ECMA

EUROPEAN COMPUTER MANUFACTURERS ASSOCIATION

STANDARD ECMA-164

PRIVATE TELECOMMUNICATION NETWORKS

-

INTER-EXCHANGE SIGNALLING PROTOCOL

-

NAME IDENTIFICATION SUPPLEMENTARY SERVICES

(PTN QSIG-NA)

2nd Edition - June 1993

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Table of contents

1　Scope

This Standard specifies the signalling protocol for the support of Name Identification supplementary services at the Q reference point between Private Telecommunication Network Exchanges (PTNXs) connected together within a Private Telecommunication Network (PTN). The Name Identification supplementary services are Calling Name Identification Presentation (SS-CNIP) and Connected Name Identification Presentation (SS-CONP).

Calling Name Identification Presentation (SS-CNIP) is a supplementary service which is offered to the called user and which provides the name of the calling user to the called user.

Connected Name Identification Presentation (SS-CONP) is a supplementary service which is offered to the calling user and which provides to the calling user the following:

– the name of the user who answers the call,
– optionally the name of the alerting user,
– optionally the name of the called user who cannot be reached.

The supplementary service Calling/Connected Name Identification Restriction (SS-CNIR) has no impact on the signalling at the Q reference point.

The Q reference point is defined in ENV 41004.

Service specifications are produced in three stages and according to the method specified in ENV 41005. This Standard contains the stage 3 specification for the Q reference point and satisfies the requirements identified by the stage 1 and 2 specifications in ETS 300 237.

NOTE 1

Signalling protocols for SS-CNIP and SS-CONP have the ability to convey an indication that presentation of a name is restricted. The stage 1 and stage 2 specifications in ETS 300 237 for SS-CNIR do not place any additional requirements on stage 3 at the Q reference point.

The signalling protocol for SS-CNIP and SS-CONP operates on top of the signalling protocol for basic circuit switched call control, as specified in ETS 300 172, and uses certain aspects of the generic procedures for the control of supplementary services specified in ECMA-165.

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.

This Standard is applicable to PTNXs which can be interconnected to form a PTN.

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 annex A.

3　References

ECMA-165	Private Telecommunication Networks (PTN) - Inter-exchange Signalling - Generic Functional Protocol for the Support of Supplementary Services (QSIG-GF) (1993)
ETS 300 171	Private Telecommunication Network (PTN); Specification, functional models and information flows; Control aspects of circuit mode basic services (1992)
ETS 300 172	Private Telecommunication Network (PTN); Inter-exchange signalling protocol; Circuit mode basic services (1992)
ETS 300 237	Private Telecommunication Network (PTN); Specification, functional models and information flows; Name identification supplementary services (1993)
ISO 8859-1	Information processing - 8-bit single-byte coded graphic character sets - Part 1: Latin alphabet No. 1 (1987)

ENV 41004   Reference configurations for calls through exchanges of private telecommunication networks (1989)

ENV 41005   Method for the specification of basic and supplementary services of private telecommunication networks (1990)

ENV 41007   Definition of terms in private telecommunication networks (1989)

CCITT Rec. I.112   Vocabulary of terms for ISDNs (1988)

CCITT Rec. I.210   Principles of telecommunication services supported by an ISDN and the means to describe them (1988)

CCITT Rec. T.61   Character repertoire and coded character sets for the international teletex service (1988)

CCITT Rec. Z.100   Specification and description language (1988)

4   Definitions

For the purpose of this Standard the following definitions apply.

4.1   External definitions

This Standard uses the following terms defined in other documents:

– Application Protocol Data Unit	(ECMA-165)
– Basic Service	(CCITT Rec. I.210)
– Call, Basic Call	(ECMA-165)
– Co-ordination Function	(ECMA-165)
– Incoming Gateway PTNX	(ETS 300 172)
– Integrated Services Digital Network	(CCITT Rec. I.112)
– Originating PTNX	(ETS 300 172)
– Outgoing Gateway PTNX	(ETS 300 172)
– Private	(ENV 41007)
– Private Telecommunication Network Exchange	(ENV 41007)
– Public ISDN	(ENV 41007)
– Signalling	(CCITT Rec. I.112)
– Supplementary Service	(CCITT Rec. I.210)
– Supplementary Service Control Entity	(ECMA-165)
– Telecommunication Network	(ENV 41007)
– Terminal, Terminal Equipment	(ENV 41007)
– Terminating PTNX	(ETS 300 172)
– Transit PTNX	(ETS 300 172)
– User	(ETS 300 171)

4.2   Name

A string of maximum 50 characters which is used for the name identification of the PTN user of a call.

