

AS/NZS 4477:1997
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Australian/New Zealand Standard[®]

**Information technology—
Telecommunications and
information exchange between
systems—Private integrated
services network—Specification,
functional model and information
flows—Identification supplementary
services**



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AS/NZS 4477:1997

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee IT/16, Private Telecommunications Networking.

This Standard is identical with, and has been reproduced from, ISO/IEC 14136:1995, *Information technology—Telecommunications and information exchange between systems—Private Integrated Services Network—Specification, functional model and information flows—Identification supplementary services*.

The objective of this Standard is to provide private integrated services network (PISN) designers and users with the specification for the identification supplementary service in order to allow a user involved in a call to receive information on the identity of the other user and to prevent the presentation of one's own number worldwide.

The Standard is one of a series of emerging ISO/IEC Standards applicable to private integrated services networking. The series uses the ISDN concepts as developed by ITU-T and is also within the framework of Standards for Open Systems Interconnection (OSI) as defined by ISO/IEC JTC 1.

Statements expressed in mandatory terms in notes to clauses are deemed to be requirements of this Standard.

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The term 'informative' has been used in this Standard to define the application of the annex to which it applies. An 'informative' annex is only for information and guidance.

For the purpose of this Joint Standard, the ISO/IEC text should be modified as follows:

- (a) *Terminology* The words 'this Australian/New Zealand Standard' should replace the words 'this International Standard' wherever they appear.
- (b) *References* The references to international Standards should be replaced by references, where appropriate, to the following Australian/New Zealand Standards:

<i>Reference to International Standard or other Publication</i>		<i>Australian/New Zealand Standard</i>	
ISO/IEC		AS/NZS	
11571	Information technology— Telecommunications and information exchange between systems— Numbering and sub-addressing in private integrated services networks	4134	Information technology— Telecommunications and information exchange between systems— Numbering and sub-addressing in private integrated services networks
11574	Information technology— Telecommunications and information exchange between systems—Private Integrated Services Network—Circuit mode 64kbit/s bearer services— Service description, functional capabilities and information flows	4135	Information technology— Telecommunications and information exchange between systems— Private integrated services network— Circuit-mode 64 kbit/s bearer services—Service description, functional capabilities and information flows

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ISO/IEC		AS/NZS	
11579	Information technology— Telecommunications and information exchange between systems—Private Integrated Services Network	4136	Information technology— Telecommunications and information exchange between systems— Private integrated services network
11579-1	Part 1: Reference Configuration for PISN Exchanges (PINX)	4136.1	Part 1: Reference configuration for PISN exchanges (PINX)
CCITT			
Rec.I.112	Vocabulary of terms for ISDNs (Blue Book)	—	
Rec.I.130	Method for the characterization of telecommunication services supported by an ISDN and network capabilities of an ISDN (Blue Book)	—	
Rec.I.210	Principles of telecommunication services supported by an ISDN and the means to describe them (Blue Book)	—	
Rec.I.221	Common specific characteristics of services (Blue Book)	—	
Rec.Z.100	Specification and Description Language (Blue Book)	—	

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AUSTRALIAN/NEW ZEALAND STANDARD

Information technology - Telecommunications and information exchange between systems - Private Integrated Services Network - Specification, functional model and information flows - Identification supplementary services

1 Scope

This International Standard specifies the following Identification supplementary services: Calling Line Identification Presentation (SS-CLIP), Connected Line Identification Presentation (SS-COLP) and Calling/Connected Line Identification Restriction (SS-CLIR), which are applicable to various basic services supported by Private Integrated Services Networks (PISN). Basic services are specified in ISO/IEC 11574.

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

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

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

Supplementary service specifications are produced in three stages, according to the method described in CCITT Recommendation I.130. This International Standard contains the stage 1 and stage 2 specifications of SS-CLIP, SS-COLP and SS-CLIR. The stage 1 specifications (clauses 6, 7 and 8) specify the supplementary services as seen by users of PISNs. The stage 2 specifications (clauses 9, 10 and 11) identify the functional entities involved in the supplementary services and the information flows between them.

2 Conformance

In order to conform to this International Standard, a stage 3 International Standard shall specify signalling protocols and equipment behaviour that are capable of being used in a PISN which supports the supplementary services specified in this International Standard. This means that, to claim conformance, a Stage 3 International Standard is required to be adequate for the support of those aspects of clauses 6, 7 and 8 (stage 1) and clauses 9, 10 and 11 (stage 2) which are relevant to the interface or equipment to which the Stage 3 International Standard applies.

3 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO/IEC 11571:1994, *Information technology - Telecommunications and information exchange between systems - Numbering and sub-addressing in private integrated services networks*.

ISO/IEC 11574:1994, *Information technology - Telecommunications and information exchange between systems - Private integrated services network - Circuit-mode 64 kbit/s bearer services - Service description, functional capabilities and information flows*.

