

Title: Public Personal Handy-Phone System : Public Cell Station -  
ISDN Interface  
- Calling User Identification Presentation (CUIP) -  
- Calling User Identification Restriction (CUIR) -

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List of contents:

1. Calling User Identification Presentation (CUIP)
2. Calling User Identification Restriction (CUIR)

Number of pages: 20

# PHS MoU Group

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History of Revised Versions

Version	Date	Outline
01	Dec. 19, 1997	Established

**Public Personal Handy-Phone System  
Public Cell Station - ISDN Interface  
- Calling User Identification Presentation (CUIP) -  
- Calling User Identification Restriction (CUIR) -**

**<Summary>**

**1. Relations with international standards**

This specification is based on ITU-T Recommendation Q.951.3 and Q.951.4.

**2. Differences from ITU-T Recommendation Q.951.3 and Q951.4.**

The differences between this specification and ITU-T Recommendation are summarized in the following.

(1) Common terms

The following terms used in ITU-T Recommendation Q.951 shall be partly replaced with those of this specification.

**Table Summary-1/B-IF2.53  
Different terms between this specification and ITU-T Recommendation Q.951**

ITU-T Recommendation Q.951	This specification terminology
Calling Line Identification Presentation	Calling User Identification Presentation
Calling Line Identification Restriction	Calling User Identification Restriction
CLIP	CUIP
CLIR	CUIR
ISDN number	PHS number
Recommendation	document
Recommendation E.164	ITU-T Recommendation E.164
Recommendation I.251	B-SV2.00
Q.931	B-IF2.02
ISDN	PSC
network	PSC
network	public PHS ISDN part
ISDN number	PHS number
number	PHS number
called user	called PS
called user	called public CS
calling user	calling PS
calling user	calling public CS
calling line	calling PS
user	PS
user	public CS

## (2) Differences

**Table Summary-2/B-IF2.53**  
**Differences from ITU-T Recommendation Q.951**

Items	Differences	Reasons
Specific terminology	A 'default number' is deleted. And related descriptions are deleted.	The 'default number' is not used in PHS.
	A 'special arrangement' is deleted. And related descriptions are deleted.	The arrangement does not exist in PHS.
Numbering plan identification	A 'unknown' is deleted. And related descriptions are deleted.	In PHS MoU specification, the 'unknown' is not defined.
Type of number	A 'subscriber number' is deleted. And related descriptions are deleted.	In PHS MoU specification, the 'subscriber number' is not defined.
Override category	A 'override' category is deleted.	The category does not exist in PHS.
Signalling requirements	All descriptions are revised.	Descriptions are revised for CUIP/CUIR of PHS supplementary service. And the behaviors for 'the public CS Type 1 in B-NW1.00' and 'the public CS Type 2' are different, so description about them are described separately.
Interaction with other supplementary services	All descriptions are revised.	ISDN supplementary services are replaced to PHS supplementary services.
Dynamic description	All figures are revised.	Figures are revised for CUIP/CUIR of PHS supplementary service. And the behaviors for 'the public CS Type 1 in B-NW1.00' and 'the public CS Type 2' are different, so figures about them are described separately.
Annex A	Annex A is deleted.	Two Calling party number information elements delivery option does not exist in PHS.

### **3. References**

ITU-T Recommendation Q.951.3, Q.951.4  
PHS MoU Specification B-SV2.00

### **4. Items for Further Study**

#### 1.7.2 Interaction with non-ISDNs

On calls incoming from some non-ISDNs, the calling number may be delivered to the destination PSC without an indication of calling line identity restriction. This case is for further study.

**Public Personal Handy-Phone System  
Public Cell Station - ISDN Interface  
- Calling User Identification Presentation (CUIP) -  
- Calling User Identification Restriction (CUIR) -**

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## **1. Calling User Identification Presentation (CUIP)**

### **1.1 Definition**

Calling User Identification Presentation (CUIP) is a supplementary service offered to the called party which provides the calling party's PHS number, possibly with sub-address information to the called party.

### **1.2 Description**

#### **1.2.1 General description**

This supplementary service provides the ability of indicating the PHS number of the calling PS, with possible additional sub-address information (i.e. the Calling party sub-address information element), to the called party.

The information provided to the called PS consists of the PHS number of the calling PS in a form sufficient to allow the returning of the call (i.e. a national number or an international number and optionally a sub-address if provided by the calling PS).

#### **1.2.2 Specific terminology**

For the purposes of this document, the following terms apply:

A served PS is the PS of a particular PHS number who has subscribed to the presentation of the calling user identification information in association with incoming calls. The served PS is also known as the called PS.

A calling PS is the PS that initiated an incoming call at the served PS. The calling PS need not have subscribed to the CUIP supplementary service.

A PHS number is a number conforming to the numbering plan structure specified in ITU-T Recommendation E.164.

An address is the number of the calling PS (normally PHS number), and a sub-address if provided by that PS.

A calling public CS (cell station) is the public CS which has the radio area where the calling PS is visiting.

A called public CS (cell station) is the public CS which has the radio area where the called PS is visiting.

An international number is an ISDN number structured as specified in ITU-T Recommendation E.164.

A national number; national significant number is an ISDN number structured as specified in ITU-T Recommendation E.164.

CUIP Calling User Identification Presentation  
CUIR Calling User Identification Restriction

### **1.2.3 Qualification on the applicability to telecommunication services**

See B-SV2.00.

### **1.2.4 State definitions**

No specific state definitions are required.

## **1.3 Operational requirements**

### **1.3.1 Provision/withdrawal**

See B-SV2.00.

### **1.3.2 Requirements on the originating PSC side**

All information pertaining to CUIP, shall be inserted in the SETUP message sent as part of the basic call procedures according to 5/B-IF2.02 (Q.931).