5   List of acronyms

APDU	Application Protocol Data Unit
ASN.1	Abstract Syntax Notation One
ISDN	Integrated Services Digital Network
NFE	Network Facility Extension
PICS	Protocol Implementation Conformance Statement
PTN	Private Telecommunication Network
PTNX	Private Telecommunication Network Exchange
SDL	Specification and Description Language
SSCE	Supplementary Service Control Entity
SS-CNIP	Calling Name identification Presentation supplementary service
SS-CONP	Connected Name identification Presentation supplementary service

6   SS-CNIP and SS-CONP coding requirements

6.1   Operations

The operations defined in ASN.1 in table 1 shall apply.

Table 1 - Operations in support of SS-CNIP and SS-CONP

```
Name-Operations
        { iso(1) identified-organisation(3) icd-ecma(0012) standard(0) qsig-name (164)
            name-operations (0) }


DEFINITIONS         :: =
BEGIN
IMPORTS     OPERATION, ERROR FROM Remote-Operation-Notation
                { joint-iso-ccitt (2) remote-operations (4) notation (0) }
            Extension FROM Manufacturer-specific-service-extension-definition
                { iso(1) identified-organisation(3) icd-ecma(0012) standard(0)
                    qsig-generic-procedures (165) msi-definition (0) };
EXPORTS     Name, NameSet;

ptn OBJECT IDENTIFIER
                :: = { iso (1) identified-organisation (3) icd-ecma (0012)
                    private-isdn-signalling-domain (9) }

CallingName     OPERATION
                ARGUMENT CHOICE
                    { Name, SEQUENCE { Name, CHOICE {
                        [5] IMPLICIT Extension,
                        [6] IMPLICIT SEQUENCE OF Extension } OPTIONAL } }

CalledName      OPERATION
                ARGUMENT CHOICE
                    { Name, SEQUENCE { Name, CHOICE {
                        [5] IMPLICIT Extension,
                        [6] IMPLICIT SEQUENCE OF Extension } OPTIONAL } }

ConnectedName   OPERATION
                ARGUMENT CHOICE
                    { Name SEQUENCE { Name, CHOICE {
                        [5] IMPLICIT Extension,
                        [6] IMPLICIT SEQUENCE OF Extension } OPTIONAL } }

BusyName        OPERATION
                ARGUMENT CHOICE
                    { Name, SEQUENCE {Name, CHOICE{
                        [5] IMPLICIT Extension,
                        [6] IMPLICIT SEQUENCE OF Extension } OPTIONAL } }

Name            :: =CHOICE
                    { NamePresentationAllowed,
                      NamePresentationRestricted,
                      NameNotAvailable }
```

```
NamePresentationAllowed
                    :: = CHOICE
                            {  namePresentationAllowedSimple [0] IMPLICIT NameData,
                            {  namePresentationAllowedExtended [1] IMPLICIT NameSet }
                            - - iso8859-1 is implied in namePresentationAllowedSimple.
NamePresentationRestricted
                    :: = CHOICE
                            {  namePresentationRestrictedSimple [2] IMPLICIT NameData,
                            {  namePresentationRestrictedExtended [3] IMPLICIT NameSet }
                            - - iso8859-1 is implied in namePresentationRestrictedSimple.
NameNotAvailable
                    :: = [4] IMPLICIT NULL
NameData            :: = OCTET STRING (SIZE (1..50))
                            - - The maximum allowed  size of the name field is 50 octets.
                            - - The minimum required size of the name field is 1 octet.
NameSet
                    :: = SEQUENCE
                            {  nameData            NameData,
                            characterSet CharacterSet OPTIONAL }
                            - - If characterSet is not included, iso8859-1 is implied.
CharacterSet        :: = INTEGER
                            {  unknown (0),
                            iso8859-1 (1), t-61 (2) } (0..255)
                            - - The character set "iso8859-1" is specified in International
                            - - Standard ISO 8859-1.
                            - - The character set "t-61" is specified in CCITT Recommendation T.61.
                            - - Other character sets might be added in further editions of this
                            - - Standard

callingName         CallingName         :: = { ptn calling-name (0) }
calledName          CalledName          :: = { ptn called-name (1) }
connectedName       ConnectedName       :: = { ptn connected-name (2) }
busyName            BusyName            :: = { ptn busy-name (3) }


END                             - - of Name-Operations
```

6.2 Information elements

The operations defined in 6.1 for the support of SS-CNIP and SS-CONP shall be coded in the Facility information element in accordance with ECMA-165.

When conveying the invoke APDU of the operations defined in 6.1, the NFE in the Facility information element shall be included and coded as defined in case no. 1 of 7.1.2.1 of ECMA-165. The Interpretation APDU in the Facility information element shall be included and shall have the value "discardAnyUnrecognisedInvokePdu (0)".

6.3 Messages

Basic call messages ALERTING, CONNECT, DISCONNECT and SETUP shall be used for conveying the Facility information element in support of SS-CNIP and SS-CONP as specified in ECMA-165.

7 Signalling protocol for the support of SS-CNIP

7.1 SS-CNIP general description

Calling Name Identification Presentation (SS-CNIP) is a supplementary service which is offered to the called user and which provides the name of the calling user to the called user.

