

Title: Public Personal Handy-phone System : Service Specifications of
Call forwarding Services

Version: 01

Date: Dec. 17, 1996

PHS MoU Classification: Unrestricted

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**Public Personal Handy-Phone System:
Service Specifications of Call forwarding Services**

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1 Call Forwarding Unconditional

1.1 Definition

Call forwarding unconditional(CFU) permits a “served user”(see 1.2.2) to have the network send to another number all incoming calls for the served user’s PHS number(or just those associate with a specified basic service). The served user’s originating service is unaffected. If this service is activated, calls are forwarded no matter what the condition of the termination.

Other call forwarding service provide for call forwarding based on condition of the air and the termination, e.g. Call Forwarding Busy(CFB), Call Forwarding on No Reply (CFNRy) and Call Forwarding No Reachable(CFNRC).

The forwarded-to number is registered with the network for use on all calls.

1.2 Description

1.2.1 General Description

For a given PHS number, Call Forwarding Unconditional service (including options) may be subscribed to for each basic service to which the user(s) of the number subscribes, or collectively for all the basic services to which the user(s) subscribes.

The served user can request a different forwarded-to number for each basic service subscription parameter value to which he has subscribed.

A notification that the CFU service is activated may, as an option, be given to the user who has forwarding activated, each time an outgoing call is made. This may take the form of a special notification in the proceed response.

1.2.2 Specific terminology

Served user : User of a particular PHS number who is requesting that calls to his number be forwarded. This user may also be referred to as the forwarding user or the called user.

Forwarded-to-user : User to whom the call shall be forwarded.

1.2.3 Qualifications on the applicability to telecommunication service

No restrictions identified.

1.3 Procedures

1.3.1 Provision/withdrawal

CFU shall be provided after pre-arrangement with the service provider.

The service can be offered with subscription options. Options apply separately to each basic service subscribed to on each PHS number. For each subscription option, only one value can be selected. Subscription options are summarized below:

Table 1-1/B-SV2.10 Subscription option values

Subscription options	Values
Served user receives notification that the call has been forwarded	No Yes, with information about the call
Calling user receives notification that the call has been forwarded	No Yes, without the forwarded-to user number Yes, with the forwarded-to user number
Served user receives notification that CFU is currently activated	No Yes
Served user releases his/her number to forwarded-to user	No Yes

Note - Subscription options may be provided as a network provider options.

This service will be withdrawn by the service provider at the subscriber's request or for administrative reasons.

1.3.2 Normal procedures

1.3.2.1 Activation/deactivation/registration

If the served user has subscribed to CFU, the served user will use the activation procedure. To activate CFU, the served user may supply:

- (1) the forwarded-to address;
- (2) information as to whether all calls or all calls of a specified basic service should be forwarded;

As a network option, verification of the forwarded-to number should be accomplished, if possible, before accepting the call forwarding request.

When the served user so activates CFU, the service provider will return notification of acceptance or rejection of the request (see Exceptional procedures, 1.3.3, for a list of possible causes for rejection).

This notification may include the number of forwarded-to users to whom the call forwarding is active.

As a service option, activation/deactivation may be restricted to selected terminals (users) (e.g. by use of a password).

CFU can be deactivated in next way. The user can specifically deactivate the CFU activation.

1.3.2.2 Invocation and operation

When CFU is active, all incoming calls will be forwarded without being offered the served user.

When an incoming call is forwarded without being offered to the served user, the served user, as a subscription option, may receive notification of the call forwarding (but will not be able to answer the incoming call). This notification is given as soon as the forwarding attempt is started.

The forwarded-to user may receive an indication that the call has been forwarded.

When multiple forwarding occurs, the reason for forwarding given to the forwarded-to user should relate to the last forwarding user in the chain.

As a subscription option, the served user can request that the calling user receives a notification that the call has been forwarded (a notification may include the reason for forwarding and the forwarded-to number).

Transfer of the forwarded-to user's number to the calling user, may be subject to number notification restrictions due to invocation of other supplementary services at the forwarded-to user.

