Title: **Public Personal Handy-phone System : Public Cell Station - ISDN Interface - PHS-UUS Supplementary service -**

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History of Revised Versions

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01	July 31, 1998	Established
02	July 14, 1999	Changing the description of "object ID"

Note :

A preliminary Technical Specifications or a technical explanatory document is published as a Technical Report (TR).

This Technical Report (TR) is a preliminary Technical Specifications and will be published as a Technical specifications (TS) in the future when it is completed as a Technical Specifications (TS).

B-IF2.51-02-TS

Personal Handy-Phone System : Public Cell Station - ISDN Interface
-PHS-UUS Supplementary Service-

<Summary>

1. Relations with international standards

This specification specifies the public cell station - ISDN interface for PHS-UUS supplementary services based on ITU-T Recommendation Q.957.1

2. Differences from ITU-T Recommendation Q.957.1

The differences between this specification and ITU-T Recommendation Q.957.1 are summarized in the following table.

Table Summary-1/B-IF2.51 Differences from ITU-T Recommendation Q.957.1

Item	Differences	Reasons
1)Common terms	(1)"user" is changed to "public cell station" and "network" to "ISDN." Note - "user" is not replaced with "public CS" when "user" is used in the context related to subscription. (2) "User-to-User Signalling" is changed to "PHS User-to-User Signalling" (3)"ITU-T Recommendation Q.931" and "ITU-T Recommendation Q.932" is changed to "PHS MoU specification B-IF2.02" and "PHS MoU specification B-IF 2.01". (4)"service 1, 2 and 3" is changed to "PHS-UUS service 1, 2 and 3".	(1)This change makes clear what "user" and "network" mean. (2)This change conforms to B-SV2.70. (3)"Q.931" and "Q.932" in ITU-T Recommendation correspond to "B-IF 2.02" and "B-IF 2.01" in PHS MoU specification. (4)This change makes clear that "service 1, 2 and 3" are "PHS-UUS service 1, 2 and 3".
2)Messages	SETUP ACKNOWLEDGE message is not used.	SETUP ACKNOWLEDGE message is not specified in MoU specification B-IF 2.02
3)Call contention	Procedures related to call contention are deleted.	Point-to-multipoint arrangement is not specified in B-SV2.70. (Point-to-multipoint is a situation where multiple responses to an incoming call cannot occur.)

4)Interaction with other supplementary services	All descriptions are revised	This change conforms to interaction with supplementary services specified in B-SV2.70
5)Interaction with other networks	All descriptions are revised. Inter action with other PHS network and interaction with ISDN network is described.	This change conforms to interaction with other networks specified in B-SV2.70
6)Signalling flow	All descriptions are revised. It is changed as "In addition to basic control according to Q.931, the signalling flow described in B-IF0.51 is added for your reference."	This change makes it easier to understand the signalling flow.
7)Facility information element in RELEASE COMPLETE message	Facility information element in RELEASE COMPLETE message is added in the section "1.4.1 messages."	This change conforms to the content of the section "1.5.2 Invocation and operation", i.e. the acceptance or rejection of PHS-UUS request can be included in RELEASE COMPLETE message.

3.   References

ITU-T Recommendation Q.957.1
PHS MoU Specification B-IF2.01,B-IF2.02, B-SV2.70

4.   Items for Further Study

 (1) ASN.1 description
ASN.1 description of the operation required for the PHS-UUS supplementary service is for further study. It is necessary to study object identifier of the operation.

(2)   **B-IF2.51-02-TS**

B-IF2.51-02TS

Public Personal Handy-Phone System:
Interface between Public Cell Station and ISDN-based PHS Switching Center
-PHS User-to-User Signalling (PHS-UUS)-

Contents

1. PHS User-to-User Signalling (PHS-UUS)

1.1 Definition

The PHS User-to-User Signalling (PHS-UUS) supplementary service allows an PHS public CS to send/receive a limited amount of information to/from another PHS user over the communication channel in association with a call to the other PHS public CS.

1.2 Description

1.2.1 General description

The PHS-UUS supplementary services provide a means of communication between two users by using as a basis the layer 3 protocol defined in 5/B-IF2.02 [1]. User-user signalling is used to exchange information between two users to provide the services described in the Stage 1 Service Description. The exchange of user-user signalling is limited by flow control procedures provided by the ISDN or the public CS. The exchange of user-to-user information is not a network acknowledged service. Any acknowledgement procedure shall be controlled at a higher layer between public CSs.

Three PHS-UUS services associated with circuit-switched calls that may be provided by the network to users are:

 i) *PHS-UUS service 1* – User-user information exchanged during the setup and clearing phases of a call, by transporting User-user information element within B-IF2.02 [1] call control messages;

 ii) *PHS-UUS service 2* – User-user information exchanged from the sender's point of view during call establishment, between the ALERTING and CONNECT messages, within USER INFORMATION messages; and

 iii) *PHS-UUS service 3* – User-user information exchanged while a call is in the Active state, within USER INFORMATION messages.

All three services may be used separately or in any combination in association with a single call. As an option, at call set-up, users may be able to specify that the requested PHS user-to-user signalling service(s) is (are) required for the call, i.e. the call should not be completed if user-to-user information cannot be passed.

1.2.2 Specific terminology

The public CS is the protocol entity at the public CS side of the public CS-ISDN interface.

The ISDN is the protocol entity at the ISDN side of the public CS-ISDN interface.

The called public CS is the public CS who is offered an incoming call at the terminating interface.

The calling public CS is the public CS who initiates an outgoing call at the originating interface.

The served user is the user requesting the PHS User to-User (PHS-UUS) supplementary service.

The invoke component is defined in PHS MoU specification B-IF2.02 [1].

1.2.3 Qualifications on the applicability to telecommunications services

See PHS MoU specification B-SV2.70.

1.2.4 Sate definitions

The states associated with basic call control according to B-IF2.02 [1] are applicable.

1.3 Operational requirements

1.3.1 Provision/withdrawal

PHS-UUS services 1 and 2 must be subscribed to by the calling user. PHS-UUS service 3 must be subscribed to by the served user. Whether these component services are offered to the user as separate supplementary or in any particular combination is a service provider option. The remote user can decide to subscribe the service provision or withdrawal as a service provider option.