The PTN provides the calling user's name and delivers the calling user's name to the called user whenever an incoming call is presented.

The presentation of the calling user's name may be restricted as specified in SS-CNIR. Some users may have a service profile which permits the override of calling name identification restriction.

This supplementary service is applicable to all basic telecommunication services.

7.2 SS-CNIP operational requirements

7.2.1 Requirements on the Originating PTNX and the Incoming Gateway PTNX

Call establishment procedures, as specified in ETS 300 172, shall apply. Additionally, these PTNXs shall be responsible for obtaining the name information.

Generic procedures for the call related control of supplementary services, as specified in ECMA-165 for a Source PTNX, shall apply.

7.2.2 Requirements on the Terminating PTNX and the Outgoing Gateway PTNX

Call establishment procedures, as specified in ETS 300 172, shall apply. Additionally, these PTNXs shall be responsible for delivering the name information to the user or to the other network.

Generic procedures for the call related control of supplementary services, as specified in ECMA-165 for a Destination PTNX, shall apply.

7.2.3 Requirements on a Transit PTNX

Call establishment procedures, as specified in ETS 300 172, shall apply.

Generic procedures for the call related control of supplementary services, as specified in ECMA-165 for a Transit PTNX, shall apply.

7.3 SS-CNIP state definitions

No specific state definitions are required.

7.4 SS-CNIP signalling procedures for invocation and operation

7.4.1 Actions at the Originating PTNX

7.4.1.1 Normal procedures

If the calling user's name is available and presentation is allowed, the callingName invoke APDU shall be sent in the SETUP message from the Originating PTNX to the Terminating PTNX. Within the argument, the NamePresentationAllowed type shall be chosen for the element of type Name.

If the calling user's name is available and presentation is restricted, the callingName invoke APDU shall also be sent in the SETUP message from the Originating PTNX to the Terminating PTNX. Within the argument, the NamePresentationRestricted type shall be chosen for the element of type Name.

If the calling user's name is not available, the callingName invoke APDU may be sent in the SETUP message from the Originating PTNX to the Terminating PTNX. Within the argument, the NameNotAvailable type shall be chosen for the element of type Name.

7.4.1.2 Exceptional procedures

Not applicable.

7.4.2 Actions at the Terminating PTNX

7.4.2.1 Normal procedures

If the callingName invoke APDU has been received with an element of type NamePresentationAllowed in the argument, the name information including the presentation indicator shall be delivered to the called user if able and authorised to receive the calling name information.

If the callingName invoke APDU has been received with an element of type NamePresentationRestricted in the argument, no name information other than the presentation indictor shall be delivered to the called user, unless the called user has an override capability.

If either the callingName invoke APDU has not been received or the callingName invoke APDU has been received with an element of type NameNotAvailable in the argument, no name information other than the presentation indicator "name not available" shall be delivered to the called user.

7.4.2.2 Exceptional procedures

Not applicable.

7.4.3 Actions at a Transit PTNX

No special actions are required in support of SS-CNIP.

7.5 SS-CNIP impact of interworking with public ISDNs or with non-ISDNs

7.5.1 Actions at the Incoming Gateway PTNX

On calls incoming from another network, if the other network provides the calling user's name information, it shall be sent to the Terminating PTNX as specified in 7.4.1 (the Incoming Gateway PTNX thereby acting as an Originating PTNX).

7.5.2 Actions at the Outgoing Gateway PTNX

On outgoing calls to another network, the PTN shall deliver the calling user's name information to the other network as specified in 7.4.2 (the Outgoing Gateway PTNX thereby acting as a Terminating PTNX), if the other network supports an equivalent supplementary service.

7.6 SS-CNIP parameter values

No specific timers are required.

8 Signalling protocol for the support of SS-CONP

8.1 SS-CONP general description

Connected Name Identification Presentation (SS-CONP) is a supplementary service which is offered to the calling user and which provides to the calling user the following:

– the name of the user who answers the call,
– optionally the name of the alerting user,
– optionally the name of the called user who cannot be reached.

The PTN provides the connected user's name and delivers the connected user's name to the calling user whenever an incoming call is answered by the called user.

Optionally, the PTN provides the name of the busy user and delivers the name to the calling user whenever the called user cannot be reached because of a busy condition.

Optionally, the PTN provides the name of the alerted user and delivers the name to the calling user whenever an incoming call commences alerting at the called user.

The presentation of the connected user's name, busy user's name and alerted user's name may be restricted as specified in SS-CNIR. Some users may have a service profile which permits the override of connected name identification restriction.

This supplementary service is applicable to all basic telecommunication services.

8.2 SS-CONP operational requirements

8.2.1 Requirements on the Terminating PTNX and the Outgoing Gateway PTNX

Call establishment procedures and the call release procedures, as specified in ETS 300 172, shall apply. Additionally, these PTNXs shall be responsible for obtaining the name information.

Generic procedures for the call related control of supplementary services, as specified in ECMA-165 for a Source PTNX, shall apply.