1.3.3 Exceptional procedures

1.3.3.1 Activation/deactivation/registration

1.3.3.1.1 Activation

Call Forwarding Unconditional for all basic services and Call Forwarding of particular basic services cannot be activated simultaneously. If the PHS network cannot accept an activation request, the served user should receive a notification that call forwarding activation was unsuccessful. For example possible causes are :

- (1) service not subscribed;
- (2) forwarded-to number invalid;
- (3) forwarded-to number's telecommunication service violate subscribed constraints (e.g. group restrictions);
- (4) insufficient information;
- (5) requested telecommunication service is not provided to the forwarded-to number;
- (6) forwarded-to number is a special service code (e.g. police);
- (7) forwarded-to number is served user's number.

However, the network is not required to validate information related to the forwarded-to user.

1.3.3.1.2 Deactivation

If the user does not specify completely which CFU request is to be deactivated (e.g. the basic service and/or the originator's number), the network will reject the deactivation request with appropriate cause.

If the network cannot accept a user's request for deactivation, the cause will be returned to the user, e.g. incorrect origination PHS number used.

1.3.3.2 Invocation and operation

Call forwarding applies only to subscribed basic services. Calls to an PHS number requesting a basic service which is not subscribed to, will never be forwarded.

In cases where a user may be given the address of users involved in the call (e.g. when the forwarded-to user may receive the forwarding user's address) as part of that user's notification and this address information is unavailable (e.g. due to address presentation restriction), the user who would have been given the address shall get an indication on the reason why no number can be given.

The total number of all forwarding for each call may be limited. This is to prevent infinite looping.

If the limit is reached and an attempt is made to forward the call an additional time, then the

forwarded call shall be treated as follows:

If the forwarded call cannot be completed to the forwarded-to destination, then the network will clear the forwarded leg of the call. Specifically, if CFU has been invoked, then the call would be cleared back towards the calling user. If the call has not previously undergone CFNRy and so on, the call will be cleared all the way back to the calling user and the calling user will be informed that no user is responding. This information shall not explicitly reveal that the call has been forwarded.

1.3.4 Alternative procedures

None identified

1.4 Network capabilities for charging

This specification does not cover charging principles.

1.5 Interworking requirements

This is for further study.

1.6 Interaction with other supplementary services

1.6.1 Calling User Identification Presentation (CUIP)

Served users, who have subscribed to CUIP may receive the calling user's number if the calling user has not subscribed/invoked Calling User Identification Restriction (CUIR).

1.6.2 Calling User Identification Restriction (CUIR)

Calling user: When CUIR is applicable and activated, the calling user identification will not be presented to the forwarded-to user unless the forwarded-to user is in the override category. The latter is a national option.

1.6.3 Call forwarding

1.6.3.1 Call Forwarding Unconditional (CFU)

Not applicable.

1.6.3.2 Call Forwarding on PS Busy (CFB)

The invocation of CFU takes precedence over CFB.

1.6.3.3 Call Forwarding on No Reply (CFNRy)

The invocation of CFU takes precedence over CFNRy.

1.6.3.4 Call Forwarding on PS Not Reachable (CFNRc)

The invocation of CFU takes precedence over CFNRc.

1.6.4 Call barring

1.6.4.1 Barring of All Outgoing Calls (BAOC)

When CFU has been activated prior to the activation of Barring of All Outgoing Calls(BAOC), the calls are forwarded regardless of the limitations of BAOC that has been activated; i.e. in this case there exists no interaction between the two services.

After BAOC has been activated, calls can only be forwarded to destinations which are within the limitations of BAOC, that has been activated.

1.6.4.2 Barring of Outgoing International Calls (BOIC)

Same as BAOC.

1.6.4.3 Barring of Outgoing International Calls except call to Home Country (BOIC-exHC)

Same as BAOC.

1.6.4.4 Barring of All Incoming Calls (BAIC)

When CFU has been activated prior to the activation of Barring of all incoming calls(BAIC), the calls are forwarded regardless of BAIC that has been activated, i.e. in this case there exists no interaction between the two services.

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

When CFU has been activated prior to the activation of Barring of Incoming Calls on Roaming outside Home Country (BIC-roam). the calls are forwarded regardless of BIC-roam that has been activated, i.e. in this case there exists no interaction between the two services.