1.3.2 Requirements on the originating ISDN side

The basic call control procedures according to 5.1/B-IF2.02 [1] are applicable.
The public CS and ISDN supporting PHS-UUS service 1 is expected to be able to receive and send the User-user information element (see 4.5.30/B-IF2.02 [1]) as described in 1.5.2.1 below. In the case of explicit activation, it is also expected to support the codings and procedures in 1.5.2.1.
The public CS and ISDN supporting PHS-UUS service 2 is expected to be able to receive and/or send USER INFORMATION messages containing the PHS User-user information element (see 4.5.30/B-IF2.02 [1]) as described in 1.5.2.2.3 below. It is also expected to support the codings and procedures in 1.5.2.2.
The public CS and ISDN supporting PHS-UUS service 3 is expected to be able to receive and/or send USER INFORMATION messages containing the User-user information element (see 4.5.30/B-IF2.02 [1]) as described in 1.5.2.3.4 below. It is also expected to support the codings and procedures in 1.5.2.3 below. In the case that congestion control is used, it is also expected to support the CONGESTION CONTROL message and the Congestion Level Information Element (see 4.5.14/B-IF2.02 [1]), and to support with the procedures of 1.5.2.3.5 below.

1.3.3 Requirements in the ISDN

Not applicable to B-IF2.51.

1.3.4 Requirements on the terminating ISDN side

The basic call control procedures according to 5.2/B-IF2.02 [1] are applicable.
The public CS and ISDN supporting PHS-UUS service 1 is expected to be able to receive and send the User-user information element (see 4.5.30/B-IF2.02 [1]) as described in 1.5.2.1 below. In the case of explicit activation, it is also expected to support the codings and procedures in 1.5.2.1.
The public CS and ISDN supporting PHS-UUS service 2 is expected to be able to receive and/or send USER INFORMATION messages containing the PHS User-user information element (see 4.5.30/B-

IF2.02 [1]) as described in 1.5.2.2.3 below. It is also expected to support the codings and procedures in 1.5.2.2.

The public CS and ISDN supporting PHS-UUS service 3 is expected to be able to receive and/or send USER INFORMATION messages containing the User-user information element (see 4.5.30/B-IF2.02 [1]) as described in 1.5.2.3.4 below. It is also expected to support the codings and procedures in 1.5.2.3 below. In the case that congestion control is used, it is also expected to support the CONGESTION CONTROL message and the Congestion Level Information Element (see 4.5.14/B-IF2.02 [1]), and to support with the procedures of 1.5.2.3.5 below.

1.3.5 Assumptions made about the terminal

See PHS MoU specification B-IF1.51.

1.4   Coding requirements

1.4.1   Messages

The following messages are applicable to service activation for PHS-UUS services 1, 2 and 3: SETUP, CALL PROCEEDING, PROGRESS, ALERTING, CONNECT, DISCONNECT, RELEASE, RELEASE COMPLETE. The FACILITY message is also applicable to the activation of service 3.

The following messages are applicable to the operation of PHS-UUS service 1: SETUP, ALERTING, CONNECT, DISCONNECT, RELEASE, RELEASE COMPLETE.

The following message is applicable to the operation of PHS-UUS services 2 and 3: USER INFORMATION. Where the congestion control procedures are used, the following message is applicable to service 3: CONGESTION CONTROL.

The following are message contents for PHS-UUS services.

Message Type: ALERTING

Information element	Reference	Direction	Type	Length
Protocol discriminator	4.2/ B-IF2.02	Both	M	1
Call reference	4.3/ B-IF2.02	Both	M	2-*
Message type = ALERTING	4.4/ B-IF2.02	Both	M	1
Facility	8.2.3/B-IF2.01	Both	O (Note 1)	19
User-user	4.5.30/ B-IF2.02	Both	O (Note 2)	2-131
NOTES 1 Always included for activation of service 2. Always included in public CS - ISDN direction for explicit activation of PHS-UUS service 1. Not included otherwise for PHS-UUS service 1. 2 May be included for PHS-UUS service 1 (explicit or implicit activation). 3 Other mandatory and optional information elements per PHS MoU specification B-IF2.02.				

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Message Type: CALL PROCEEDING

Information element	Reference	Direction	Type	Length
Protocol discriminator	4.2/ B-IF2.02	Both	M	1
Call reference	4.3/ B-IF2.02	Both	M	2-*
Message type = CALL PROCEEDING	4.4/ B-IF2.02	Both	M	1
Facility	8.2.3/ B-IF2.01	Both	O (Note 1)	19
NOTES 1 Included only for rejection of explicit PHS-UUS service 1, 2 or 3 request. 2 Other mandatory and optional information elements per PHS MoU specification B-IF2.02.				

Message Type: CONGESTION CONTROL

Information element	Reference	Direction	Type	Length
Protocol discriminator	4.2/ B-IF2.02	N → C	M	1
Call reference	4.3/ B-IF2.02	N → C	M	2-*
Message type = CONGESTION CONTROL	4.4/ B-IF2.02	N → C	M	1
Congestion level	4.5.14/ B-IF2.02	N → C	M	1
Cause	4.5.12/B-IF2.02	N → C	M	4-32
NOTE - Other optional information elements per PHS MoU specification B-IF2.02.				

Message Type: CONNECT

Information element	Reference	Direction	Type	Length
Protocol discriminator	4.2/ B-IF2.02	Both	M	1
Call reference	4.3/ B-IF2.02	Both	M	2-*
Message type = CONNECT	4.4/ B-IF2.02	Both	M	1
Facility	8.2.3/ B-IF2.01	Both	O (Note 1)	19
User-user	4.5.30/ B-IF2.02	Both	O (Note 2)	2-131

NOTES
1 Always included for PHS-UUS service 3 activation during call establishment. May also be included for explicit PHS-UUS service 1 activation, if not present in the ALERTING message. Not otherwise included for PHS-UUS service.
2 May be included for PHS-UUS service 1 (explicit or implicit activation). Not included otherwise.
3 Other mandatory and optional information elements per PHS MoU specification B-IF2.02.

Message Type: DISCONNECT

Information element	Reference	Direction	Type	Length
Protocol discriminator	4.2/ B-IF2.02	Both	M	1
Call reference	4.3/ B-IF2.02	Both	M	2-*
Message type = DISCONNECT	4.4/ B-IF2.02	Both	M	1
Facility	8.2.3/ B-IF2.01	Both	O (Note 2)	19
User-user	4.5.30/ B-IF2.02	Both	O (Note 1)	2-131

NOTES
1 May be included for PHS-UUS service 1 where DISCONNECT is the first clearing message. Not included otherwise.
2 May be included to indicate explicit PHS-UUS service/acceptance or PHS-UUS service 1, 2 or 3 rejection.
3 Other mandatory and optional information elements per PHS MoU specification B-IF2.02.