In the case where no information is provided by the calling public CS (as part of the basic call procedures) the PSC shall release the call.

When the calling party information is provided by the public CS, the PSC may only verify that the PHS number is within the range allocated to that PS.

### **1.3.3 Requirements in the public PHS ISDN part**

This subclause is not applicable.

### **1.3.4 Requirements on the destination PSC side**

See 1.5.2.3.

## **1.4 Coding requirements**

All information pertaining to CUIP is inserted in the SETUP message. 4.5.10/B-IF2.02 (Q.931) and 4.5.11/B-IF2.02 (Q.931) give the coding for the Calling party number and Calling party sub-address information elements which are required to support this service. The purpose of the Calling party number information element is to identify the origin of a call. The purpose of the Calling party sub-address information element is to identify a sub-address associated with the origin of the call.

## **1.5 Signalling requirements**

### **1.5.1 Activation/deactivation/registration**

Not applicable.

## **1.5.2 Invocation and operation**

### **1.5.2.1 Actions at the originating local exchange**

#### **1.5.2.1.1 Normal operation**

##### **1.5.2.1.1.1 Actions at the originating public CS**

These procedures shall be provided as part of the basic service and the calling PS need not have subscribed to the CUIP supplementary service.

The numbering plan identification, to be indicated with the Calling party number information element, sent by the calling public CS, shall be “ISDN/telephony numbering plan” (see ITU-T Recommendation E.164).

Where the calling PHS number included by the calling public CS is complete the type of number to be indicated within the Calling party number information element, sent by the calling public CS, shall be one of the following:

- “*National number*” - In the case where the complete national number is sent.
- “*International number*” - In the case where the complete international number is sent.

##### **1.5.2.1.1.2 Actions at the originating local exchange**

These procedures shall be provided as part of the basic service and the calling PS need not have subscribed to the CUIP supplementary service.

When a SETUP message is received from the calling public CS, the PSC shall check to see if the Calling party number and Calling party sub-address information elements are included.

If the Calling party number information element is received with a coding of the numbering plan identification field other than “ISDN/telephony numbering plan” (see ITU-T Recommendation E.164), then the PSC shall release the call.

If the SETUP message does not contain the Calling party number information element, the PSC shall release the call.

The PSC or the calling public CS shall set the value of the screening indicator based on the outcome of the screening of the calling PHS number.

[public CS Type 1 in B-NW1.00]

If the PSC received the Calling party number information element from the calling public CS, the PSC shall perform the screening function. (One of the screening function is an authentication.)

If the calling PHS number received from the calling public CS is determined to be correct, the PSC shall set the screening indicator to “user-provided, verified and passed”.

If the screening function fails, the PSC shall release the call.

[public CS Type 2 in B-NW1.00]

If the PSC receives the SETUP message which does not include the screening indicator from the calling public CS, the PSC shall release the call.

If the PSC receives the SETUP message which included the screening indicator from the calling public CS, the PSC shall set the value of that screening indicator. (Because the calling public CS has already performed the screening function.)

The information determined by the procedures above ( in case of CS Type 1 and CS Type 2), shall be forwarded to the destination local exchange, in association with the basic call request.

The presentation indicator, as determined by the procedures of the CUIR supplementary service, shall be forwarded to the destination local exchange, in association with the basic call request.

If the Calling party sub-address information element is available, it shall be passed transparently through the PSC.

#### **1.5.2.1.2 Exceptional operation**

Not applicable.

#### **1.5.2.2 Action at the transit exchange**

This subclause is not applicable.

#### **1.5.2.3 Actions at the destination local exchange**

##### **1.5.2.3.1 Normal operation**

[public CS Type 1 in B-NW1.00]

When the PSC sends a SETUP message to the called public CS and if the called PS is provided with the CUIP supplementary service, the PSC shall check to see if the calling number is available.

If the calling number is available and presentation is allowed according to the presentation indicator supplied together with the calling number, the PSC shall include the Calling party number information element in the SETUP message sent to the called public CS. If provided, the PSC shall also include the Calling party sub-address information element in the SETUP message. The presentation and screening indicators associated with the calling number, and the calling sub-address, received at the destination exchange, shall be passed transparently to the called public CS.

The numbering plan identification field shall be coded "ISDN/telephony numbering plan" (see ITU-T Recommendation E.164).

If presentation is not allowed according to the presentation indicator supplied together with the calling number, the PSC may not include the Calling party number information element in the SETUP message sent to the called public CS.

If the calling number is not available at the destination local exchange the PSC may not include the Calling party number information element in the SETUP message sent to the called public CS.

If the called PS is not provided with the CUIP supplementary service, then neither the Calling party number nor the Calling party sub-address information elements shall be included in the SETUP message sent to the called public CS.

[public CS Type 2 in B-NW1.00]

When the PSC sends a SETUP message to the called public CS, the PSC shall check to see if the calling number is available.

If the calling number is available and presentation is allowed according to the presentation indicator supplied together with the calling number, the PSC shall include the Calling party number information element in the SETUP message sent to the called public CS. If provided, the PSC shall also include the Calling party sub-address information element in the SETUP message. The presentation and screening indicators associated with the calling number, and the calling sub-address, received at the destination exchange, shall be passed transparently to the called public CS.

The numbering plan identification field shall be coded "ISDN/telephony numbering plan" (see ITU-T Recommendation E.164).

If presentation is not allowed according to the presentation indicator supplied together with the calling number, the PSC may include the Calling party number information element in the SETUP message sent to the called public CS. The presentation indicator in the Calling party number information element shall indicate "presentation restricted". The screening indicator shall be sent to the public CS as received at the destination PSC.

The PSC shall include digits field. The PSC shall include the Calling party sub-address information element in the SETUP message.