8.2.2 Requirements on the Originating PTNX and the Incoming Gateway PTNX

Call establishment procedures and the call release procedures, as specified in ETS 300 172, shall apply. Additionally, these PTNXs shall be responsible for delivering the name information to the user or to the other network.

Generic procedures for the call related control of supplementary services, as specified in ECMA-165 for a Destination PTNX, shall apply.

8.2.3 Requirements on a Transit PTNX

Call establishment and release procedures, as specified in ETS 300 172, shall apply.

Generic procedures for the call related control of supplementary services, as specified in ECMA-165 for a Transit PTNX, shall apply.

8.3 SS-CONP state definitions

No specific state definitions are required.

8.4 SS-CONP signalling procedures for invocation and operation

8.4.1 Actions at the Terminating PTNX

8.4.1.1 Normal procedures

When an incoming call is answered by the called user and the connected user's name is available and presentation is allowed, the connectedName invoke APDU shall be sent in the CONNECT message from the Terminating PTNX to the Originating PTNX. Within the argument, the NamePresentationAllowed type shall be chosen for the element of type Name.

When the called user cannot be reached because of a busy condition and the called user's name is available and presentation is allowed, the busyName invoke APDU may be sent in the DISCONNECT message from the Terminating PTNX to the Originating PTNX. Within the argument, the NamePresentationAllowed type shall be chosen for the element of type Name.

When an incoming call commences alerting at the called user and the called user's name is available and presentation is allowed, the calledName invoke APDU may be sent in the ALERTING message from the Terminating PTNX to the Originating PTNX. Within the argument, the NamePresentationAllowed type shall be chosen for the element of type Name.

When an incoming call is answered by the called user and the connected user's name is available and presentation is restricted, the connectedName invoke APDU shall be sent in the CONNECT message from the Terminating PTNX to the Originating PTNX. Within the argument, the NamePresentationRestricted type shall be chosen for the element of type Name.

When the called user cannot be reached because of a busy condition and the called user's name is available and presentation is restricted, the busyName invoke APDU may be sent in the DISCONNECT message from the Terminating PTNX to the Originating PTNX. Within the argument, the NamePresentationRestricted type shall be chosen for the element of type Name.

When an incoming call commences alerting at the called user and the called user's name is available and presentation is restricted, the calledName invoke APDU may be sent in the ALERTING message from the Terminating PTNX to the Originating PTNX. Within the argument, the NamePresentationRestricted type shall be chosen for the element of type Name.

When an incoming call is answered by the called user and the connected user's name is not available, the connectedName invoke APDU may be sent in the CONNECT message from the Terminating PTNX to the

Originating PTNX. Within the argument, the NameNotAvailable type shall be chosen for the element of type Name.

When the called user cannot be reached because of a busy condition and the called user's name is not available, the busyName invoke APDU may be sent in the DISCONNECT message from the Terminating PTNX to the Originating PTNX. Within the argument, the NameNotAvailable type shall be chosen for the element of type Name.

When an incoming call commences alerting at the called user and the called user's name is not available, the calledName invoke APDU may be sent in the ALERTING message from the Terminating PTNX to the Originating PTNX. Within the argument, the NameNotAvailable type shall be chosen for the element of type Name.

8.4.1.2 Exceptional procedures

Not applicable.

8.4.2 Actions at the Originating PTNX

8.4.2.1 Normal procedures

If the connectedName invoke APDU has been received in the CONNECT message with an element of type NamePresentationAllowed in the argument, the name information including the presentation indicator shall be delivered to the calling user if able and authorised to receive the connected name information.

If the busyName invoke APDU has been received in the DISCONNECT message with an element of type NamePresentationAllowed in the argument, the name information including the presentation indicator may be delivered to the calling user if able and authorised to receive the connected name information.

If the calledName invoke APDU has been received in the ALERTING message with an element of type NamePresentationAllowed in the argument, the name information including the presentation indicator may be delivered to the calling user if able and authorised to receive the connected name information.

If the connectedName invoke APDU has been received in the CONNECT message with an element of type NamePresentationRestricted in the argument, no name information other than the presentation indicator as received shall be delivered to the calling user, unless the calling user has an override capability.

If the busyName invoke APDU has been received in the DISCONNECT message with an element of type NamePresentationRestricted in the argument, no name information other than the presentation indicator as received may be delivered to the calling user, unless the calling user has an override capability.

If the calledName invoke APDU has been received in the ALERTING message with an element of type NamePresentationRestricted in the argument, no name information other than the presentation indicator as received may be delivered to the calling user, unless the calling user has an override capability.

If either the connectedName invoke APDU has not been received in the CONNECT message or the connectedName invoke APDU has been received in the CONNECT message with an element of type NameNotAvailable in the argument, no name information other than the presentation indicator "name not available" shall be delivered to the calling user.

