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

7. Dynamic description

The dynamic description of this service is contained in Figure 1/I.252.6.

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

6.10Diversion services

6.10.1Call forwarding busy (CFB)

If the outcome of the Line Hunting supplementary service is unsuccessful (see § 3.3.2 above) CFB may be invoked.

6.10.2Call forwarding no reply

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

6.10.3Call forwarding unconditional

When the Call Forwarding Unconditional and Line Hunting supplementary services are both subscribed to on the same ISDN number, the Call Forwarding Unconditional supplementary service takes priority. Futher information is contained in the Call Forwarding Unconditional definition in Recommendation I.252D.

6.11Line hunting

Not relevant.

6.12Three party service

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

6.13User to user signalling

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

6.14Multiple subscriber number

For further study.

6.15Call hold service

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

6.16Advice of charge

be considered. This is for futher study.

6. Interaction with other supplementary services

6.1 Call waiting

The Call Waiting service should not be provided to a line in a Hunt Group.

6.2 Call transfer

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

6.3 Connected line identification presentation

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

6.4 Connected line identification restriction

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

6.5 Calling line identification presentation

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

6.6 Calling line identification restriction

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

6.7 Closed user group

When a free line of a Line Hunting Group has been found any CUG restrictions must be met before the connection will be established.

6.8 Conference calling

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

6.9 Direct Dialling In

Outgoing calls from a line hunting group are unaffected by this service.

3.3 Exceptional procedures

3.3.1 Activation/deactivation/registration

None identified.

3.3.2 Invocation and operation

If no interface is available, the line hunting service is unsuccessful and a busy indication is returned to the calling subscriber.

If no compatible terminal on a selected interface responds, no further line hunting action is provided and the call is released in the normal manner.

If the offered call is rejected at an interface, the call is released with normal procedures. No further hunting is provided.

3.4 Alternative procedures

3.4.1 Activation/deactivation/registration

None identified.

3.4.2 Invocation and operation

None identified.

4. Network capabilities for charging

This Recommendation does not cover charging principles. Future Recommendations in the D-Series are expected to contain that information. It shall bepossible to charge the subscriber accurately for the service.

5. Interworking requirements

The possibility of a line hunting group including both ISDN and non-ISDN interfaces for a particular Line Hunting service should

numbers or subsets of ISDN numbers.

2.3Qualifications on the applicability to telecommunications services

This supplementary service is considered meaningful when applied to the speech and 3.1 kHz audio bearer services and to the Telephony Teleservice. Furthermore, it may also be meaningful when applied to other services.

3.Procedures

3.1Provision/withdrawal

Line Hunting is offered, with possible subscription options, as a service to the called party and applied to an ISDN number. For each subscription the following are specified:

Subscription option	Values
Selection Method	- Sequential - Uniform
Members	- List of 2 or more interfaces.

3.2Normal procedures

3.2.1Activation/deactivation/registration

Line Hunting is activated on provision and deactivated on withdrawal.

3.2.2Invocation and operation

An incoming call to an ISDN number on which line hunting is in operation will be offered to a specific available interface in a predefined manner. The selection of the specified interface may provide for a uniform distribution of calls or sequential distribution of calls.

The method of selecting the interface may be either Sequential Hunting or Uniform Distribution. The selection algorithm may include reference to the channel status.

Once an interface has been selected, normal call set up procedures apply and Line Hunting procedures are considered complete.

Line Hunting is a supplementary service which enables incoming calls to a specific ISDN number to be distributed over a group of interfaces.

Note - Expansion of the Line Hunting service to cover the case of hunting on available ISDN numbers, or addresses, rather than on interfaces is a possible extension of the service.

2. Description

2.1 General description

The interfaces selected for line hunting may be contained within one node, or may encompass more than one node.

It is the responsibility of the user to provision terminals to his interfaces for effective operation of the service. The problem of terminal compatibility in the line hunting supplementary service is also the responsibility of the user of the service.