If the calling number is not available at the destination local exchange the PSC may not include the Calling party number information element in the SETUP message sent to the called public CS.

#### **1.5.2.3.2 Exceptional procedures**

Not applicable.

### **1.6 Interaction with other supplementary services**

#### **1.6.1 DTMF Transmission**

No interaction.

#### **1.6.2 Handover**

No interaction.

#### **1.6.3 User scrambling**

No interaction.

#### **1.6.4 Subaddress**

No interaction

#### **1.6.5 Calling User Identification Presentation (CUIP)**

No interaction.

#### **1.6.6 Calling User Identification Restriction (CUIR)**

The calling user identification will not be presented if the calling PS has an arrangement to inhibit the presentation of his number(s) to the called party (calling PS subscribes to the supplementary service “Calling User Identification Restriction”).

#### **1.6.7 Call Forwarding**

##### **1.6.7.1 Call Forwarding Unconditional (CFU)**

As specified in B-IF2.52.

##### **1.6.7.2 Call Forwarding on PS Busy (CFB)**

As specified in B-IF2.52.

##### **1.6.7.3 Call Forwarding on No Reply (CFNRy)**

As specified in B-IF2.52.

##### **1.6.7.4 Call Forwarding on PS Not Reachable (CFNRc)**

As specified in B-IF2.52.

#### **1.6.8 Call Barring**

##### **1.6.8.1 Barring of All Outgoing Calls (BAOC)**

No interaction.

##### **1.6.8.2 Barring of Outgoing International Calls (BOIC)**

No interaction.

##### **1.6.8.3 Barring of Outgoing International Calls Except Call to Home Country (BOIC-exHC)**

No interaction.

##### **1.6.8.4 Barring of All Incoming Calls (BAIC)**

No interaction.

#### **1.6.8.5 Barring of Incoming Calls on Roaming outside Home Country (BIC-roam)**

No interaction.

#### **1.6.9 Roaming**

Further Study

#### **1.6.10 PHS-UUS**

##### **1.6.10.1 Service 1**

No interaction.

##### **1.6.10.2 Service 2**

No interaction.

##### **1.6.10.3 Service 3**

No interaction.

#### **1.7 Interaction with other networks**

##### **1.7.1 Interaction with ISDNs**

###### **1.7.1.1 Actions at the originating local exchanges in ISDN**

See ITU-T Recommendation Q.951.

###### **1.7.1.2 Actions at the transit exchanges in ISDN**

This subclause is not applicable.

###### **1.7.1.3 Action at the destination exchanges in PHS**

See 1.5.2.3.

##### **1.7.2 Interaction with non-ISDNs**

On calls incoming from some non-ISDNs, the calling number may be delivered to the destination PSC without an indication of calling line identity restriction. This case is for further study.

For some other non-ISDNs, no complete calling number may be available to the PSC and therefore the full number of the calling user cannot be given to the called PS which has been provided with the

CUIP supplementary service. In this case the PSC shall not send the Calling party number information element.

On calls incoming from some non-ISDNs, the calling number may be delivered to the destination PSC with an indication of Calling Line Identity Restriction. In this case the PSC shall behave according to 1.5.2.3.1.

As a network option the originating network may restrict any address information identifying the calling user from being forwarded to another network.

### **1.7.3 Procedures for interworking with private ISDNs**

The procedures specified in 1.7.1 shall be used.

### **1.8 Signalling flows**

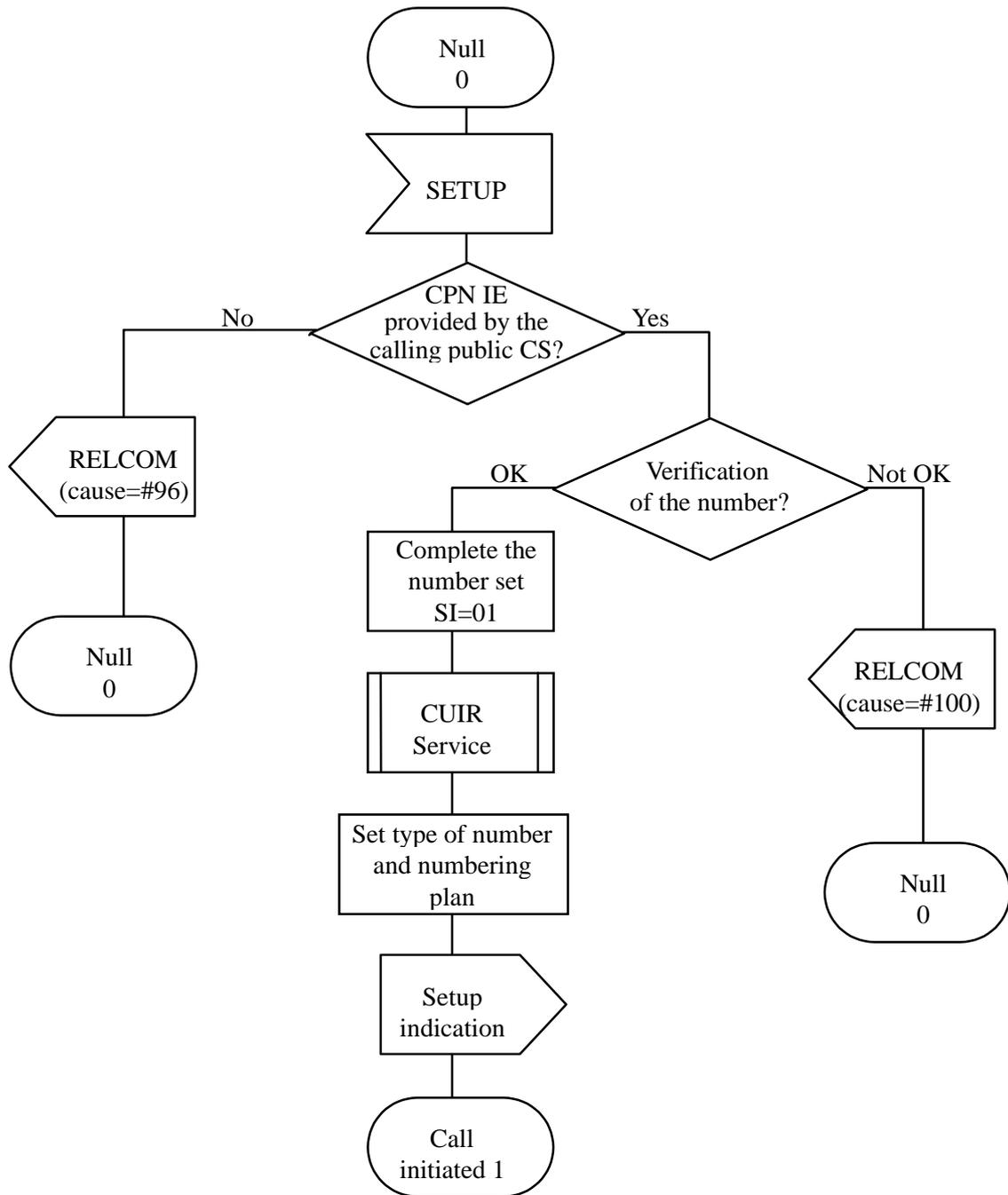
The signalling flows are not included as they are an integral part of the basic call control procedures.