Message Type: FACILITY

Information element	Reference	Direction	Type	Length
Protocol discriminator	4.2/ B-IF2.02	Both	M	1
Call reference	4.3/ B-IF2.02	Both	M	2-*
Message type = FACILITY	8.1/ B-IF2.01	Both	M	1
Facility	8.2.3/B-IF2.01	Both	O(Note1)	19
NOTES 1 Included for PHS-UUS service 3 activation or deactivation during a call. 2 Other mandatory and optional information elements per PHS MoU specification B-IF2.01.				

Message Type: PROGRESS

Information element	Reference	Direction	Type	Length
Protocol discriminator	4.2/ B-IF2.02	Both	M	1
Call reference	4.3/ B-IF2.02	Both	M	2-*
Message type = PROGRESS	4.4/ B-IF2.02	Both	M	1
Facility	8.2.3/ B-IF2.01	N → C	O (Note 1)	19
User-user	4.5.30/ B-IF2.02	N → C	O (Note 2)	2-131
NOTES 1 Included only for rejection of explicit PHS-UUS service 1, 2 or 3 request. 2 Included (e.g. in conjunction with in-band tones or announcements) when the PROGRESS message is sent by the ISDN to indicate that the call has been cleared before reaching the active state by the remote user, and a User-user information element was present in the clearing message. 3 Other mandatory and optional information elements per PHS MoU specification B-IF2.02.				

Message Type: RELEASE

Information element	Reference	Direction	Type	Length
Protocol discriminator	4.2/ B-IF2.02	Both	M	1
Call reference	4.3/ B-IF2.02	Both	M	2-*
Message type = RELEASE	4.4/ B-IF2.02	Both	M	1
User-user	4.5.30/ B-IF2.02	Both	O (Note 1)	2-131
NOTES 1 May be included for PHS-UUS service 1 where RELEASE is the first clearing message. Not included otherwise. 2 Other mandatory and optional information elements per PHS MoU specification B-IF2.02.				

Message Type: RELEASE COMPLETE

Information element	Reference	Direction	Type	Length
Protocol discriminator	4.2/ B-IF2.02	Both	M	1
Call reference	4.3/ B-IF2.02	Both	M	2-*
Message type = RELEASE COMPLETE	4.4/ B-IF2.02	Both	M	1
Facility	8.2.3/ B-IF2.01	Both	O (Note 2)	19
User-user	4.5.30/ B-IF2.02	C $\to$ N	O (Note 1)	2-131
NOTES 1 May be included for PHS-UUS service 1 where a RELEASE COMPLETE message is sent by thepublic CS to reject an incoming SETUP message. Not included otherwise. 2 May be included to indicate explicit PHS-UUS service/acceptance or PHS-UUS service 1,2 or 3 rejection. 3 Other mandatory and optional information elements per PHS MoU specification B-IF2.02.				

Message Type: SETUP

Information element	Reference	Direction	Type	Length
Protocol discriminator	4.2/ B-IF2.02	Both	M	1
Call reference	4.3/ B-IF2.02	Both	M	2-*
Message type = SETUP	4.4/ B-IF2.02	Both	M	1
Facility	8.2.3/ B-IF2.01	Both	O (Note 1)	19
User-user	4.5.30/ B-IF2.02	Both	O (Note 2)	2-131
NOTES 1 Always included for explicit PHS-UUS service 1 , 2 and 3 activation during call establishment. 2 Always included for implicit service 1 activation; the length must be at least three octets. May also be included for PHS-UUS service 1 when explicit activation is used. Not included otherwise. 3 Other mandatory and optional information elements per PHS MoU specification B-IF2.02.				

Message Type: USER INFORMATION

Information element	Reference	Direction	Type	Length
Protocol discriminator	4.2/ B-IF2.02	Both	M	1
Call reference	4.3/ B-IF2.02	Both	M	2-*
Message type = USER INFORMATION	4.4/ B-IF2.02	Both	M	1
More data	4.5.20/ B-IF2.02	Both	O	1
Facility	8.2.3/B-IF2.01	Both	O (Note 1)	14
User-user	4.5.30/ B-IF2.02	Both	M	2-131
NOTES 1 Included in conjunction with interaction with the ISDN Conference Call Add-on supplementary service if USER INFORMATION messages are sent/received to/from a specific conferee. 2 Other mandatory and optional information elements per PHS MoU specificationB-IF2.02.				

1.4.2   Codesets

All information elements are in codeset 0.

1.4.3   Information elements

The Facility information element is applicable to functional service activation for PHS-UUS services 1, 2 and 3.

The User-user information element is applicable to the operation of PHS-UUS service 1, 2 and 3.

The More data information element is applicable to the operation of PHS-UUS services 2 and 3.

The Congestion level information element is applicable to the operation of PHS-UUS service 3.

1.4.4   Codepoints

1.4.4.1   Syntax for service activation using the Facility information element

Table 1-1 shows the definition of the operation required for the PHS-UUS supplementary service using ASN.1 as specified in Recommendation X.680 [4] and using the remote operations information objects as defined in Annex A/X.880 [5].
The coding of the operation specific fields of the invoke component is shown in Figure 1-1 and Table 1-1.

TABLE 1-1/IF2.51

Definition of operations and errors

```
PHS-User-User-Signalling-Operations
{itu-t(0) administration(2) japan(440) isdn(102) phs(4) module(0) phs-user-to-user-signalling-operations(3)
version1(1)}
DEFINITIONS              ::=
 BEGIN
 IMPORTS            OPERATION,ERROR
                    FROM Remote-Operations-Information-Objects
                    { joint-iso-itu-t remote-operations(4) informationObjects(5) version1(0) }
                    rejectedByNetwork, rejectedByUser
                    FROM General-Error-List
                    { ccitt recommendation q 950 general-error-list (1) };
pHSUserUserService   OPERATION::={
        ARGUMENT SEQUENCE {   [1] IMPLICIT Service,
                                 [2] IMPLICIT Preferred }
        RETURN RESULT TRUE
        ERRORS { rejectedByNetwork | rejectedByUser }
    CODE  opcode-phsUserUserService
}
Service             ::=   INTEGER { service1(1), service2(2), service3(3) } (1...3)
Preferred           ::=   BOOLEAN {
                    preferred (TRUE),
                    required (FALSE) }
opcode-phsUserUserService Code  ::=  global :{itu-t(0)  administration(2)  japan(440)  isdn(102)  phs(4)
operation(1) phs-user-user-service(4)}
END
```

1.4.4.2 Coding of the PHS-UUS service operation component

See Figure 1-1.