2.2 Specific terminology

The following specific terminology is used to describe the possible selection method:

Sequential Hunting	A sequential search is conducted over the members of the group in a fixed prespecified order.
Uniform Distribution	An equal distribution of calls is provided to idle members of the group.

The actual algorithm for each hunting method is a network provider option.

Note - An individual channel's status may be included in the selection criteria above.

The selection of an interface is based on the availability of information channels rather than the NDUB status. As part of each applicable bearer service or Teleservice, there is already an option specifying the maximum number of information channels which can be used on the interface for each ISDN number, all ISDN

activated: Since Call Forwarding Unconditional does not affect the forwarding user's ability to make outgoing calls, a user with Call Forwarding Unconditional activated can send and receive UUI in association with an ongoing call or at the setup of a new call.

During forwarding: Any UUI which accompanies the setup of the call will be forwarded along with the forwarded call if both the calling and forwarding (i.e. called) parties have subscribed to service 1.

After forwarding: If the calling party has requested UUS Service(s) 1, 2 and/or 3 in their initial call setup, and if the fowarding (i.e. called) party has subscribed to the same service(s), then that service (those services) will automatically be extended to be available for use between the calling party and the forwarded-to party. If the forwarding party does not subscribe to the same service(set of services), the calling party will be informed that they can no longer employ the service(s) on this call.

6.14Multiple Subscriber Number

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

6.15Call Hold Service

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

6.16Advice of Charge

See Advice of Charge interaction with CFU.

7.Dynamic description

Refer to CFB dynamic description (which covers CFB, CFNR and CFU) in I.252.2

I.252.5Call deflection

This service being identified needs to be further studied and the description is not yet included.

I.252.6Line Hunting

1.Definition

tions.

A call, which has been forwarded can be added to an existing conference by the forwarded-to user.

6.9Direct Dialling In

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

6.10Diversion services

6.10.1Call Forwarding Busy

The invocation of CFU takes precedence over CFB.

6.10.2Call Forwarding No Reply

The invocation of CFU takes precedence over CFNR.

6.10.3Call Forwarding Unconditional

Not applicable.

6.11Line Hunting

Calling user: No impact i.e. neither supplementary service affects the operation of the other supplementary service.

Called user: Call Forwarding may be assignable to all or part of the hunting group. When forwarding is only required on part of the hunting group the forwarding customer must specify, at activation, which access the service is to be invoked from. Procedures for the operation of this service in association with part of a hunt group need to be completed. In general, CFU takes precedence over Line Hunting.

Forwarded-to user: Forwarded calls will be treated as normal calls when completing to a multi-line group user.

6.12Three-Party Service

See Three-Party Service interaction with CFU in I.254.2

6.13User-to-User Signalling

Call originated by a user with Call Forwarding Unconditional

callinguser's number if the calling user has not subscribed/ invoked CLIR. In addition, forwarded-to users subscribing to CLIP may also receive the original called user's number and the last forwarding user's number if neither has subscribed/invoked CLIR (e.g. if A calls B1 who forwards A to B2 who forwards A to B3 who forwards A to C, then C will receive A, B1 and B3's number, unless A, B1 and B3 have restricted delivery).

6.6Calling Line Identification Restriction

Calling user: When the Calling Line Identification Restriction is applicable and activated, the Calling Line Identification will not be presented to the forwarded-to user unless both the forwarding and forwarded-to users have an override category. In addition, if the forwarding user has an override category, the calling party's number will be provided in the call offering information. The latter is a national option.

6.7Closed User Group

CUG restrictions must be met on each leg of the call. In addition, CUG restrictions must be met end-to-end. In the case of multiple forwarding CUG restrictions have to be met in addition to each intermediate forwarding point.

Called user/forwarded-to user: When a call is forwarded, a new check of the CUG restrictions is made at the "forwarded-to" destination. The CUG information sent to the "forwarded'to" destination is the same CUG information that was sent from the originating network.

Forwarding (i.e. called) user: Call forwarding can only be activated if CUG restrictions between the forwarding user and the forwarded-to user are met.