If either calledName invoke APDU has not been received in the ALERTING message or the calledName invoke APDU has been received in the ALERTING message with an element of type NameNotAvailable in the argument, only the presentation indicator "name not available" may be delivered to the calling user.

If either the busyName invoke APDU has not been received in the DISCONNECT message or the busyName invoke APDU has been received in the DISCONNECT message with an element of type NameNotAvailable in the argument, only the presentation indicator "name not available" may be delivered to the calling user.

8.4.2.2 Exceptional procedures

Not applicable.

8.4.3 Actions at a Transit PTNX

No special actions are required in support of SS-CONP.

8.5 SS-CONP impact of interworking with public ISDNs or with non-ISDNs

8.5.1 Actions at the Outgoing Gateway PTNX

On outgoing calls to another network, if the other network provides the name of the user who has answered the call and the name of the alerted user or the name of the user who cannot be reached, it shall be sent to the Originating PTNX as specified in 8.4.1 (the Outgoing Gateway PTNX thereby acting as a Terminating PTNX).

8.5.2 Actions at the Incoming Gateway PTNX

On calls incoming from another network, the PTN shall deliver the name of the user who has answered the call and the name of the alerted user or the name of the user, who cannot be reached, to the other network as specified in 8.4.2 (The Incoming Gateway PTNX thereby acting as an Originating PTNX), if this network supports an equivalent supplementary service.

8.6 SS-CONP parameter values

No specific timers are required.

Annex A

(normative)

Protocol Implementation Conformance Statement (PICS) Proforma

A.1 Introduction

The supplier of a protocol implementation which is claimed to conform to this Standard shall complete the Protocol Implementation Conformance Statement (PICS) proforma in A.3.

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 a 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 PICS proforma;

– by user (or potential user) of the implementation, as a basis for initially checking the possibility of interworking with another implementation (note that, while interworking cannot be guaranteed, failure to interwork can often be predicted from incompatible PICS);

– by a protocol tester, as the basis for selecting appropriate tests against which to assess the claim for conformance of the implementation.

A.2 Instructions for completing the PICS proforma

A.2.1 General structure of the PICS proforma

The PICS proforma is a fixed format questionnaire divided into sub-classes 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).

A.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.

A.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 requirements. 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 this Standard. 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.

A.3 PICS proforma for ECMA-164

A.3.1 Implementation identification

Supplier	
Contact point for queries about 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)	

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

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

A.3.2 Protocol summary

Protocol version	1.0
Addenda Implemented (if applicable)	
Amendments Implemented	
Have any exception items been required (see A.2.3)?	No [ ] Yes [ ] (The answer Yes means that the implementation does not conform to this Standard)

Date of statement	

A.3.3 Supplementary services

Item	Name of Item	References	Status	N/A	Support
A1	Support of SS-CNIP	7	o.1		Yes [ ] No [ ]
A2	Support of SS-CONP	8	o.1		Yes [ ] No [ ]

A.3.4 Procedures for SS-CNIP

Item	Name of Item	References	Status	N/A	Support
B1	Procedures at the Originating PTNX	7.4.1	A1:o.2		Yes [ ] No [ ]
B2	Procedures at the Terminating PTNX	7.4.2	A1:o.2		Yes [ ] No [ ]
B3	Procedures at the Incoming Gateway PTNX	7.5.1	A1:o.2		Yes [ ] No [ ]
B4	Procedures at the Outgoing Gateway PTNX	7.5.2	A1:o.2		Yes [ ] No [ ]
B5	Encoding of callingName APDU	6	A1:m		Yes [ ]
B6	Sending of callingName APDU in SETUP	6, 7.4.1	c.1	[ ]	Yes [ ]
B7	Receipt of callingName APDU in SETUP	6, 7.4.2	c.2	[ ]	Yes [ ]
B8	Sending of character set number	6.1	c.3	[ ]	Yes [ ] No [ ]

c.1: if B1 or B3 then m
      else N/A

c.2: if B2 or B4 then m
      else N/A

c.3: if B1 or B3 then o
      else N/A

A.3.5 Procedures for SS-CONP

Item	Name of Item	References	Status	N/A	Support
C1	Procedures at the Terminating PTNX	8.4.1	A2:o.3		Yes [ ] No [ ]
C2	Procedures at the Originating PTNX	8.4.2	A2:o.3		Yes [ ] No [ ]
C3	Procedures at the Outgoing Gateway PTNX	8.5.1	A2:o.3		Yes [ ] No [ ]
C4	Procedures at the Incoming Gateway PTNX	8.5.2	A2:o.3		Yes [ ] No [ ]
C5	Encoding of connectedName APDU	6	A2:m		Yes [ ]
C6	Encoding of busyName APDU	6	A2:o		Yes [ ] No [ ]
C7	Encoding of calledName APDU	6	A2:o		Yes [ ] No [ ]
C8	Sending of connectedName APDU in CONNECT	6, 8.4.1	c.1	[ ]	Yes [ ]
C9	Receipt of connectedName APDU in CONNECT	6, 8.4.2	c.2	[ ]	Yes [ ]
C10	Sending of busyName APDU in DISCONNECT	6, 8.4.1	c.3	[ ]	Yes [ ] No [ ]
C11	Receipt of busyName APDU in DISCONNECT	6, 8.4.2	c.4	[ ]	Yes [ ] No [ ]
C12	Sending of calledName APDU in ALERTING	6, 8.4.1	c.3	[ ]	Yes [ ] No [ ]
C13	Receipt of calledName APDU in ALERTING	6, 8.4.2	c.4	[ ]	Yes [ ] No [ ]
C14	Sending of character set number	6.1	c.3	[ ]	Yes [ ] No [ ]