### **1.9 Parameter values (timers)**

Not specific timers are required.

### **1.10 Dynamic description**

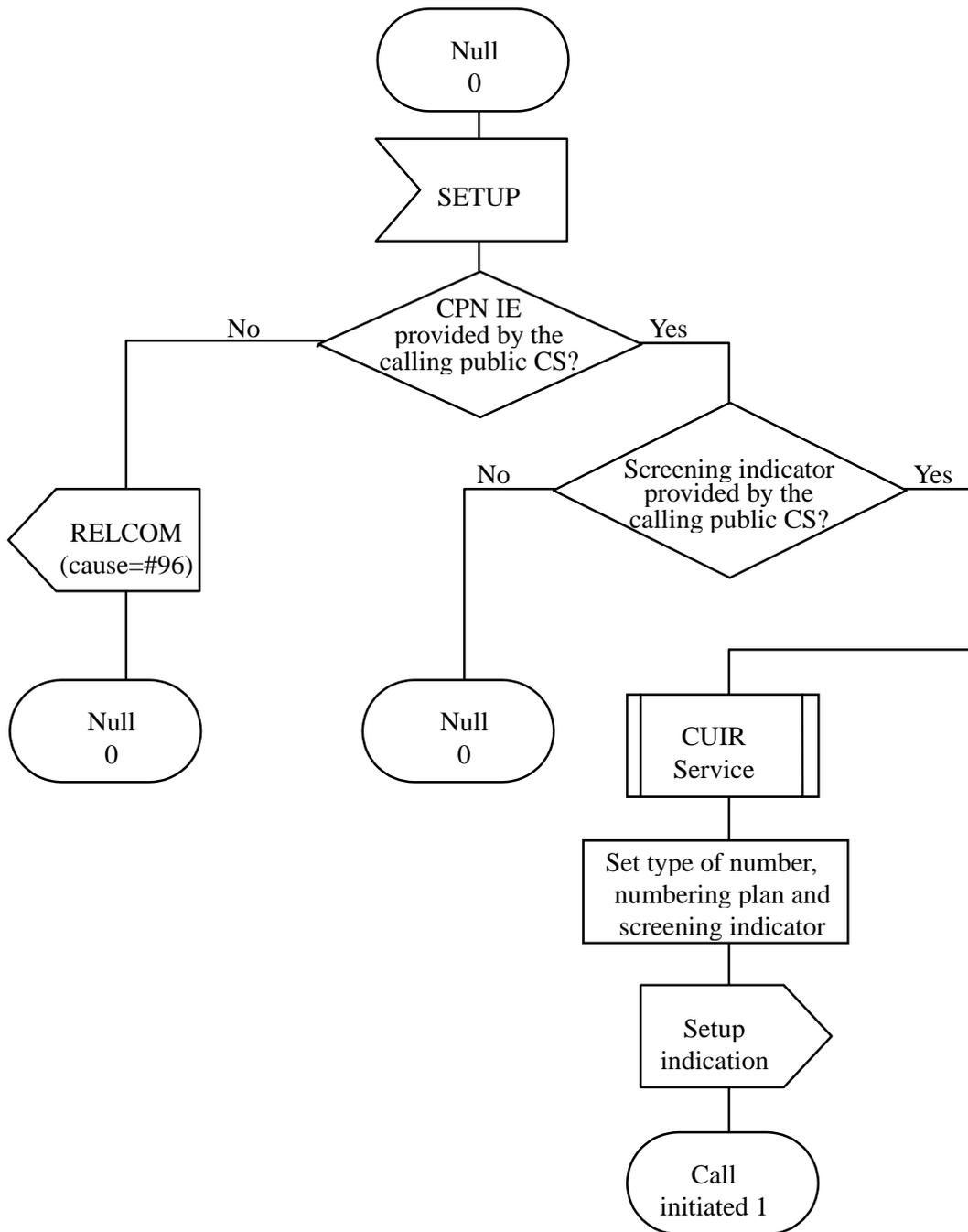
See Figures 1-1-1, 1-1-2, 1-2-1 and 1-2-2.