6.8Conference Calling

Calling user: If a conference controller attempts to establish a conference call and calls a user with call forwarding active, the forwarded-to user will be alerted and can be added to the conference.

Called user: No impact i.e. neither supplementary service affects the operation of the other supplementary service.

Forwarded-to user: A forwarded-to user can establish a conference using an existing forwarded call as one of the conference connec-

Forwarded-to user: A forwarded call can invoke Call Waiting.

6.2 Call Transfer

6.2.1 Transfer of a Forwarded Call

Calling user: A call which has been forwarded can be transferred by the calling user.

Called user: No impact i.e. neither supplementary service affects the operation of the other supplementary service.

Forwarded-to user: A call that has been transferred will be forwarded if the transferred-to user has Call Forwarding Unconditional active and the appropriate forwarding conditions are met. A call which has been forwarded can by transferred by the forwarded-to user.

6.2.2 Forwarding of a Call During Transfer

A call which is being transferred can be forwarded by the party to whom the call is being transferred.

6.3 Connected Line Identification Presentation

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

6.4 Connected Line Identification Restriction

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

6.5 Calling Line Identification Presentation

Called user: If subscribed to, the Called User can receive the Calling Line Identification of all calls which have been forwarded.

Forwarded-to user: Forwarded-to users having subscribed to Calling Line Identification Presentation may receive the calling user's number. If subscribed to by the called user, the forwarded-to User may receive the called user's number when a call has been forwarded.

Forwarded-to users, which have subscribed to CLIP may receive the

user is responding. If the call has previously undergone CFNR the call will only be cleared back as far as the CFNR exchange and the calling user will, in case of a telephony call, continue to receive
inband ringing tone.

3.4Alternate procedures

3.4.1Activation/deactivation/registration

None identified.

3.4.2Invocation and operation

None identified.

4.Network capabilities for charging

This Recommendation does not cover charging principles. Future Recommendations in the D-Series are expected to contain that information. It shall be possible to charge the subscriber accurately for the service.

5.Interworking requirements

If the fowarded-to number is not within the ISDN, then an interworking situation is said to exist.

If a forwarded call meets an interworking situation, then an interworking indication should be sent to the calling party.

Note - The number of times a call has been forwarded once it has exited the Common Channel Signalling (CCS) network, cannot be limited by the CCS network.

6.Interaction with other supplementary services

6.1Call Waiting

Calling user: No impact i.e. neither supplementary service affects theoperation of the other supplementary service.

Called user: If a called user has activated CFU, then execution of that forwarding condition takes precedence over Call Waiting. CFU can be activated while a call is waiting without changing the state of the waiting call.

forwarded-to ISDN number;

viii) forwarded-to number is a special service code (e.g. police);

ix) forwarded-to number is served user's number.

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

3.3.1.2Deactivation

If the user does not specify completely which CFU request is to be deactivated (e.g. the basic service and/or the originators 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 ISDN number used.

If the network deactivates CFU without the served user having requested deactivation (e.g. when an exceptional condition occurs), the served user will receive notification along with the cause.

3.3.2Invocation and operation

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

Within an ISDN or tandem ISDNs, the total number of all forwardings for eachcall should be limited. The maximum number of such connections should be limited to a value between 3 and 5 for each call. 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 in the following paragraph.

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 CFNR, the call will be cleared all the way back to the calling user and the calling user will be informed that no

3) last forwarding number Bx;

4) cause for last forwarding.

(Depending on the use of other supplementary services, the forwarded-to User C may also receive information such as the calling party A number and user-to-user signalling. See the descriptions of interactions with other supplementary services.)

Calling user A's view:

As a subscription option, the served user Bm can request, that the calling user receives a notification that the call has been forwarded and as an additional subscription option that notification can include the forwarded-to number B(m+1). Transfer of the forwarded-to user number will not take place if number restrictions at the forwarded-to user exist.

3.3Exceptional procedures

3.3.1Activation/deactivation/registration

3.3.1.1Call Forwarding Unconditional for all basic services and Call Forwarding of particular basic services cannot be activated simultaneously.