c.1: if C1 or C3 then m
      Else N/A

c.2: if C2 or C4 then m
      Else N/A

c.3: if C1 or C3 then o
      Else N/A

c.4: if C2 or C4 then o
      Else N/A

Annex B

(informative)

Specification and Description Language (SDL)
Representation of Procedures

The diagrams in this annex use the Specification and Description Language defined in CCITT Rec. Z.100 (1988).

Each diagram represents the behaviour of an SS-CNIP or SS-CONP Supplementary Service Control entity at a particular type of PTNX. In accordance with the protocol model described in ECMA-165, the Supplementary Service Control entity uses, via the Co-ordination Function, the services of Generic Functional Procedures Control and Basic Call Control.

Where an output symbol represents a primitive to the Co-ordination Function, and that primitive results in a QSIG message being sent, the output bears the name of the message and any remote operations APDU(s) or notification(s) contained in that message. In case of a message specified in ETS 300 172, basic call actions associated with the sending of that message are deemed to occur.

B.1   SDL representation of SS-CNIP

Figure B.1 shows the behaviour of an SS-CNIP Supplementary Service Control entity within the Originating PTNX. Figure B.2 shows the behaviour of an SS-CNIP Supplementary Service Control entity within the Terminating PTNX.

In figure B.1 output signals to the right represent messages sent via the outgoing side protocol control and input signals from the left represent primitives from the SSCE user.

In figure B.2 output signals to the right represent primitives to the SSCE user and input signals from the left represent messages received via the incoming side protocol control.
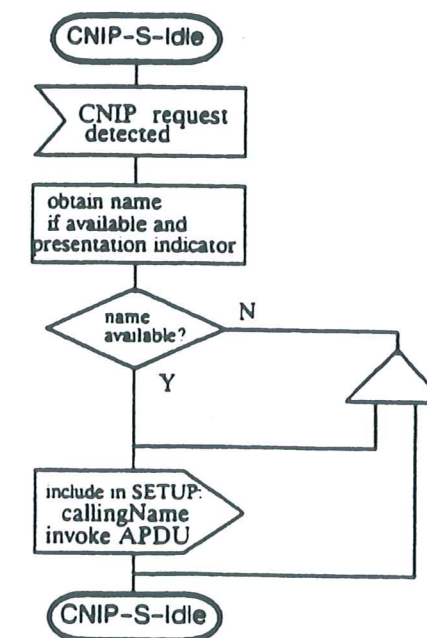

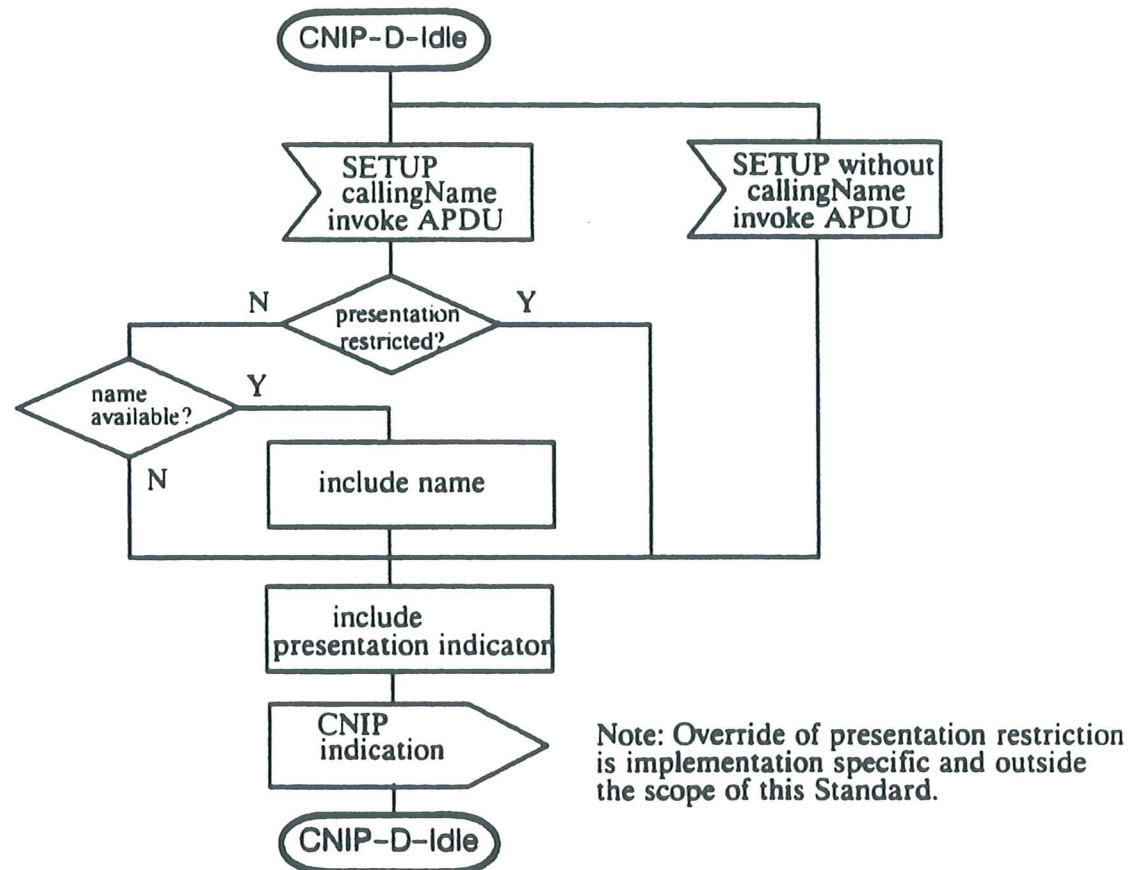**Figure B.1 - SDL representation of SS-CNIP at the Originating PTNX**

