPRESENTATION OF SS-COLP AT THE ORIGINATING PTNX

Figure 4 of clause 14 of prETS 300097 is an SDL representation of the behaviour of an originating node of a public ISDN in support of the public ISDN supplementary service COLP. With the following amendment, that figure is also applicable to the support of SS-COLP at an Originating PTNX,

- The Connected subaddress information element, if provided, is sent to the user independently of whether the connected user's number is available and whether the number is subject to restriction.

C.3 SDL REPRESENTATION OF SS-CLIR AT THE ORIGINATING PTNX

Figure 1 of clause 14 of prETS 300093 is an SDL representation of the behaviour of an originating node of a public ISDN in support of the public ISDN supplementary service CLIR. That figure is also applicable to the support of SS-CLIR at an Originating PTNX.

C.4 SDL REPRESENTATION OF SS-CLIR AT THE DESTINATION PTNX

Figure 1 of clause 14 of prETS 300098 is an SDL representation of the behaviour of an destination node of a public ISDN in support of the public ISDN supplementary service COLR. That figure is also applicable to the support of SS-CLIR at a Destination PTNX.

ANNEX D

(informative)

BIBLIOGRAPHY

prETS 300092	Integrated Services Digital Network (ISDN) Calling Line Identification Presentation (CLIP) Supplementary Service Digital Subscriber Signalling System One (DSS1) Protocol
prETS 300093	Integrated Services Digital Network (ISDN) Calling Line Identification Restriction (CLIR) Supplementary Service Digital Subscriber Signalling System One (DSS1) Protocol
prETS 300097	Integrated Services Digital Network (ISDN) Connected Line Identification Presentation (COLP) Supplementary Service Digital Subscriber Signalling System One (DSS1) Protocol
prETS 300098	Integrated Services Digital Network (ISDN) Connected Line Identification Restriction (COLR) Supplementary Service Digital Subscriber Signalling System One (DSS1) Protocol