If the system cannot accept an activation request, the served user should receive a notification that Call Forwarding activation was unsuccessful.
Possible causes are:

i) service not subscribed;

ii) forwarded-to invalid ISDN number;

iii) use of an operator access prefix;

iv) forwarded-to ISDN number telecommunications services violates subscribed constraints (e.g. group restrictions);

v) forwarded-to ISDN number is of a free number within the same office (i.e. a number to which no call is chargeable);

vi) insufficient information;

vii) requested telecommunication service is not provided to the

Served user Bm's view:

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

This notification includes the following information (on the call that has been forwarded):

1) indication that a call has been forwarded:

2) telecommuncations service information (e.g. bearer capability, higher layer compatibility);

3) user-to-user information;

4) Bm's number;

5) calling party number A (if CLIP applicable).

If multiple forwardings have occurred and the served user is authorized to receive additional information, he may also receive:

6) originally called number B1;

7) cause for original forwarding;

8) last forwarding number B(m-1);

9) cause for last forwarding.

Forwarded-to User C's view:

The forwarded-to User C will receive an indication that call has been forwarded.

As an option he may also receive:

1) originally called number B1;

2) cause for original forwarding;

the activation procedure.

To activate CFU, the served user must supply:

1) the forwarded-to number;

2) information as to whether all calls or all calls of a specified basic service should be informed;

3) possibly the ISDN number for which CFU should apply.

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 for a list of possible causes for rejection in section 3.3.1.1).

This notification will include the number of the forwarded-to user to whom the call forwarding is active. If a single number can be used by more than one terminal, activation of CFU will be possible from any terminal which uses this number. 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 either of two ways. The user can specifically deactivate the CFU activation. The user can activate CFU for the specified basic service to another number, thus causing the previous invocation of CFU to be overridden.

3.2.2 Invocation and operation

The following illustration clarifies the CFU procedures. Assume that A calls B1, who forwards the call to B2, ..., Bm, ... Bx. The final receiver of the call is C.

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 indication in the proceed response.

2.2Specific terminology

A served user is a user of a particular ISDN 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.

A forwarded-to user is a user to whom the call shall be forwarded.

2.3Qualifications on the applicability to telecommunications services

No restrictions identified.

3.Procedures

3.1Provision/withdrawal

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

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

Subscription options	Value
Served user receives notification that call has been forwarced	- No - Yes, with call offering information (see 3.2.2)
Calling user receives notification his call has been forwarded	- No - Yes, with or without forwarded to user number
Served user receives notification that CFU is currently activated	- No - Yes

3.2Normal procedures

3.2.1Activation/deactivation/registration

If the served user has subscribed to CFU, the served user will use

I.252.4 Call Forwarding Unconditional

1. Definition

Call Forwarding Unconditional (CFU) permits a served user to have the network send all incoming calls for the served user's ISDN number, or just those associated with a specified basic service, to another number. 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 services provide for call forwarding based on condition e.g. Call Forwarding Busy (CFB) and Call Forwarding No Reply (CFNR).

Note – In normal situations, the CFU service is provided on a per access basis. (In these situations, there is a one-to-one relationship between ISDN number and access.) However, the network may recognize multiple numbers on a single interface. In addition, it may not understand a complete ISDN number (e.g., DDI). In these cases, the CFU service is offered on the basis of the part of the ISDN number which the network can recognize.

2. Description

2.1 General description

For a given ISDN 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. Since subscription is on an ISDN number basis, the same Call Forwarding subscriptions will apply to all terminals using this number.

Note – In this service description, it is assumed that a single ISDN number is not shared across multiple interfaces. A single ISDN number may, however, be shared by multiple terminals on the same interface. Procedures permitting an ISDN number to be shared across multiple interfaces are for further study. For multiple access installations, it could be possible for the user to specify, on activation, if the service is applicable to a specific access or all accesses associated with that installation.

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

An indication that the CFU service is activated on a number may,

in I.252.2.

The invocation of CFU takes precedence over CFNR.

6.11Line Hunting

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

6.12Three-Party Service

See Three Party Service interaction with CFNR.