NOTES

1. This procedure operates independently from any CUIP subscription by the calling PS and is provided as part of the basic service.
2. The screening indicator encodings are:  
SI=01 User provided verified and

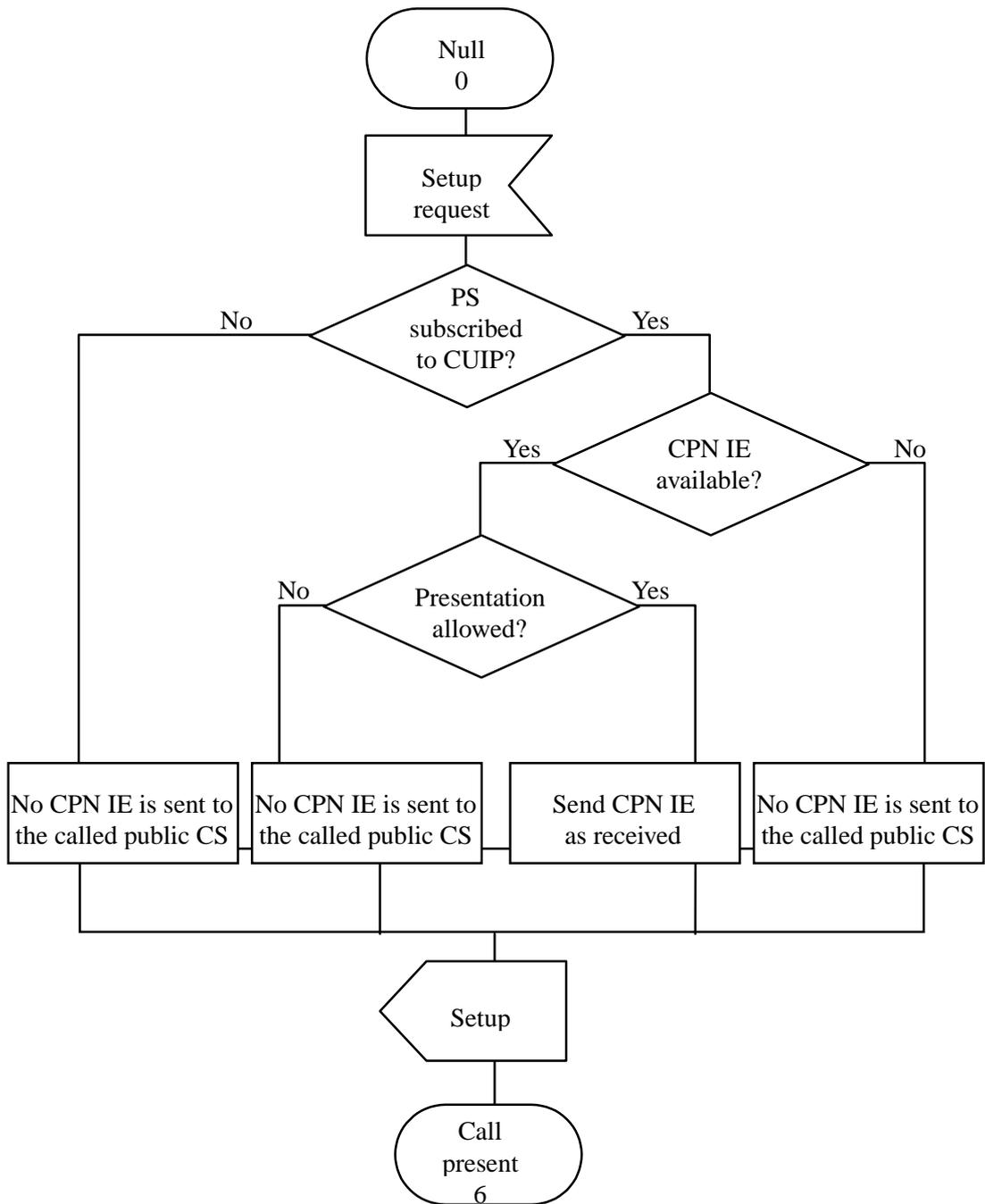
**Figure 1-1-1/B-IF2.53**  
**Originating PSC side dynamic description**  
**[public CS Type 1 in B-NW1.00]**