CNIP-D-Idle

SETUP callingName invoke APDU

SETUP without callingName invoke APDU

presentation restricted?   N   Y

name available?   Y

N

include name

include presentation indicator

CNIP indication

Note: Override of presentation restriction is implementation specific and outside the scope of this Standard.

CNIP-D-Idle

Figure B.2 - SDL representation of SS-CNIP at the Terminating PTNX

B.2   SDL representation of SS-CONP

Figure B.3 shows the behaviour of an SS-CONP Supplementary Service Control entity within the Terminating PTNX. Figure B.4 shows the behaviour of an SS-CONP Supplementary Service Control entity within the Originating PTNX.

In figure B.3 output signals to the left represent messages sent via the incoming side protocol control and input signals from the right represent primitives from the SSCE user.

In figure B.4 output signals to the left represent primitives to the SSCE user and input signals from the right represent messages received via the outgoing side protocol control.
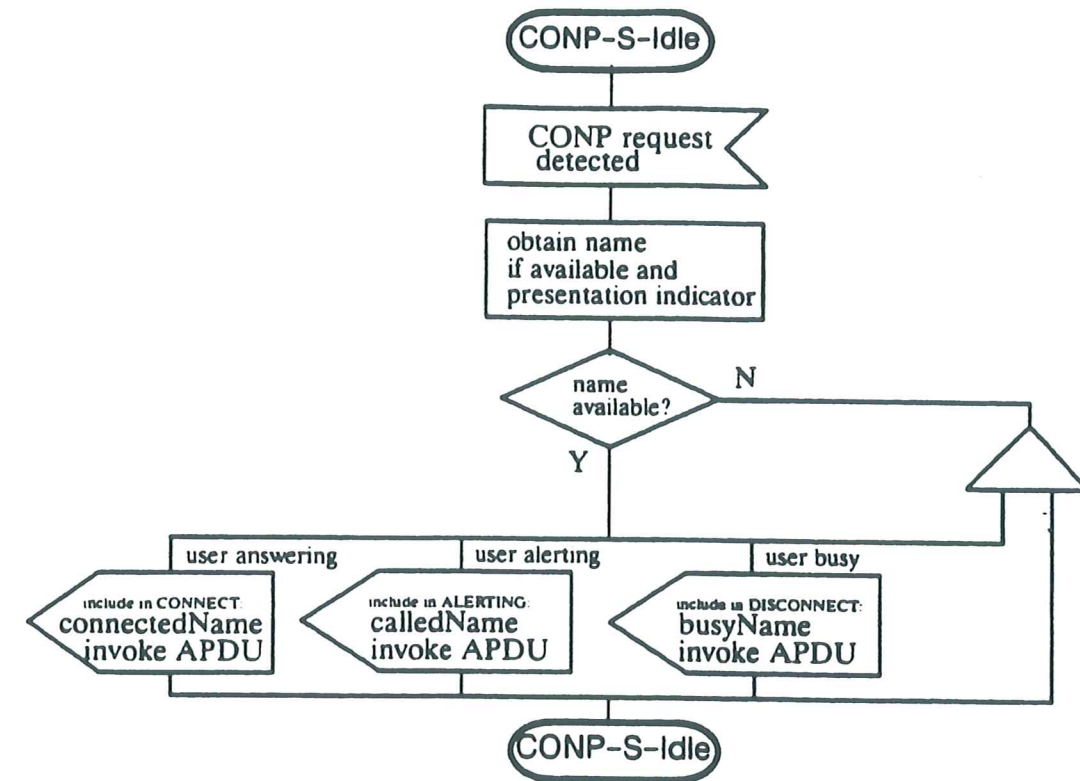
CONP-S-Idle