6.13User-to-User Signalling

Service 1: A CFNR subscriber who has CFNR activated should not respond by accepting or rejecting a User-to-User Service 1 request until they answer the call. If a call for which User-to-User Service 1 was requested undergoes CFNR, User-to-User Service 1 will not be extended to the forwarded-to user.
Service 2: An outgoing call which meets a called party with CFNR activated cannot use User-to-User Service 2. On CFNR, User-to-User Service 2 will not be extended to the forwarded-to user.

Service 3: A CFNR subscriber who has CFNR activated should not respond by accepting or rejecting a User-to-User Service 3 request until they answer the call. If a call for which User-to-User Service 3 was requested undergoes CFNR, UUS Service 3 may be extended to the forwarded-to user if the forwarding party allows it.

6.14Multiple Subscriber Number

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

6.15Call Hold Service

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

6.16Advice of Charge

See Advice of Charge interaction with CFNR.

7.Dynamic description

Refer to CFB dynamic description (which covers CFU, CFB, and CFNR)

See Call Waiting interaction with CFNR.

6.2Call Transfer

Same as CFU (see I.252.4).

6.3Connected Line Identification Presentation

Same as CFU (see I.252.4).

6.4Connected Line Identification Restriction

Same as CFU (see I.252.4).

6.5Calling Line Identification Presentation

Same as CFU (see I.252.4).

6.6Calling Line Identification Restriction

Same as CFU (see I.252.4).

6.7Closed User Group

Same as CFU (see I.252.4).

6.8Conference Calling

Same as CFU (see I.252.4).

6.9Direct Dialling In

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

6.10Diversion services

6.10.1Call Forwarding Busy

The invocation of CFB takes precedence over CFNR.

6.10.2Call Forwarding No Reply

Not applicable.

6.10.3Call Forwarding Unconditional

user until alerting commences at the forwarded-to user.)

3.4 Alternate procedures

3.4.1 Activation/deactivation/registration

None identifed.

3.4.2 Invocation and operation

None identified.

4. Network capabilities for charging

This Recommendation does not cover charging principles. Future Recommendations in the D-Series are expected to contain that information. It shall be possible to charge the subscriber accurately for the service.

5. Interworking requirements

If a forwarded-to number is not within the ISDN, then an interworking situation is said to exist.

If a forwarded call meets an interworking situation, then an interworking indication should be sent to the calling party. Also, if the network cannot determine that the forwarded call cannot be completed (i.e. the progress of the call is provided inband), the network shall cease alerting at the diverting termination and connect the calling user to the diverted call in order to receive these inband supervisory indications.

Note - The number of times a call has been forwarded once it has exited the Common Channel Signalling (CCS) network cannot be limited by this CCS network.

6. Interaction with other supplementary services

The ways in which Call Forwarding No Reply 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 the word "Call Forwarding Unconditional" should be replaced by "Call Forwarding Busy".

6.1 Call Waiting

2) cause for original forwarding;

3) last forwarding number Bx;

4) cause for last forwarding.

(Depending on the use of other supplementary services, the forwarded-to user C may also receive information such as the calling party A number and user-to-user signalling. See the descriptions of interactions with other supplementary services.)

Calling user A's view:

As a subscription option, the served user Bm can request, that the calling user receives a notification that the call has been forwarded and as an additional subscription option that notification can include the forwarded-to number B(m+1). Transfer of the forwarded-to user number will not take place if number restrictions at the forwarded-to user exist.

3.3Exceptional procedures

3.3.1Activation/deactivation/registration

Same as CFU (see I.252.4).

3.3.2Invocation and operation

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

Within an ISDN, or tandem ISDNs, the total number of all forwardings for each call should be limited. The maximum number of such connections should be limited to a value between 3 and 5 for each call. This is to prevent infinite looping.

If the limit is reached and an attempt is made to forward the call an additional time, the forwarded call shall be treated as in the following paragraph.