After BIC-roam has been activated, calls can only be forwarded within the limitations of BIC-roam, that has been activated.

1.6.5 DTMF Transmission

No impact, i.e. neither supplementary service affects the operation of the other supplementary service (because these invocation criteria are mutually exclusive).

1.6.6 Handover

No impact, i.e. neither supplementary service affects the operation of the other supplementary service (because these invocation criteria are mutually exclusive).

1.6.7 Subaddress

The sub-address associated with the original called party number shall not be forwarded if the call is forwarded.

1.6.8 User scrambling

No impact, i.e. neither supplementary service affects the operation of the other supplementary service (because these invocation criteria are mutually exclusive).

2 Call Forwarding on PS Busy

2.1 Definition

Call forwarding busy(CFB) permits a “served user”(see 2.2.2) to have the network send to another number all incoming calls for the served user’s PHS number(or just those associate with a specified basic service) which meet busy at the served user’s PHS number. The served user’s originating service is unaffected.

The forwarded-to number is registered with the network for use on all calls.

2.2 Description

2.2.1 General Description

For a given PHS number, Call Forwarding Busy service (including options) may be subscribed to for each basic service to which the user(s) of the number subscribes, or collectively for all the basic services to which the user(s) subscribes.

The served user can request a different forwarded-to number for each basic service subscription parameter value to which he has subscribed.

A notification that the CFB service is activated may, as an option, be given to the user who has

forwarding activated, each time an outgoing call is made. This may take the form of a special notification in the proceed response.

2.2.2 Specific terminology

Served user : User of a particular PHS number who is requesting that calls to his number be forwarded. This user may also be referred to as the forwarding user or the called user.

Forwarded-to-user : User to whom the call shall be forwarded.

2.2.3 Qualifications on the applicability to telecommunication service

No restrictions identified.

2.3 Procedures

2.3.1 Provision/withdrawal

CFB shall be provided after pre-arrangement with the service provider.

The service can be offered with subscription options. Options apply separately to each basic service subscribed to on each PHS number. For each subscription option, only one value can be selected. Subscription options are summarized below:

Table 2-1/B-SV2.10 Subscription option values

Subscription options	Values
Served user receives notification that the call has been forwarded	No Yes, with information about the call for the NDUB case
Calling user receives notification that the call has been forwarded	No Yes, without the forwarded-to user number Yes, with the forwarded-to user number
Served user receives notification that CFB is currently activated	No Yes
Served user releases his/her number to forwarded-to user	No Yes

Note - Subscription options may be provided as a network provider options.

This service will be withdrawn by the service provider at the subscriber’s request or for administrative reasons.

2.3.2 Normal procedures

2.3.2.1 Activation/deactivation/registration

Same as CFU.

2.3.2.2 Invocation and operation

When CFB is active and the served user is network determined user busy (NDUB) or user determined user busy (UDUB), then an incoming call to the served user will be forwarded.

In case of NDUB, the call is not offered to the served user. In this case, the served user, as a subscription option, may receive notification of the call forwarding (but will not be able to answer the incoming call). This notification is given as soon as forwarding attempt is started.

In case of UDUB, the call will have been offered to the served user. Normal call set-up information will already have been provided to the served user. When the forwarding attempt is started, the served user, as a subscription option, may receive notification that a call has been forwarded. No further notification is given.

The forwarded-to user may receive an indication that the call has been forwarded.

When multiple forwarding occurs, the reason for forwarding given to the forwarded-to user should relate to the last forwarding user in the chain.

As a subscription option, the served user can request that the calling user receives a notification that the call has been forwarded (a notification may include the reason for forwarding and the forwarded-to number).

Transfer of the forwarded-to user's number to the calling user, may be subject to number notification restrictions due to invocation of other supplementary services at the forwarded-to user.

2.3.3 Exceptional procedures

2.3.3.1 Activation/deactivation/registration

Same as CFU.

2.3.3.2 Invocation and operation

Call forwarding applies only to subscribed basic services. Calls to an PHS number requesting a basic service which is not subscribed to, will never be forwarded.

In cases where a user may be given the address of users involved in the call (e.g. when the forwarded-to user may receive the forwarding user's address) as part of that user's notification and this address information is unavailable (e.g. due to address presentation restriction), the user who would have been given the address shall get an indication on the reason why no number can be given.