ISO/IEC 11579-1:1994, *Information technology - Telecommunications and information exchange between systems - Private integrated services network - Part 1: Reference configuration for PISN exchanges (PINX)*.

CCITT Rec. I.112:1988, *Vocabulary of terms for ISDNs (Blue Book)*.

CCITT Rec. I.130:1988, *Method for the characterization of telecommunication services supported by an ISDN and network capabilities of an ISDN (Blue Book)*.

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

CCITT Rec. Z.100:1988, *Specification and Description Language (Blue Book)*.

4 Definitions

For the purposes of this International Standard the following definitions apply.

4.1 External definitions

This International Standard uses the following terms defined in other documents:

- Basic service (CCITT Rec. I.210)
- PISN number (ISO/IEC 11571)
- Private Integrated Services Network (PISN) (ISO/IEC 11579-1)
- Private Integrated Services Network Exchange (PINX) (ISO/IEC 11579-1)
- Service (CCITT Rec. I.112)
- Signalling (CCITT Rec. I.112)
- Subaddress (ISO/IEC 11571)
- Supplementary Service (CCITT Rec. I.210)
- User (ISO/IEC 11574)

This International Standard refers to the following basic call functional entities (FEs) defined in ISO/IEC 11574:

- Call Control (CC)
- Call Control Agent (CCA)

This International Standard refers to the following basic call inter-FE relationships defined in ISO/IEC 11574:

- r1
- r2
- r3

This International Standard refers to the following basic call information flows defined in ISO/IEC 11574:

- Setup request/indication
- Setup response/confirmation.

4.2 Other definitions

4.2.1 calling user number: The PISN number of the calling user.

4.2.2 calling user subaddress: The subaddress supplied by the calling user for identification purposes.

4.2.3 connected user: The called user that answers a call.

4.2.4 connected user number: The PISN number of the connected user for identification purposes.

4.2.5 connected user subaddress: The subaddress supplied by the connected user.

5 List of acronyms

CC	Call Control (functional entity)
CCA	Call Control Agent (functional entity)
CGLI	Calling Line Identification
CN	Connected Number
COLI	Connected Line Identification

CS	Connected Subaddress
FE	Functional Entity
ISDN	Integrated Services Digital Network
ON	Originating Number
OS	Originating Subaddress
PINX	Private Integrated Services Network Exchange
PISN	Private Integrated Services Network
PSTN	Public Switched Telephone Network
RI	Restriction Indicator
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
SDL	Specification and Description Language
TE	Terminal Equipment

6 SS-CLIP stage 1 specification

6.1 Description

6.1.1 General description

The PISN provides the called user with the PISN 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 number may be accompanied by the calling user subaddress.

6.1.2 Qualifications on applicability to telecommunication services

SS-CLIP is applicable to all basic services defined in ISO/IEC 11574.

6.2 Procedure

6.2.1 Provision/withdrawal

SS-CLIP shall be generally available. There is no need for service profile control.

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

6.2.2 Normal procedures

6.2.2.1 Activation/deactivation/registration/interrogation

SS-CLIP shall be permanently activated. No information needs to be registered with the PISN for this supplementary service, and therefore interrogation is not applicable.

6.2.2.2 Invocation and operation

The PISN shall provide the called user with the calling user number at the same time as indicating an incoming call.

The number presented shall be accompanied by indications of the numbering plan and type of number, and should be sufficient to unambiguously identify the calling user.

Where the number presented has been wholly or partially provided by the calling user, it shall be marked "user provided, verified and passed". Otherwise it shall be marked "network-provided".

If the calling user has also provided a calling user subaddress, it shall be delivered to the called user along with the calling user number.

In some cases where calling line identification restriction has been invoked, there may be certain categories of called user that have the service profile to override this restriction and have the calling user number presented, e.g. emergency

stations, PISN attendants. In these circumstances, presentation shall include an indication that restriction has been invoked.

6.2.3 Exceptional procedures

6.2.3.1 Activation/deactivation/registration/interrogation

Not applicable.

6.2.3.2 Invocation and operation

There are two exceptions when the calling user number is not presented to the called user:

- when calling line identification restriction has been invoked (see definition of Calling/Connected Line Identification Restriction) and the called user does not have the service profile to override this restriction; and
- when the calling user number is not available, e.g. due to interworking with the analogue telephone network (PSTN).

In such cases the called user shall receive an indication of the situation. In either case the called user can receive the calling user subaddress, if available.

6.3 Interaction with other supplementary services and ANFs

Interactions with other supplementary services and ANFs for which PISN International Standards were available at the time of publication of this International Standard are specified below.

6.3.1 Connected Line Identification Presentation (SS-COLP)

No interaction.

6.3.2 Calling/Connected Line Identification Restriction (SS-CLIR)

The calling user number shall not be presented if calling line identification restriction has been invoked at the calling user, unless the called user has the service profile to override this restriction.