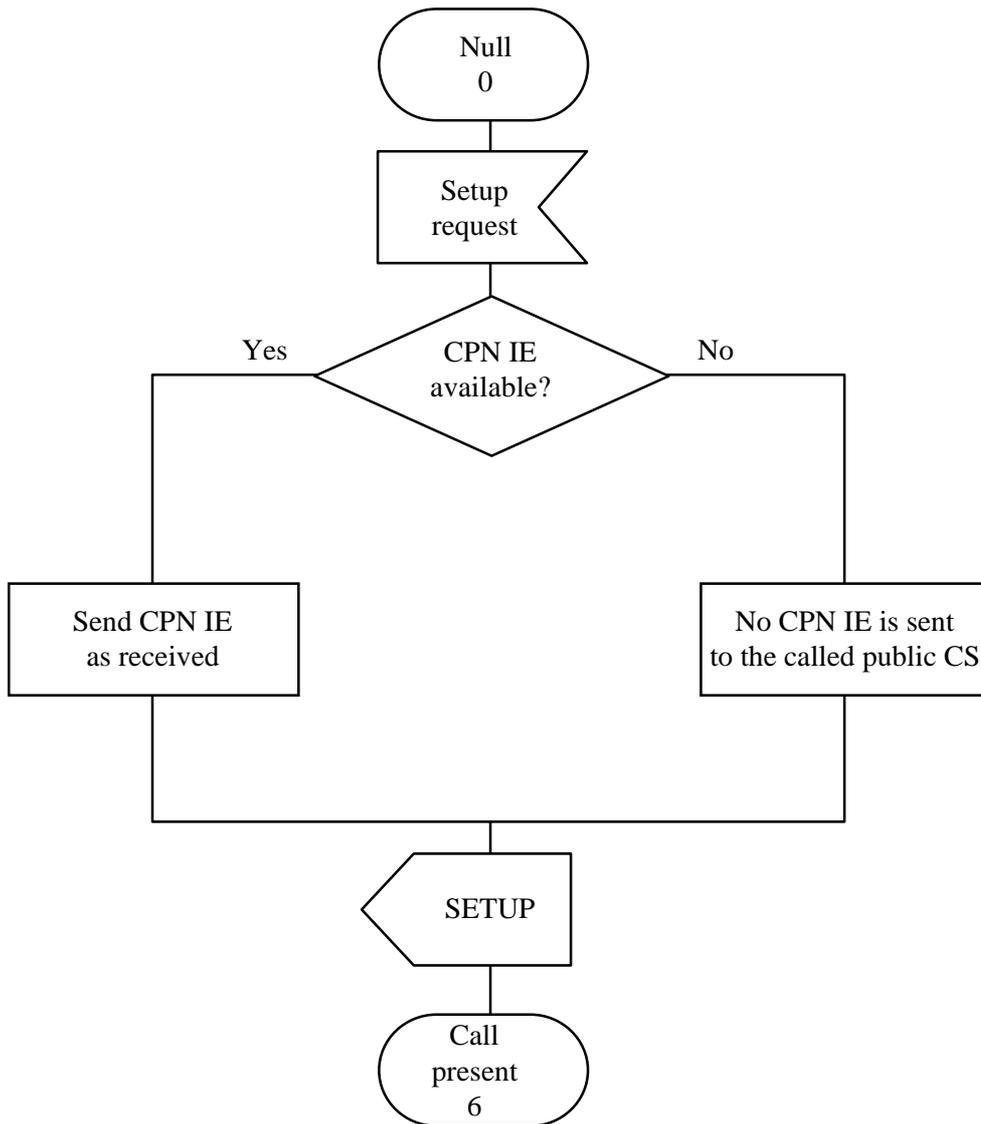
NOTES

1. This procedure operates independently from any CUIP subscription by the calling PS and is provided as part of the basic service.

**Figure 1-1-2/B-IF2.53**  
**Originating PSC side dynamic description**  
**[public CS Type 2 in B-NW1.00]**



**Figure 1-2-1/B-IF2.53**  
**Destination PSC dynamic description**  
**[public CS Type 1 in B-NW1.00]**



**Figure 1-2-2/B-IF2.53**  
**Destination PSC side dynamic description**  
**[public CS Type 2 in B-NW1.00]**

## **2. Calling User Identification Restriction (CUIR)**

### **2.1 Definition**

Calling User Identification Restriction (CUIR) is a supplementary service offered to the calling party to restrict presentation of the calling party's PHS number and sub-address to the called party.

### **2.2 Description**

#### **2.2.1 General description**

When CUIR is applicable and activated the originating PSC or public CS shall provide the destination PSC with an indication that the calling user's PHS number and sub-address (if provided by the calling PS) are not allowed to be presented to the called PS. In this case no calling user number and sub-address shall be included in the call offered to the called PS.

The presentation restriction function shall not influence the forwarding of the calling party number within the PSC as part of the basic service procedures.

#### **2.2.2 Specific terminology**

For the purposes of this document, the following terms apply:

A served PS is the PS of a particular PHS number who has subscribed to the restriction of the calling user identification information (on a permanent or on a per-call basis) in association with outgoing calls. The served PS is also known as the calling PS.

A called PS is the receiver of a call, initiated by the served PS, on which CUIR has been activated.

A PHS number is a number conforming to the numbering plan and structure specified in ITU-T Recommendation E.164.

CUIP     Calling User Identification Presentation

CUIR     Calling User Identification Restriction

#### **2.2.3 Qualification on the applicability to telecommunication services**

See B-SV2.00.

#### **2.2.4 State definition**

No specific states are required.

## **2.3 Operational requirements**

### **2.3.1 Provision/withdrawal**

See B-SV2.00.

### **2.3.2 Requirements on the originating PSC side**

All information pertaining to CUIR is inserted in the SETUP message sent as part of the basic call procedures according to B-IF2.02 (Q.931).

### **2.3.3 Requirements in the public PHS ISDN part**

This subclause is not applicable.

### **2.3.4 Requirements on the destination PSC side**

See 2.5.2.4.

## **2.4 Coding requirements**

The same as for 1.4.

## **2.5 Signalling requirements**

### **2.5.1 Activation/deactivation/registration**

Not applicable.

### **2.5.2 Invocation and operation**

#### **2.5.2.1 Actions at the originating public CS**

[public CS Type 1 in B-NW1.00]

If the calling public CS wishes to override the default setting in the PSC, the SETUP message sent by the public CS shall contain the Calling party number information element with the presentation indicator set appropriately.

[public CS Type 2 in B-NW1.00]

The SETUP message sent by the public CS shall contain the Calling party number information element with the presentation indicator set appropriately.

If the calling PS has subscribed to the CUIR supplementary service permanent mode, the calling public CS shall set the presentation indicator to “presentation restricted”.

If the calling PS has subscribed to the CUIR supplementary service on a per-call basis and requests to override the default setting, the calling public CS shall set the presentation indicator according to that in the received Calling party number information element.

#### **2.5.2.2 Actions at the originating local exchange**

#### **2.5.2.2.1 Normal operation**

[public CS Type 1 in B-NW1.00]

If the calling PS has subscribed to the CUIR supplementary service permanent mode, the presentation indicator received in the SETUP message will be ignored. The PSC shall set the presentation indicator to “presentation restricted”.