The total number of all forwarding for each call may be limited. This is to prevent infinite looping.

If the limit is reached and an attempt is made to forward the call an additional time, then the forwarded call shall be treated as follows:

If the forwarded call cannot be completed to the forwarded-to destination, then the network will clear the forwarded leg of the call. Specifically, if CFB has been invoked, and CFNRy has not occurred, then the call would be cleared back towards the calling user, and the calling user would be sent a cause to indicate that the call cannot be completed (i.e. because of network congestion, invalid number, facility not available, etc.). This information shall not explicitly reveal that the call has been

forwarded.

2.3.4 Alternative procedures

None identified

2.4 Network capabilities for charging

This specification does not cover charging principles.

2.5 Interworking requirements

Same as CFU.

2.6 Interaction with other supplementary services

The ways in which Call Forwarding on Busy interacts with other supplementary services are in general identical to the ways in which Call Forwarding Unconditional interacts with other supplementary services. Thus, if the interactions are described to be "same as CFU", the CFU text should be taken verbatim, except that expression "Call Forwarding Unconditional" should be replaced by "Call Forwarding on PS Busy".

2.6.1 Calling User Identification Presentation (CUIP)

Served users, who have subscribed to CUIP may receive the calling user's number if the calling user has not subscribed/invoked Calling User Identification Restriction (CUIR).

2.6.2 Calling User Identification Restriction (CUIR)

Calling user: When CUIR is applicable and activated, the calling user identification will not be presented to the forwarded-to user unless the forwarded-to user is in the override category. The latter is a national option.

2.6.3 Call forwarding

2.6.3.1 Call Forwarding Unconditional (CFU)

The invocation of CFU takes precedence over CFB.

2.6.3.2 Call Forwarding on PS Busy (CFB)

Not applicable.

2.6.3.3 Call Forwarding on No Reply (CFNRy)

No impact, i.e. neither supplementary service affects the operation of the other supplementary service (because these invocation criteria are mutually exclusive).

2.6.3.4 Call Forwarding on PS Not Reachable (CFNRc)

No impact, i.e. neither supplementary service affects the operation of the other supplementary service (because these invocation criteria are mutually exclusive).

2.6.4 Call barring

2.6.4.1 Barring of All Outgoing Calls (BAOC)

When CFU has been activated prior to the activation of Barring of All Outgoing Calls(BAOC), the calls are forwarded regardless of the limitations of BAOB that has been activated; i.e. in this case there exists no interaction between the two services.

After BAOB has been activated, calls can only be forwarded to destinations which are within the limitations of BAOB, that has been activated.

2.6.4.2 Barring of Outgoing International Calls (BOIC)

Same as BAOB.

2.6.4.3 Barring of Outgoing International Calls except call to Home Country (BOIC-exHC)

Same as BAOB.

2.6.4.4 Barring of All Incoming Calls (BAIC)

When CFU has been activated prior to the activation of Barring of All Incoming Calls(BAIC), the calls are forwarded regardless of the limitations of BAIC that has been activated; i.e. in this case there exists no interaction between the two services.

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

When CFU has been activated prior to the activation of Barring of Incoming Calls on Roaming outside Home Country (BIC-roam) . the calls are forwarded regardless of the limitations of BIC-roam that has been activated; i.e. in this case there exists no interaction between the two services.

After BIC-roam has been activated, calls can only be forwarded within the limitations of BIC-roam, that has been activated.

2.6.5 DTMF Transmission

No impact, i.e. neither supplementary service affects the operation of the other supplementary service (because these invocation criteria are mutually exclusive).

2.6.6 Handover

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

(because these invocation criteria are mutually exclusive).

2.6.7 Subaddress

The sub-address associated with the original called party number shall not be forwarded if the call is forwarded.

2.6.8 User scrambling

No impact, i.e. neither supplementary service affects the operation of the other supplementary service (because these invocation criteria are mutually exclusive).

3 Call forwarding on No Reply

3.1 Definition

Call Forwarding on No Reply permits a “served user” to have the network send to another number all incoming calls for the served user’s PHS number which meet no reply, or just those associated with a specified basic service which meet no reply. The served user’s originating service is unaffected. The forwarded-to number is registered with the network for use on all calls.