Octet	8	7	6	5	4	3	2	1
15.1	Class		Form	Sequence tag				
	0	0	1	1	0	0	0	0
15.2	Length Format 0	Length of sequence tag						
15.3.1	Class		Form	Service tag				
	1	0	0	0	0	0	0	1
15.3.2	Length Format 0	Length of service						
15.3.3	Service							
15.3.4	Class		Form	Preferred tag				
	1	0	0	0	0	0	1	0
15.3.5	Length Format 0	Length preferred						
		0	0	0	0	0	0	1
15.3.6	Preferred							

Figure 1-1/B-B-IF2.51

**Facility information element - Invoke component - Operation-specific
fields for PHS-UUS supplementary service**

Class (octets 15.1, 15.3.1 and 15.3.4)
bits
<u>8 7</u>
0 0   Universal
1 0   Context Specific
All other values reserved.

Form (octets 15.1, 15.3.1 and 15.3.4)
bit
<u>6</u>
0   Primitive
1   Constructor

Length format (octets 15.2, 15.3.2 and 15.3.5)
bit
<u>8</u>
0   Length is one octet

Length of sequence (octet 15.2)
This field indicates the total length of the following sequence of fields (i.e. octet 15.3.1 and its subparts). It is the binary coding of the number of octets of the service, with bit 1 as the least significant bit.

Length of service (octet 15.3.2)
This field indicates the total length of the contents of the service field (i.e. octet 15.3.3). It is the binary coding of the number of octets of the service, with bit 1 as the least significant bit.

Service (octet 15.3.3)
bits
<u>8 7 6 5 4 3 2 1</u>
0 0 0 0 0 0 0 1   PHS-UUS service 1
0 0 0 0 0 0 1 0   PHS-UUS service 2
0 0 0 0 0 0 1 1   PHS-UUS service 3
All other values reserved.

Length of preferred (octet 15.3.5)
This field indicates the total length of the preferred field (i.e. octet 15.3.6). It is the binary coding of octets of the preferred field with bit 1 as the least significant bit.

Preferred (octet 15.3.6)
bits
<u>8 7 6 5 4 3 2 1</u>
0 0 0 0 0 0 0 0   False (service is required)
0 0 0 0 0 0 0 1   True (service is preferred) (see Note)
          NOTE - Any value other than "0000 0000" represents the value True.

1.5   Signalling requirements

1.5.1   Activation/deactivation/registration

PHS-UUS services 1, 2 and 3 may be provided on a per call basis following an explicit request from a public CS. The standard explicit activation procedure makes use of the Facility information element defined in PHS MoU specification B-IF2.01[2].

PHS-UUS service 1 may also be activated implicitly as described in 1.5.2.1.1.1 below. In this case, activation and operation of the service are indistinguishable.

Procedures for call establishment are described in PHS MoU specification B-IF2.02 [1] with the following modifications. On call request, the SETUP message sent by the calling public CS shall contain independent PHS-UUS service 1, 2 and 3 requests.

The SETUP message sent by the ISDN towards the called public CS shall also contain the same independent service requests. If the called public CS can support the indicated services requested by

the explicit mechanism, then specific service acceptances shall be indicated in the appropriate message(s) as defined in 1.5.2.1, 1.5.2.2 and 1.5.2.3 below.

Deactivation procedures are not required to support these services.

1.5.2   Invocation and operation

1.5.2.1   PHS-UUS service 1

1.5.2.1.1 Call establishment phase

1.5.2.1.1.1   Implicit operation

PHS-UUS service 1 may be implicitly requested by including a User-user information element of variable length as specified in 4.5/B-IF2.02 [1] in the SETUP message, transferred across the public CS-ISDN interface at the calling side as described in 5.1.1/B-IF2.02 [1]. This information element is transported by the ISDN and delivered unchanged in the User-user information element included in the SETUP message transferred across the public CS-ISDN interface at the called side as described in 5.2.1/B-IF2.02 [1]. For activation purposes, this information element must be at least three octets long, as defined in 4.5/B-IF2.02 [1].

A User-user information element may be included in the ALERTING and/or CONNECT messages transferred across the public CS-ISDN in the interface at the called side as described in 5.2.5/B-IF2.02 [1]. It may also be included in the DISCONNECT or RELEASE COMPLETE message (see 1.5.2.1.2). The content of this information element is transported by the ISDN and delivered in the User-user information element included in the corresponding message(s) transferred across the user-network interface at the calling side as described in 5.1.7/B-IF2.02 and 5.1.8/B-IF2.02 [1].

1.5.2.1.1.2   Explicit operation (preferred or required)

Procedures for call establishment are as described in 5.1/B-IF2.02 and 5.2/B-IF2.02 [1] and 1.5.2.1.1.1 above, with the following modifications.

On call request, the SETUP message sent by the calling public CS shall contain an explicit PHS-UUS service 1 request. The SETUP message sent by the ISDN at the called side shall also contain an explicit service 1 request. The SETUP message sent by the calling public CS may contain a User-user information element. The SETUP message sent by the ISDN at the called side shall also contain a User-user information element if present in the SETUP message sent by the calling user.

If the called public CS can support the transfer of User-user information elements in call establishment and clearing messages, a service 1 acceptance shall be included in

      a)   the ALERTING or CONNECT or first clearing messages prior to the Active state;

This explicit PHS-UUS service 1 acceptance shall be forwarded by the ISDN to the calling public CS in the ALERTING, CONNECT or DISCONNECT message.

A User-user information element may be included in the ALERTING message and/or CONNECT message transferred across the public CS-ISDN interface at the called side as described in 5.2.5/ B-IF2.02 [1].

1.5.2.1.2 Call clearing phase

A User-user information element may be included in the first message used to initiate the normal call clearing phase (see5.3.3/ B-IF2.02 and 5.3.4/ B-IF2.02 [1]).

The information contained in such an information element is transferred to the remote public CS in the first clearing message (see 5.3.3/B-IF2.02 and 5.3.4/B-IF2.02[1]). Such a transfer is only performed if the information is received at the local exchange of the remote public CS before sending a clearing message to that public CS; otherwise, the information is discarded without sending any notification.