If the calling PS has subscribed to the CUIR supplementary service on a per-call basis and requests to override the default setting, the originating PSC shall set the presentation indicator according to that in the received Calling party number information element.

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

[public CS Type 2 in B-NW1.00]

If the PSC receives the SETUP message which does not include the presentation indicator from the calling public CS, the PSC may set the presentation indicator to “presentation restricted”.

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

#### **2.5.2.2.2 Exceptional procedures**

Not applicable.

#### **2.5.2.3 Actions at the transit exchange**

This subclause is not applicable.

#### **2.5.2.4 Actions at the destination local exchange**

##### **2.5.2.4.1 Normal operation**

The actions to be performed at the destination local exchange are provided as part of the CUIP service, described in 1.5.2.3.1.

##### **2.5.2.4.2 Exceptional procedures**

Not applicable.

### **2.6 Interaction with other supplementary services**

#### **2.6.1 DTMF Transmission**

No interaction.

## **2.6.2 Handover**

No interaction.

## **2.6.3 User scrambling**

No interaction.

## **2.6.4 Subaddress**

No interaction

## **2.6.5 Calling User Identification Presentation (CUIP)**

CUIR takes precedence over CUIP.

## **2.6.6 Calling User Identification Restriction (CUIR)**

No interaction.

## **2.6.7 Call Forwarding**

### **2.6.7.1 Call Forwarding Unconditional (CFU)**

As specified in B-IF2.52.

### **2.6.7.2 Call Forwarding on PS Busy (CFB)**

As specified in B-IF2.52.

### **2.6.7.3 Call Forwarding on No Reply (CFNRy)**

As specified in B-IF2.52.

### **2.6.7.4 Call Forwarding on PS Not Reachable (CFNRc)**

As specified in B-IF2.52.

## **2.6.8 Call Barring**

### **2.6.8.1 Barring of All Outgoing Calls (BAOC)**

No interaction.

### **2.6.8.2 Barring of Outgoing International Calls (BOIC)**

No interaction.

### **2.6.8.3 Barring of Outgoing International Calls Except Call to Home Country (BOIC-exHC)**

No interaction.

### **2.6.8.4 Barring of All Incoming Calls (BAIC)**

No interaction.

### **2.6.8.5 Barring of Incoming Calls on Roaming outside Home Country (BIC-roam)**

No interaction.

### **2.6.9 Roaming**

Further Study

### **2.6.10 PHS-UUS**

#### **2.6.10.1 Service 1**

No interaction.

#### **2.6.10.2 Service 2**

No interaction.

#### **2.6.10.3 Service 3**

No interaction.

### **2.7 Interaction with other networks**

#### **2.7.1 Interaction with ISDNs**

##### **2.7.1.1 Actions at the originating local exchange in PHS**

See 2.5.2.2.

##### **2.7.1.2 Actions at the transit exchanges in ISDN**

This subclause is not applicable.

##### **2.7.1.3 Actions at the destination local ISDN exchange**

See ITU-T Recommendation Q.951.

#### **2.7.2 Interaction with non-ISDNs**

On calls to or via non-ISDNs, it cannot be assured that a restriction indication can be carried to the destination network. As a national network option the originating PSC shall have the possibility to restrict any information identifying the calling party being forwarded to the destination network when CUIR is applicable. If a destination network receives a calling party number without any indication of presentation allowed or restricted, the destination network (the host network) will act according to its rules and regulations. For further information see 3.7 in ITU-T Recommendation Q.951.

### **2.7.3 Procedures for interworking with private ISDNs**

The procedures specified in 2.7.1 shall be used.

### **2.8 Signalling flows**

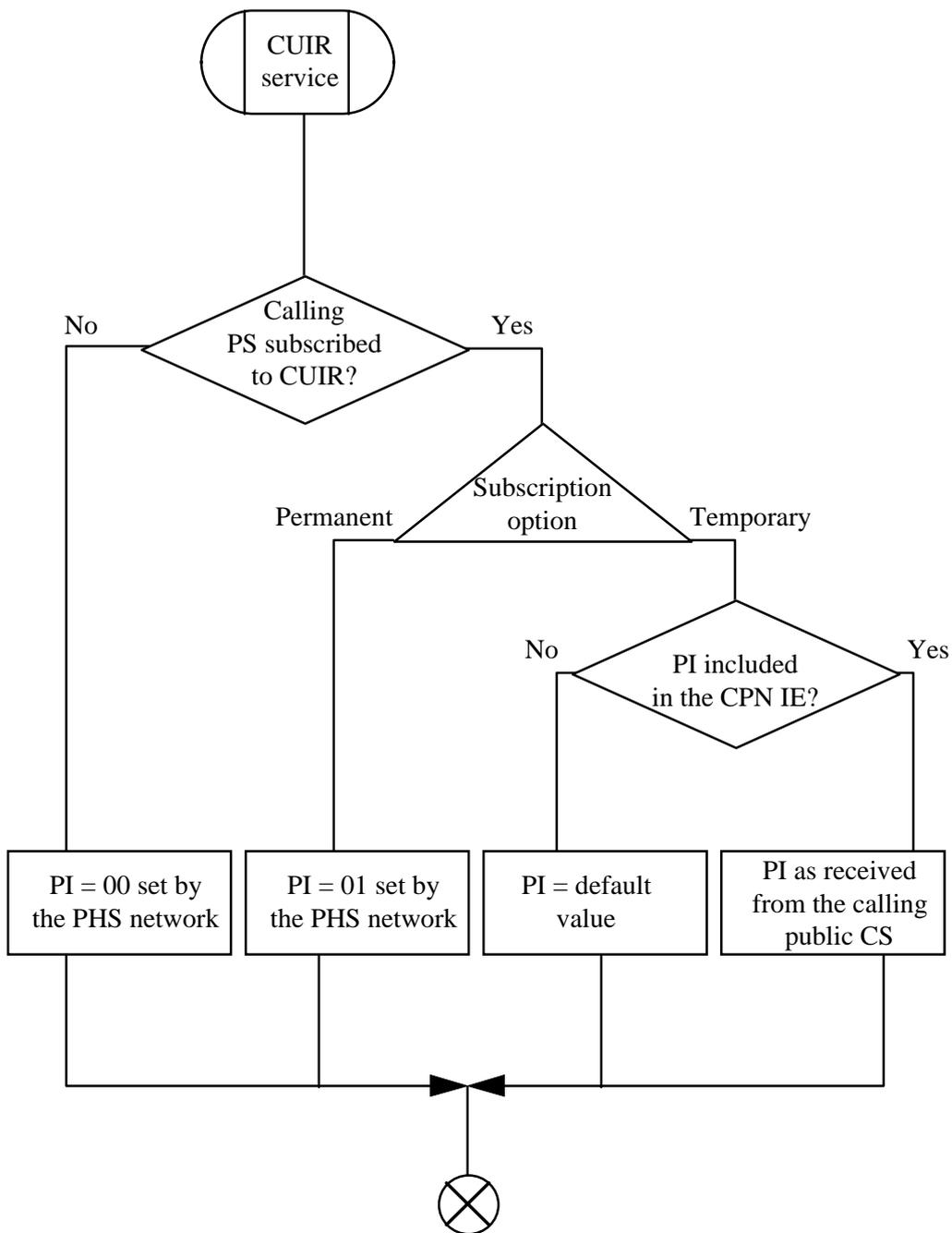
The signalling flows are not included as they form an integral part of the basic call control procedures.