6.4 Interworking considerations

6.4.1 Incoming calls

On calls incoming from another network, the calling user number, and calling user subaddress, if available, are obtained from the other network. In some circumstances the number may be marked "user provided, not screened".

Where no number is provided by the other network, the called user shall be given an indication "number unavailable due to interworking" or "presentation restricted", as appropriate.

6.4.2 Outgoing calls

This PISN supplementary service does not apply to outgoing calls.

NOTE 1 — The possible provision of the calling user number and/or calling user subaddress to another network is part of the basic call, see ISO/IEC 11574.

6.5 Overall SDL

Figure 1 contains the dynamic description of SS-CLIP using the Specification and Description Language (SDL) defined in CCITT Rec. Z.100 (1988). The SDL process represents the behaviour of the PISN in providing SS-CLIP. The relationship of this process to the basic call process is indicated in the annotations.

Output signals to the right represent primitives to the called user. Input signals from the left represent internal stimuli.

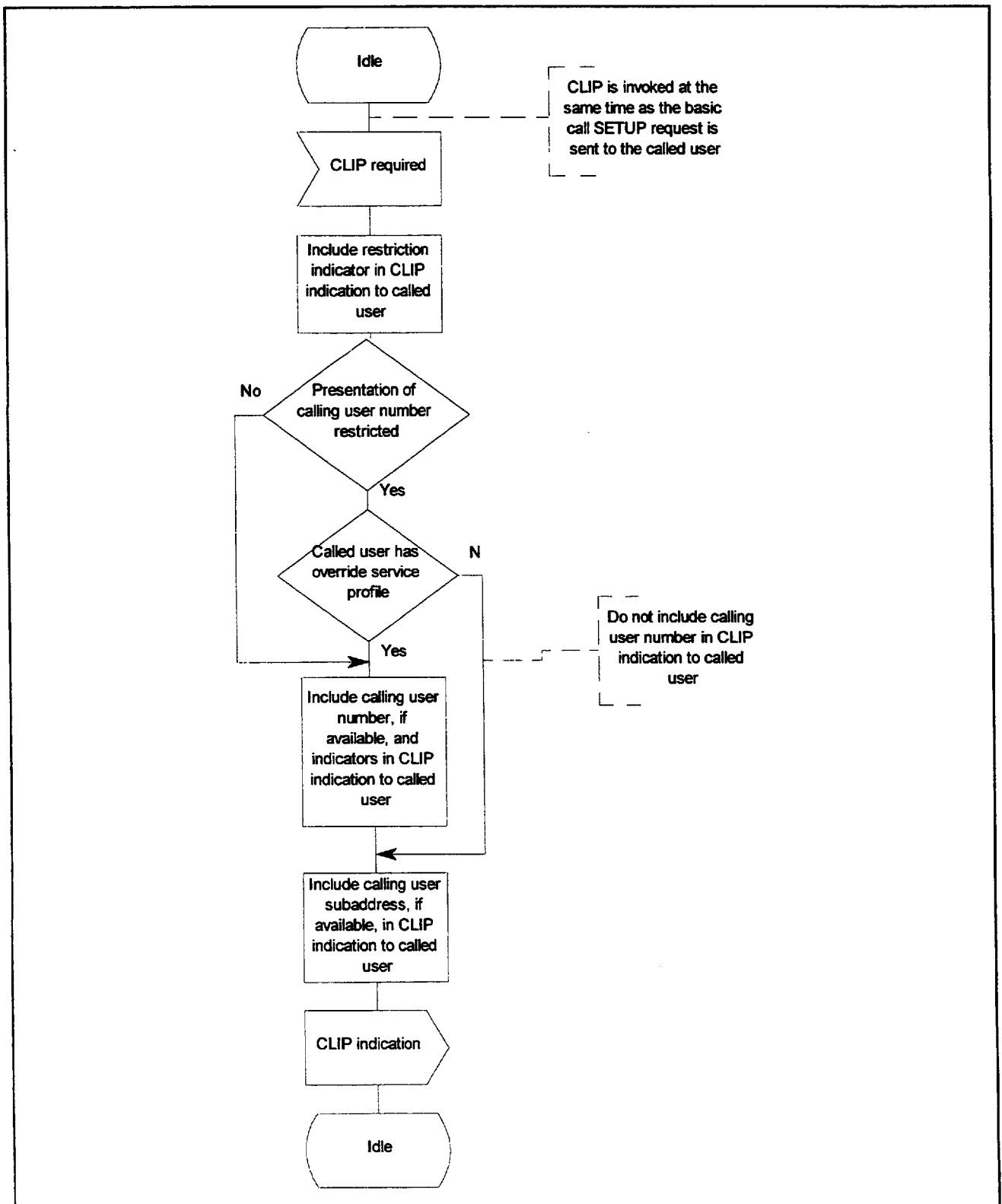


Figure 1 - SS-CLIP, overall SDL