A User-user information element may be included in the first normal clearing message sent by the called public CS during call establishment at the destination interface.

If the called public CS rejects the call with a clearing message containing a User-user information element, the ISDN shall deliver the User-user information element in the DISCONNECT message sent to the calling public CS. However, if the ISDN is providing in-band information to the calling public CS, and chooses not to initiate clearing procedures at that time, the ISDN may deliver the User-user information element in a PROGRESS message sent to the calling public CS.

> NOTE - It is intended that this capability may be used to provide the clearing data transfer (i.e. conveyance of the NS-User-Data parameter to the N-Disconnect primitives) described in CCITT Rec. X.213 [6] | ISO 8348.

1.5.2.1.3 Actions at the transit exchange

Not applicable to PHS MoU specification B-IF2.51.

1.5.2.1.4 Exceptional procedures

1.5.2.1.4.1   Rejection of implicit service requests. The ISDN shall discard the User-user information element if it is received from the calling public CS in a SETUP message, but the calling user has not subscribed to PHS-UUS service 1. If the discard occurs, the ISDN shall continue to process the call request. The ISDN may also inform the calling public CS that the PHS-UUS request is not accepted by sending a STATUS message containing cause #50, "requested facility non-subscribed", or cause #43, "access information discarded".

The called user may not be able to interpret incoming User-user information elements. In such situations, the user should discard this information without disrupting normal call handling. No specific signalling is provided by the ISDN to accommodate this situation.

1.5.2.1.4.2   Rejection of explicit service requests

General exceptional procedures are described in 6.3.6/B-IF2.01 [2] and specific exceptional procedures are described below.

If the ISDN cannot support PHS-UUS service 1, or the calling user has not subscribed to the service, and it was requested as preferred, a PHS-UUS service 1 rejection indicating "rejected by network" is included in the CALL PROCEEDING, PROGRESS, ALERTING or CONNECT message, depending on the state of the call at the time that the ISDN determines that it cannot support the service.

If the PHS-UUS service 1 request indicated required and the ISDN cannot support it (e.g. because it is not implemented or because of temporary inability to provide the service), a DISCONNECT or RELEASE COMPLETE message (depending on the state of the call) is sent with cause #47 "resource unavailable, unspecified" or cause #69 "requested facility not implemented" and a PHS-UUS service 1 rejection indicating "rejected by network".

If the PHS-UUS service 1 request indicated required and the calling user has not subscribed to the service, a DISCONNECT or RELEASE COMPLETE message is sent with cause #50 "requested facility not subscribed" and a PHS-UUS service 1 rejection indicating "rejected by network".

If the called public CS receives a service 1 rejection,, and the service 1 was requested as preferred, the rejection indicating "rejected by user" is included in

  a)   the ALERTING or CONNECT message;

  b)   the first clearing messages prior to the Active state.

This explicit PHS-UUS service 1 rejection shall be forwarded by the ISDN to the calling public CS in the ALERTING or CONNECT message and may be forwarded in the DISCONNECT message.

If the called public CS receives a PHS-UUS service 1 rejection,, and the PHS-UUS service 1 was requested as required, the srejection indicating "rejected by user" is included in a DISCONNECT or RELEASE COMPLETE message with cause #69 "requested facility not implemented". This explicit PHS-UUS service 1 rejection may be forwarded by the ISDN to the calling public CS in the DISCONNECT message.

If the called public CS(s) does(do) not include a PHS-UUS service 1 acceptance or rejection in the ALERTING, CONNECT, DISCONNECT or RELEASE COMPLETE message, and the PHS-UUS service 1 request indicated preferred, the ISDN shall return an explicit rejection indicating "rejected by user" in the CONNECT or DISCONNECT message sent to the calling public CS.

If the called public CS(s) does(do) not include a PHS-UUS service 1 acceptance or rejection in the ALERTING or CONNECT message, and the PHS-UUS service 1 request indicated required, the ISDN shall clear the call by sending a DISCONNECT message to the calling public CS with cause

#69 "requested facility not implemented" and a PHS-UUS service 1 rejection indicating "rejected by user". Furthermore, a DISCONNECT message with cause #31 "normal, unspecified" shall be sent to the called public CS.

If the called public CS(s) does(do) not include a PHS-UUS service 1 acceptance or rejection in the DISCONNECT or RELEASE COMPLETE message, and the PHS-UUS service 1 request indicated required, the ISDN shall include a service 1 rejection indicating "rejected by user" in the DISCONNECT message sent to the calling public CS.

1.5.2.1.4.3 Unexpected User-user information element in call control messages

The ISDN shall discard the User-user information element if it is received from the called public CS in the ALERTING or CONNECT message, but a request for PHS-UUS was not indicated (either explicitly or implicitly) in the SETUP message delivered to the called public CS. If discard occurs, the ISDN shall take action on the remaining contents of the message received from the calling public CS and shall send a STATUS message to the called public CS containing cause #43, "access information discarded".

The ISDN shall discard the User-user information element if it is received from either public CS in a DISCONNECT, RELEASE or RELEASE COMPLETE message, but a request for PHS-UUS was not indicated in the SETUP message delivered to the called public CS. If discard occurs, the ISDN shall take action on the remaining contents of the message received from the public CS. If the clearing party has sent a DISCONNECT (or RELEASE) message, the ISDN shall send to the clearing party a RELEASE (or RELEASE COMPLETE) message containing cause #43, "access information discarded". If the clearing party had sent a RELEASE COMPLETE message, the ISDN shall consider the call as cleared to that party; no additional action shall be taken.

The ISDN shall discard the User-user information element in the following cases not explicitly discussed elsewhere in 1.5:

- the overall length of the User-user information element is greater than 131 octets and PHS-UUS service 1 was activated either explicitly or implicitly;

- the ISDN receives a message containing the User-user information element, but that message is not allowed to contain PHS-UUS as defined by this document.

If discard occurs, the ISDN shall take action on the remaining contents of the message received from the sending public CS and shall send a STATUS message to that public CS containing cause #43, "access information discarded". However, if the ISDN discards a User-user information element from a received clearing message, the ISDN shall include cause #43, "access information discarded", in the next sequential clearing message sent to the public CS as specified in 5.3/B-IF2.02 [1]. If the ISDN discards a User-user information element from a RELEASE COMPLETE message, the ISDN shall consider the call as cleared to that party; no additional action shall be taken.