CONP request detected

obtain name if available and presentation indicator

name available?   N

Y

user answering

include in CONNECT: connectedName invoke APDU

user alerting

include in ALERTING: calledName invoke APDU

user busy

include in DISCONNECT: busyName invoke APDU

CONP-S-Idle

Figure B.3 - SDL representation of SS-CONP at the Terminating PTNX

CONP-D-Idle

CONNECT connectedName invoke APDU

ALERTING calledName invoke APDU

DISCONNECT busyName invoke APDU

presentation restricted?   N   Y

name available?   Y

N

include name

CONNECT without connectedName invoke APDU

ALERTING without calledName invoke APDU

DISCONNECT without busyName invoke APDU

include presentation indicator

CNIP indication

Note: Override of presentation restriction is implementation specific and outside the scope of this Standard.
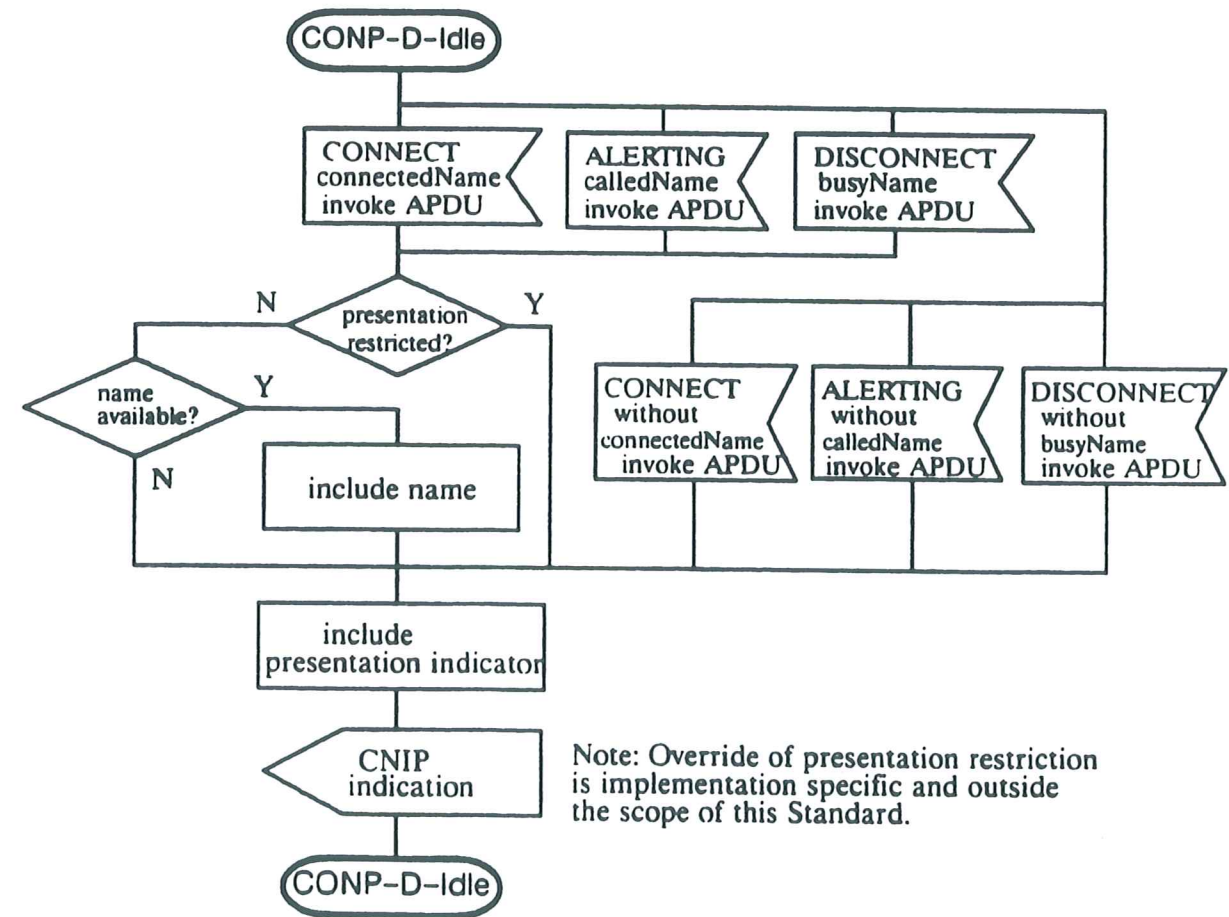
CONP-D-Idle

Figure B.4 - SDL representation of SS-CONP at the Originating PTNX