3.2 Description

3.2.1 General description

For a given PHS number, the Call Forwarding on No Reply (CFNRy) service (including options), may be subscribed to for each basic service to which the user(s) of the number subscribes, or collectively for all the basic services to which the user(s) subscribes.

The served user can request a different forward-to number for each basic service subscription parameter value to which he has subscribed.

An notification that the CFNRy service is activated on a number may, as an option, be given to the user who has forwarding activated, each time an outgoing call is made. This may take the form of special notification in the proceed response.

3.2.2 Specific terminology

Served user: User of a particular PHS number who is requesting that calls to his number be forwarded. This user may also be referred to as the forwarding user or the called user.

Forwarded-to-user: User to whom the call shall be forwarded.

3.2.3 Qualifications on the applicability to telecommunications services

No restrictions identified.

3.3 Procedures

3.3.1 Provision/withdrawal

CFNRy shall be provided after pre-arrangement with the service provider.

The service can be offered with subscription options. Options apply separately to each basic service subscribed to on each PHS number. For each subscription option, only one value can be selected. Subscription options are summarized below:

Table 3-1/B-SV2.10 Subscription option values

Subscription options	Values
Served user receives notification that the call has been forwarded	No Yes
Calling user receives notification that the call has been forwarded (See Note)	No Yes, without the forwarded-to user number Yes, with the forwarded-to user number
No reply condition timer	e.g. 5-60 seconds, in steps of 5 second
Served user receives notification that CFNRy is currently activated	No Yes
Served user releases his/her number to forward-to user	No Yes

Note- Subscription option may be provided as a network provider option.

This service will be withdrawn by the service provider at the subscriber's request or for administrative reasons.

3.3.2 Normal procedures

3.3.2.1 Activation/deactivation/registration

Same as CFU.

3.3.2.2 Invocation and operation

When CFNRy is active, incoming calls will be offered to the served user. Normal call offering information is provided to the served user. If the served user does not reply within a subscribed time interval, the call will be forwarded. The served user, as a subscription option, may receive notification that a call has been forwarded.

The forwarded-to user may receive an indication that the call has been forwarded.

If multiple forwarding have occurred, The forwarding cause that the forwarded-to user received includes last forwarding served user information.

The forwarding of the forwarded-to number to the originating user may be limited under activation of other supplementary services that the forwarded-to user have subscribed.

3.3.3 Exceptional procedures

3.3.3.1 Activation/deactivation/registration

Same as CFU.

3.3.3.2 Invocation and operation

Call forwarding applies only to subscribed basic services. Calls to an PHS number requesting a basic service which is not subscribed to will never be forwarded.

In cases where a user may be given the address of users involved in the call[e.g. when the forwarded-to user may receive the forwarding user's addresses] as part of that user's notification and this address information is unavailable (e.g. due to address presentation restriction), the user who would have been given the address shall get an indication on the reason why no number can be give.

The total number of all forwardings for each call may be limited. This is to prevent infinite looping.

If the limit is reached and an attempt is made to forward the call an additional time, then the forwarded call shall be treated as follows:

If the forwarded call cannot be completed to the forwarded-to destination, then as a service provider option the network may either:

(1) Clear the forwarded leg of the call and continue to alert the served user. The calling user will, in the case of a telephony call, continue to receive in-band ringing tone. The "no reply" timer need not be restarted. However, as a network option, the "no reply" timer may be restarted at this point. (Note that, with this option, during the invocation of CFNRy the forwarding user shall continue to be alerted until alerting commences at the forwarded-to user).

(2) Clear the call back towards the calling user and the calling user would be sent a cause to indicate that the call cannot be completed(i.e. because of network congestion, invalid number, facility not available, etc.). This information shall not explicitly reveal that the call has been forwarded. If CFNRy has previously occurred, then the call would be cleared back towards that served user; (Note that, with this option, the alerting of the forwarding user shall have ceased on invocation of CFNRy.)

3.3.4 Alternative procedures

None identified.

3.4 Network capabilities for charging

This Specification does not cover charging principles.