1.5.2.2   PHS-UUS service 2

1.5.2.2.1   Call establishment phase

On call request, the SETUP message sent by the calling public CS shall contain an explicit PHS-UUS service 2 request. The SETUP message sent by the ISDN at the called side, shall also contain an explicit PHS-UUS service 2 request.

If the called public CS can support USER INFORMATION messages during call establishment, a PHS-UUS service 2 acceptance shall be included in the ALERTING message sent to the ISDN. This explicit acceptance indication shall be forwarded in the ALERTING message sent by the ISDN to the calling public CS .

1.5.2.2.2   Actions at the transit exchange

Not applicable to B-IF2.51.

1.5.2.2.3   Transfer of USER INFORMATION messages

Once an ALERTING message has been received, both the involved public CS can transfer information between themselves by transferring USER INFORMATION messages across the public CS-ISDN interface. The ISDN provides for the transfer of such messages from the calling to the called side and vice versa. The USER INFORMATION message included the call reference, the protocol discriminator, and the User-user information element as defined in 1.4.1 in this B-IF2.51. The More data information element may also be included by the source user to indicate to the remote user that another USER INFORMATION message shall follow, containing information elements belonging to the same block. The use of a More data information element is not supervised by the ISDN.

When PHS-UUS service 2 is provided, no more than two USER INFORMATION messages may be transferred in each direction after the ALERTING message and before the CONNECT message.

As a network option, USER INFORMATION messages may be transferred to the called public CS in the Active state.

Sending or receiving of USER INFORMATION messages does not change the state of the call.

1.5.2.2.4   Exceptional procedures

1.5.2.2.4.1   Service rejection/non-acceptance

General exceptional procedures are described in 6.3.6/B-IF2.01 [2] and specific exceptional procedures are described below.

If the ISDN cannot support PHS-UUS service 2, or the calling user has not subscribed to the service, and it was requested as preferred, a PHS-UUS service 2 rejection indicating "rejected by network" is included in a CALL PROCEEDING, PROGRESS or ALERTING message, depending on the state of the call at the time that ISDN determines that it cannot support the service.

If the PHS-UUS service 2 request indicated required and the ISDN cannot support it (e.g. because it is not implemented or because of temporary inability to provide the service), a DISCONNECT or RELEASE COMPLETE message (depending on the state of the call) is sent with cause #47, "resource unavailable, unspecified", or cause #69, "requested facility not implemented", and a PHS-UUS service 2 rejection indicating "rejected by network".

If the PHS-UUS service 2 request indicated required and the calling user has not subscribed to the service, a DISCONNECT or RELEASE COMPLETE message is sent with cause #50, "requested facility not subscribed", and a PHS-UUS service 2 rejection indicating "rejected by network".

If the called public CS receives a PHS-UUS service 2 rejection , and it was requested as preferred, a PHS-UUS service 2 rejection indicating "rejected by user" is included in the ALERTING message. This explicit PHS-UUS service 2 rejection shall be forwarded by the ISDN to the calling public CS in the ALERTING message.

If the called public CS receives a PHS-UUS service 2 rejection , and it was requested as required, a PHS-UUS service 2 rejection indicating "rejected by user" is included in a DISCONNECT or RELEASE COMPLETE message with cause #69, "requested facility not implemented". This explicit PHS-UUS service 2 rejection may be forwarded by the ISDN to the calling public CS user in the DISCONNECT message.

If the called public CS(s) does(do) not include a PHS-UUS service 2 acceptance or rejection in the ALERTING message or a rejection in the DISCONNECT or RELEASE COMPLETE message and the request indicated preferred, the ISDN shall return an explicit rejection indicating "rejected by user" in the ALERTING or DISCONNECT message sent to the calling public CS.

If the called public CS(s) does(do) not include a PHS-UUS service 2 acceptance or rejection in the ALERTING message and the request indicated required, the ISDN shall clear the call by sending a DISCONNECT message to the calling public CS with cause #69, "requested facility not implemented", and a PHS-UUS service 2 rejection indicating "rejected by user". Furthermore, a DISCONNECT message with cause #31, "normal, unspecified", shall be sent to the called public CS.

If the called public CS(s) does(do) not include a PHS-UUS service 2 rejection in the DISCONNECT or RELEASE COMPLETE message and the request indicated required, the ISDN shall include a PHS-UUS service 2 rejection indicating "rejected by user" in the DISCONNECT message with cause #31, "normal, unspecified", shall be sent to the calling public CS.

1.5.2.2.4.2 Excess USER INFORMATION messages

In the following cases, the ISDN shall discard the USER INFORMATION message and send a STATUS message with cause #43, "access information discarded", to the sending public CS :

- if the ISDN receives a USER INFORMATION message in the alerting phase, but PHS-UUS service 2 is not activated;

- if the ISDN receives more than two USER INFORMATION messages from a public CS;

–   if the ISDN receives a USER INFORMATION message in any other call phase than the alerting phase.

1.5.2.3   PHS-UUS service 3

This service may be requested during call establishment or during the Active state of the call.

1.5.2.3.1   Call establishment phase

On call request, the SETUP message sent by the calling public CS shall contain an explicit PHS-UUS service 3 request. The SETUP message sent by the ISDN at the called side shall also contain an explicit PHS-UUS service 3 request.

If the called public CS can support USER INFORMATION message transfer during the Active state, a PHS-UUS service 3 acceptance shall be included in the CONNECT message.

1.5.2.3.2   Call active phase

During the Active state of a call, a public CS may request PHS-UUS service 3 preferred only. A FACILITY message indicating a PHS-UUS service 3 request is sent from the requesting public CS to the ISDN. The ISDN shall indicate the PHS-UUS service 3 request to the public CS that did not request PHS-UUS service 3 in the FACILITY message and start timer T1 at the ISDN interface of the requesting public CS.

If the public CS that did not request PHS-UUS service 3 can support the transfer of USER INFORMATION messages during the Active state, a PHS-UUS service 3 acceptance is returned in the FACILITY message. This explicit acceptance is conveyed back to the requesting public CS in a FACILITY message and the ISDN shall stop timer T1.

1.5.2.3.3   Actions at the transit exchange

Not applicable to B-IF2.51.