### **2.9 Parameter values (timers)**

No specific timers are required.

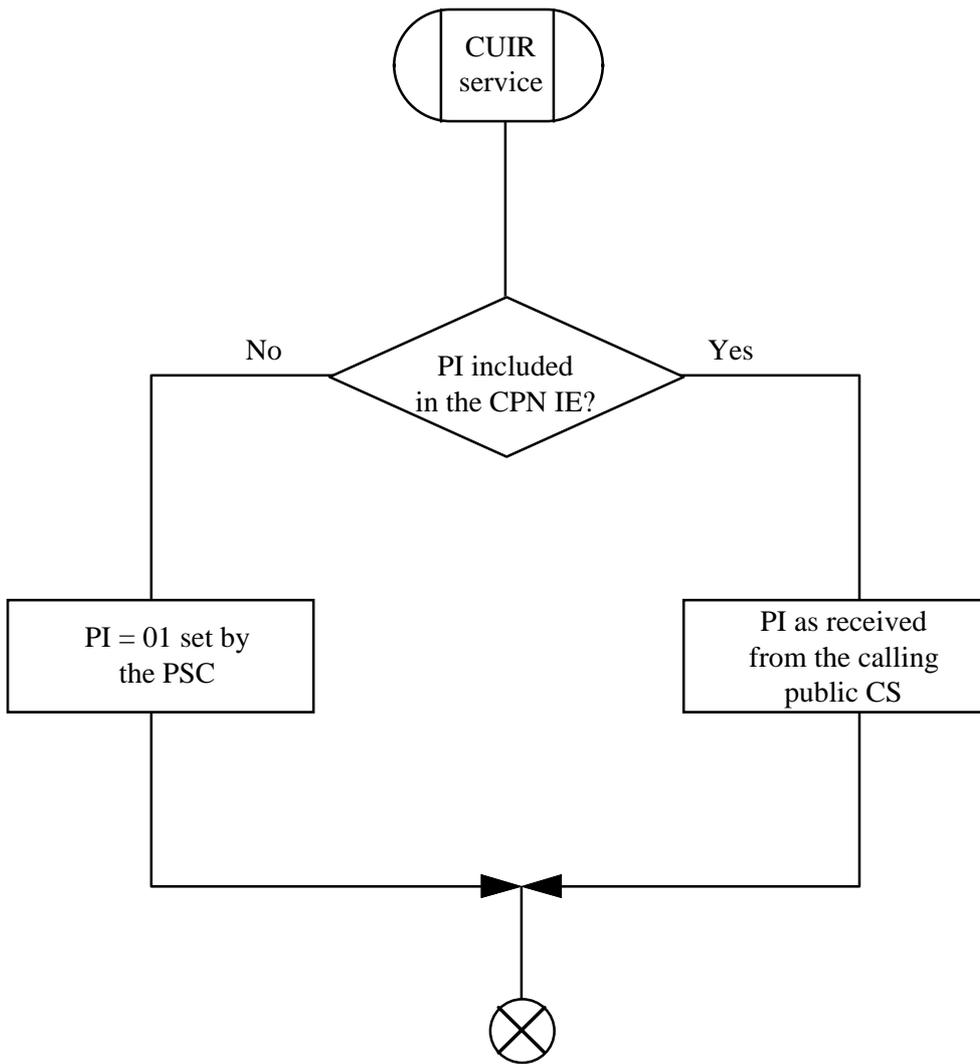
### **2.10 Dynamic description**

See Figures 2-1-1 and 2-1-2.



PI = 00 “presentation allowed”  
 PI = 01 “presentation restricted”

**Figure 2-1-1/B-IF2.53**  
**Originating PSC side dynamic description**  
**[public CS Type 1 in B-NW1.00]**



PI = 01 "presentation restricted"

**Figure 2-1-2/B-IF2.53**  
**Originating PSC side dynamic description**  
**[public CS Type 2 in B-NW1.00]**