3.5 Interworking requirements

Further study.

3.6. Interaction with other supplementary services

3.6.1 Calling User Identification Presentation (CUIP)

Same as CFU.

3.6.2 Calling User Identification Restriction (CUIR)

Same as CFU.

3.6.3 Call forwarding

3.6.3.1 Call Forwarding Unconditional (CFU)

The invocation of CFU takes precedence over CFNRy.

3.6.3.2 Call Forwarding on PS Busy (CFB)

No impact, i.e. neither supplementary service affects the operation of the other supplementary service. Because these invocation criteria are mutually exclusive.

3.6.3.3 Call Forwarding on No Reply (CFNRy)

Not applicable.

3.6.3.4 Call Forwarding on PS Not Reachable (CFNRc)

No impact, i.e. neither supplementary service affects the operation of the other supplementary service. Because these invocation criteria are mutually exclusive.

3.6.4 Call barring

3.6.4.1 Barring of All Outgoing Calls (BAOC)

When CFNRy has been activated prior to the activation of BAOc, the calls are forwarded regardless of the limitations of the version of BAOc that has been activated; i.e. in this case there exists no interaction between the two services.

After BAOc has been activated, calls can only be forwarded to destinations which are within the limitations of the BAOc version, that has been activated.

3.6.4.2 Barring of Outgoing International Calls (BOIC)

Same as BAOc.

3.6.4.3 Barring of Outgoing International Calls except call to Home Country (BOIC-exHC)

Same as BAOC.

3.6.4.4 Barring of All Incoming Calls (BAIC)

Same as CFU.

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

Same as CFU.

3.6.5 DTMF Transmission

No impact, i.e. neither supplementary service affects the operation of the other supplementary service. Because these invocation criteria are mutually exclusive.

3.6.6 Handover

No impact, i.e. neither supplementary service affects the operation of the other supplementary service. Because these invocation criteria are mutually exclusive.

3.6.7 Subaddress

Same as CFU.

3.6.8 User scrambling

No impact, i.e. neither supplementary service affects the operation of the other supplementary service. Because these invocation criteria are mutually exclusive.

4 Call Forwarding on PS Not Reachable (CFNRc)

4.1 Definition

Call forwarding on PS not reachable (including in case of turning off the PSs power) permits a “served user” (see 4.2.2) to have the network send to another number all incoming calls for the served user's PHS number or just those associated with a specified basic service which meet on PS not reachable. The served user's originating service is unaffected.

The forwarded-to number is registered with the network for use on all calls.

4.2 Description

4.2.1 General Description

For a given PHS number, this service (including options) may be subscribed to for each basic service to which the user(s) of the number subscribes, or collectively for all the basic services to which the

user(s) subscribes.

The served user can request a different forwarded-to number for each basic service subscription parameter value to which he has subscribed.

A notification that the CFNRc service is activated may, as an option, be given to the user who has forwarding activated, each time an outgoing call is made.

This may take the form of a special notification in the proceed response.

4.2.2 Specific terminology

Served user: User of a particular PHS number who is requesting that calls to his number be forwarded. This user may also be referred to as the forwarding user or the called user.

Forwarded-to-user: User to whom the call shall be forwarded.

4.2.3 Qualifications on the applicability to telecommunication services

No restrictions identified.

4.3 Procedures

4.3.1 Provision/withdrawal

CFNRc shall be provided after pre-arrangement with the service provider.

The service can be offered with subscription options. Options apply separately to each basic service subscribed to on each PHS number. For each subscription option, only one value can be selected.

Subscription options are summarized below:

Table 4-1/B-SV2.10 Subscription option values

Subscription options	Values
Calling user receives notification that the call has been forwarded	No Yes, without the forwarded-to user number Yes, with the forwarded-to user number
Served user receives notification that CFNRc is currently activated	No Yes
Served user releases his/her number to forwarded-to user	No Yes

Note - Subscription options may be provided as a network provider options.

This service will be withdrawn by the service provider at the subscriber's request or for administrative reasons.

4.3.2 Normal procedures

4.3.2.1 Activation/deactivation/registration

Same as CFU.