1.5.2.3.4   Transfer of USER INFORMATION messages

When a call is in the Active state, with PHS-UUS service 3 activated, one public CS may transfer information to the other by conveying USER INFORMATION messages across the public CS - ISDN interface. The ISDN provides for the transport of such messages. The USER INFORMATION message includes the call reference, protocol discriminator, and the User-user information element. The More data information element may also be included by the source public CS to indicate to the remote public CS that another USER INFORMATION message shall follow, containing information belonging to the same block. The use of the More data information element is not supervised by the ISDN; in particular, integrity of blocks fragmented using this procedure is not guaranteed.

1.5.2.3.5   Congestion control of USER INFORMATION messages

Network flow control mechanisms shall exist after the call has entered the Active call state to restrict USER INFORMATION message flow in each direction.

In each direction a burst capability of sending N USER INFORMATION messages shall immediately be available to each public CS , where N initially equals the value of the burst parameter X. The value of N shall be decremented by one for every USER INFORMATION message sent by the public CS and incremented by Y at regular intervals of T subject to the limitation that N shall not exceed X.

The burst parameter X shall be set to a value of $X = 16$ and the replenishment parameter Y shall be set to $Y = 8$.

> NOTE – While some ISDNs may support higher values of X and Y, the value of X and Y for international calls shall be set as above. It is up to the ISDN using higher values to take the appropriate actions, unless bilateral agreements exist.

If the ISDN within the period T receives more than N USER INFORMATION messages, the excess message(s) shall be discarded. The ISDN shall respond to the first discarded messages with a CONGESTION CONTROL message including a Congestion level information element indicating "receive not ready". The CONGESTION CONTROL message shall also include a cause #43, "access information discarded". Subsequent received USER INFORMATION messages shall be discarded by the ISDN without any indication to the public CS.

When the flow control restrictions are removed (i.e. timer T expires) then, if a USER INFORMATION message has been discarded due to that restriction, a CONGESTION CONTROL message indicating "receive ready" shall be sent to the public CS. If no USER INFORMATION has been discarded, no indication shall be sent. The public CS cannot flow control USER INFORMATION messages received from the ISDN .

If the ISDN receives a CONGESTION CONTROL message from the public CS, a STATUS message with causes #111 "protocol error, unspecified" shall be sent to the public CS and no further action shall be taken.

1.5.2.3.6 Exceptional procedures

1.5.2.3.6.1 Rejection of service requested during call establishment

General exceptional procedures are described in 6.3.6/B-IF2.01 [2] and specific exceptional procedures are described below.

If the ISDN cannot support PHS-UUS service 3, or the calling user has not subscribed to the service, and it was requested as preferred, a PHS-UUS service 3 rejection indicating "rejected by network" is included in a CALL PROCEEDING, PROGRESS, ALERTING or CONNECT message, depending on the state of the call at the time that the ISDN determines that it cannot support the service.

If the PHS-UUS service 3 request indicated required and the ISDN cannot support it (e.g. because it is not implemented or because of temporary inability to provide the service), a DISCONNECT or RELEASE COMPLETE message (depending on the state of the call) is sent with cause #47 "resource unavailable, unspecified" or cause #69 "requested facility not implemented", and a PHS-UUS service 3 rejection indicating "rejected by network".

If the PHS-UUS service 3 request indicated required and the calling user has not subscribed to the service, a DISCONNECT or RELEASE COMPLETE message is sent with cause #50 "requested facility not subscribed", and a PHS-UUS service 3 rejection indicating "rejected by network".

If the called public CS receives a PHS-UUS service 3 rejection, and it was requested as preferred, the PHS-UUS service 3 rejection indicating "rejected by user" is included in the CONNECT message. This explicit PHS-UUS service 3 rejection shall be forwarded by the ISDN to the calling public CS in the CONNECT message.

If the called public CS receives a PHS-UUS service 3 rejection, and it was requested as required, the PHS-UUS service 3 rejection indicating "rejected by user" is included in a DISCONNECT or RELEASE COMPLETE message with cause #69 "requested facility not implemented". This explicit PHS-UUS service 3 rejection may be forwarded by the ISDN to the calling public CS in the DISCONNECT message.

If the called public CS(s) does(do) not include a PHS-UUS service 3 acceptance or rejection in the CONNECT message or a rejection in the DISCONNECT or RELEASE COMPLETE message and the request indicated preferred, the ISDN shall return an explicit rejection indicating "rejected by user" in the CONNECT or DISCONNECT message sent to the calling public CS.

If the called public CS(s) does(do) not include a PHS-UUS service 3 acceptance or rejection in the CONNECT message and request indicated required, the ISDN shall clear the call by sending a DISCONNECT message to the calling public CS with cause #69 "requested facility not implemented", and PHS-UUS service 3 rejection indicating "rejected by user". Furthermore, a DISCONNECT message with cause #31, "normal, unspecified", shall be sent to the called public CS.

If the called public CS(s) does(do) not include a PHS-UUS service 3 rejection indicating "rejected by user" in the DISCONNECT or RELEASE COMPLETE message and the request indicated required, the ISDN shall include a PHS-UUS service 3 rejection in the DISCONNECT message sent to the calling public CS.

1.5.2.3.6.2   Rejection of service requested after call establishment

General exceptional procedures are described in 6.3.6/B-IF2.01 [2] and specific exceptional procedures are described below.

If the ISDN cannot support PHS-UUS service 3, or the requesting user has not subscribed to the service, a PHS-UUS service 3 rejection indicating "rejected by network" is included in a FACILITY message.

If the public CS that did not request PHS-UUS service 3 receives a PHS-UUS service 3 rejection, a PHS-UUS service 3 rejection indicating "rejected by user" shall be returned in the FACILITY message and stop timer T1.

If the requested public CS does not respond to the PHS-UUS service 3 request before timer T1 expires, the ISDN shall return a PHS-UUS service 3 rejection indicating "rejected by user" to the requesting public CS.

Collision of requests for PHS-UUS service 3 occurs when there is an outstanding request for PHS-UUS service 3 and a subsequent request is received from the called public CS. In this situation, the entities (user or network) observing the collision shall reject the second request with a FACILITY message including a PHS-UUS service 3 rejection indicating "rejected by user" or "rejected by network". Consequently, both requests will be rejected.

1.5.2.3.6.3 Receipt of unexpected USER INFORMATION messages

Whenever a USER INFORMATION message is received from the public CS and

  a) it is not allowed in the current call state (e.g. in any other state than Active where only   PHS-UUS service 3 is activated); and/or

  b) the appropriate PHS-UUS service has not been activated,

    the message shall be discarded by the ISDN. The ISDN shall also send a STATUS message with a cause #43 "access information discarded".