4.3.2.2 Invocation and operation

When CFNRc is active, all incoming calls which meet on PS not reachable (network determine) will be forwarded.

The forwarded-to user may receive an indication that the call has been forwarded.

When multiple forwarding occurs, the reason for forwarding give to the forwarded-to user should to the last forwarding user in the chain.

As a subscription option, transfer of the forwarded-to user's number to the calling user, may be subject to number notification restrictions due to invocation of other supplementary services at the forwarded-to user.

4.3.3 Exceptional procedure

4.3.3.1 Activation/deactivation/registration

4.3.3.1.1 Activation

Call Forwarding on PS Not Reachable for all basic services and Call Forwarding of particular basic services cannot be activated simultaneously. If the PHS network cannot accept an activation request, the served user should receive a notification that call forwarding activation was unsuccessful. The following are possible causes as an example, so the application is a network option.

- (1) service not subscribed;
- (2) forwarded-to number invalid;
- (3) forwarded-to number's telecommunication services violate subscribed constraints (e.g. group restrictions);
- (4) insufficient information;
- (5) requested telecommunication service is not provided to the forwarded-to number;
- (6) forwarded-to number is a special service code (e.g. police);
- (7) forwarded-to number is served user's number.

However, the network is not required to validate information related to the forwarded-to user.

4.3.3.1.2 Deactivation

Same as CFU.

4.3.3.2 Invocation and operation

Call forwarding applies only to subscribed basic service. Calls to a PHS number requesting a basic services which is not subscribed to, will never be forwarded.

In cases where a user may be given the address of users involved in the call [e.g. when the forwarded-to user may receive the forwarding user's address) as part of that user's notification and this address information is unavailable (e.g. due to address presentation restriction), the user who would have been given the address shall get an indication on the reason why no number can be given.

The total number of all forwarding for each call may be limited. This is to prevent infinite looping. If the limit is reached and an attempt is made to forward the call an additional time, then the forwarded call shall be treated as follows:

If the forwarded call cannot be completed to the forwarded-to destination, then the network will clear the forwarded leg of the call. If the call has not previously undergone CFNRy, the call will be cleared all the way back to the calling user.

4.3.4 Alternative procedures

None identified.

4.4 Network capabilities for charging

This Specification does not cover charging principles.

4.5 Interworking requirements

This is for further study.

4.6 Interaction with other supplementary services

The ways in which CFNRc interacts with other supplementary services are in general identical to the ways in which Call Forwarding Unconditional interacts with other supplementary services. Thus, if the interactions are described to be “same as CFU”, the CFU text should be taken verbatim, except that “Call Forwarding Unconditional” should be replaced by “CFNRc”.

4.6.1 Calling User Identification Presentation (CUIP)

A forwarded-to user who subscribes to CUIP may receive the calling user’s number if the calling user has not subscribed/invoked Calling Use Identification Restriction (CFIR).

4.6.2 Calling User Identification Restriction (CUIR)

Same as CFU.

4.6.3 Call forwarding

4.6.3.1 Call Forwarding Unconditional (CFU)

The invocation of CFU takes precedence over CFNRc.

4.6.3.2 Call Forwarding on PS Busy (CFB)

No impact, i.e. neither supplementary service affects the operation of the other supplementary service (because these invocation criteria are mutually exclusive).

4.6.3.3 Call Forwarding on No Reply (CFNRy)

No impact, i.e. neither supplementary service affects the operation of the other supplementary service (because these invocation criteria are mutually exclusive).

4.6.3.4 Call Forwarding on PS Not Reachable (CFNRc)

Not applicable.

4.6.4 Call barring

4.6.4.1 Barring of All Outgoing Calls (BAOC)

Same as CFU.

4.6.4.2 Barring of Outgoing International Call (BOIC)

Same as CFU.

4.6.4.3 Barring of Outgoing International Calls except call to Home Country (BOIC-exHC)

Same as CFU.

4.6.4.4 Barring of All Incoming Calls (BAIC)

Same as CFU.

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

Same as CFU.

4.6.5 DTMF Transmission

Same as CFU.

4.6.6 Handover

Same as CFU.

4.6.7 Subaddress

Same as CFU.

4.6.8 User scrambling

Same as CFU.