1.6 Interaction with other supplementary services

1.6.1 DTMF Transmission

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

1.6.2 Handover

PHS-UUS service is not activated by handover activation.

UUI and /or explicit request included in the SETUP message for Handover activation will be neglected.

PHS-UUS Service 1:

No impact, i.e. handover service does not affect the operation of PHS-UUS service 1, except for following case.

UUI incoming to PHS user with handover activated:

If UUI transmission from PHS-NW to a PHS user is not completed, PHS user may not receive UUI.

PHS-UUS Service 2:

No impact, i.e. handover service does not affect the operation of PHS-UUS service 2.

PHS-UUS Service 3:

No impact, i.e. handover service does not affect the operation of PHS-UUS service 3, except for following cases.

Handover Activated by PHS user during UUI transmission:

PHS user may not receive UUI.

Note - In this case, acknowledgment of UUI receipt may be done and UUI may be re-transmitted between end-to-end on high layer after the handover operation.

UUI incoming to a PHS user with handover activated:

If UUI transmission from PHS-NW to a PHS user is not completed, the PHS user may not receive UUI.

1.6.3 User scrambling

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

1.6.4 Subaddress

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

1.6.5 Calling User Identification Presentation

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

1.6.6 Calling User Identification Restriction

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

1.6.7 Call Forwarding

1.6.7.1 Call Forwarding Unconditional (CFU)

Calls originated by a PHS user with call forwarding unconditional activated;

Since call forwarding unconditional does not affect the forwarding user's ability to make outgoing calls, a PHS user with call forwarding unconditional activated can send and receive UUI in association with ongoing call or at the set-up of a new call.

Calls incoming to a PHS user with call forwarding unconditional activated;

Any UUI or request for PHS-UUS that accompanies the set-up request shall be forwarded with the call.

Note - As a network provider option, the forwarding of UUI and/or PHS-UUS requests can be restricted to forwarding users who subscribe to the relevant PHS-UUS supplementary service.

After forwarding;

PHS-UUS service 3 may be requested during the active phase of the call.

1.6.7.2 Call Forwarding on PS Busy (CFB)

See interaction with call forwarding unconditional. However, if a PHS user determined user busy condition exists, any UUI and/or request for PHS-UUS shall also be delivered to the forwarding user when the call is offered.

1.6.7.3 Call Forwarding on No Reply (CFNRy)

Calls originated by a PHS user with call forwarding no reply activated:;

Since call forwarding no reply does not affect the forwarding user's ability to make outgoing calls, a PHS user with call forwarding no reply activated can send UUI in association with an ongoing call or at the set-up of a new call.

Calls incoming to a PHS user with call forwarding no reply activated;

PHS-UUS service 1;

If the PHS-UUS service is explicitly requested and the forwarding user explicitly rejects the request, the PHS-UUS request and the UUI (if any) shall not be forwarded with the call. However, if the request was indicated as "UUI required" and either the forwarding or forwarded-to-user explicitly rejects the request, the call shall be rejected. In all other cases the PHS-UUS request and/or UUI shall be forwarded or delivered with the call.

PHS-UUS service 2;

If the PHS-UUS service is requested as "UUI not required", the call will be forwarded without the PHS-UUS request. If the PHS-UUS service is requested as "UUI required", call forwarding no reply shall be overridden (i.e. the call is treated as if call forwarding no reply was not activated).

PHS-UUS service 3;

Any request for PHS-UUS service 3 that accompanies the set-up request shall be forwarded with the call.

Note - As a network provider option, the forwarding of UUI and/or PHS-UUS requests can be restricted to forwarding users who subscribe to the relevant PHS-UUS supplementary service.

After forwarding;

PHS-UUS Service 3 may be requested during the active phase of the call.

1.6.7.4 Call Forwarding on PS Not Reachable (CFNRc)

See interaction with call forwarding unconditional.

1.6.8 Call Barring

1.6.8.1 Barring of All Outgoing Calls (BAOC)

No impact, i.e. neither supplementary service affects the operation of the other supplementary service. (When outgoing call is possible only under the conditions of BAOC, UUI and/or request of PHS-UUS may be sent or received.)

1.6.8.2 Barring of Outgoing International Calls (BOIC)

No impact, i.e. neither supplementary service affects the operation of the other supplementary service. (UUI and/or request of PHS-UUS may be sent to or received from the party to which outgoing call is possible only under the conditions of BOIC.)

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

No impact, i.e. neither supplementary service affects the operation of the other supplementary service. (UUI and/or request of PHS-UUS may be sent to or received from the party to which outgoing call is possible only under the conditions of BOIC-exHC.)

1.6.8.4 Barring of All Incoming Calls (BAIC)

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

(UUI and/or request of PHS-UUS may be sent to or received from the party to which incoming call is possible only under the conditions of BAIC.)

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

No impact, i.e. neither supplementary service affects the operation of the other supplementary service.

(UUI and/or request of PHS-UUS may be sent to or received from the party to which incoming call is possible only under the conditions of BIC-roam.)

1.6.9 Roaming

Further Study.

1.7 Interaction with other networks

1.7.1 Interaction with other PHS network

UUI can be delivered when the other PHS network have the function of PHS-UUS supplementary service.

1.7.1.1 PHS-UUS Service 1

No impact.

1.7.1.2 PHS-UUS Service 2

No impact.

1.7.1.3 PHS-UUS Service 3

No impact.

1.7.2 Interaction with ISDN network

The UUI will be transmitted to and /or from the ISDN network that provides the UUS supplementary service.

1.7.2.1 Originating call from ISDN network

1.7.2.1.1 PHS-UUS Service 1

No impact.

1.7.2.1.2 PHS-UUS Service 2

No impact.

1.7.2.1.3 PHS-UUS Service 3

No impact.

1.7.2.2 Originating call from PHS network

1.7.2.2.1 PHS-UUS Service 1

No impact.

1.7.2.2.2 PHS-UUS Service 2

No impact.

1.7.2.2.3 PHS-UUS Service 3

No impact.

1.8 Signaling flow

In addition to basic call control according to B-IF2.02, the signaling flow described in B-IF0.51 is added for your reference.

1.9 Parameter values (timers)

The value of network timer T is set to 10 seconds.

The value of network timer T1 is set to 10 seconds.

1.10 Dynamic Description (SDLs)

See Annex A/B-IF-2.02.