If the forwarded call cannot be completed to the forwarded-to destination, then the network will clear the forwarded leg of the call and the calling user will, in the case of a telephony call, continue to receive inband ringing tone. The "no reply timer" will not be restarted by the network. (Note that during the activation of CFNR, the calling user shall continue to alert the forwarding

user number

No reply condition timer - 5-60 seconds, in steps of
5 seconds

Served user received notification - No
that CFNR is currently activated - Yes

3.2 Normal procedures

3.2.1 Activation/deactivation/registration

Same as CFU.

3.2.2 Invocation and operation

The following illustration clarifies the CFNR procedures. Assume that A calls B1, who forwards the call to B2, ..., Bm, ..., Bx. The final receiver of the call is C.

Served user Bm's view:

When CFNR 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. This notification is given as soon as the forwarding attempt is started. No further notification is given.

Forwarded-to user C's view:

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

As an option he may also receive:

1) originally called number B1;

or all accesses associated with that installation.

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

An indication that the CFNR 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 a special indication in the proceed response.

2.2Specific terminology

A served user is a user of particular ISDN 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.

A forwarded-to user is a user to whom the call shall be forwarded.

2.3Qualifications on the applicability to telecommunications services

No restrictions identified.

3.Procedures

3.1Provision/withdrawal

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

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

Subscription options	Value
Served user receives notification that call has been forwarded (see 3.2.2)	- No - Yes, with call offering information
Calling user receives notification his call has been forwarded	- No - Yes, with or without forwarded-to

I.252.3 Call Forwarding No Reply

1. Definition

Call Forwarding No Reply (CFNR) permits a served user to have the network send all incoming calls for the served user's ISDN number which meet no reply, or just those associated with a specific basic service which meet no reply, to another number. The served user's originating service is unaffected.

Note – In normal situations, the CFNR service is provided per access basis. (In these situations, there is a one-to-one relationship between ISDN number and access.) However, the network may recognize multiple numbers on a single interface; in addition, it may not understand a complete ISDN number (e.g., DDI). In these cases, the CFNR service is offered on the basis of the part of the ISDN number which the network can recognize.

2. Description

2.1 General description

For a given ISDN 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. Since subscription is on an ISDN number basis, the same Call Forwarding subscriptions will apply to all terminals using this number.

Two conditions of Call Forwarding No Reply (CFNR) are possible as follows:

1) the call is offered and no indication of a compatible terminal is received; or

2) the call is offered and an indication of a compatible terminal is received.

Only case two is considered herein. Case one is for further study.

Note – In this service description, it is assumed that a single ISDN number is not shared across multiple interfaces. A single ISDN number may, however, be shared by multiple terminals on the same interface. Procedures permitting an ISDN number to be shared across multiple interfaces are for further study. For multiple access installations, it may be possible for the user to specify, on activation, if the service is applicable to a specific access

Note – A notification is only sent to the calling user if the served user subscribes to the supplementary service call forwarding with address notification option. Transfer of the forwarded-to user number will not take place, if number restrictions exist at the forwarded-to user.

FIGURE 1/I.252.2 (cont.)

Call Forwarding Busy

FIGURE 1/I.252.2 (cont.)

Call Forwarding Busy

FIGURE 1/I.252.2 (cont.)

Call Forwarding Busy

FIGURE 1/I.252.2 (cont.)

Call Forwarding Busy

FIGURE 1/I.252.2

Call Forwarding Busy

6.11Line Hunting

In general, Line Hunting takes precedence over CFB. Thus, CFB only occurs if all members of the hunt group are busy.

6.12Three-Party Service

See Three Party Service (I.254.2) interaction with CFB.

6.13User-to-User Signalling

Same as CFU (I.252.4), except that service 2 of UUS cannot be guaranteed prior to completion of the Call Forwarding Busy in case of a user determined busy.

6.14Multiple Subscriber Number

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

6.15Call Hold Service

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

6.16Advice of Charge

See Advice of Charge (I.256.2) interaction with CFB.

7.Dynamic description

The dynamic description given in the following diagrams contain the descriptions of the three forwarding services (CFU, CFB, and CFNR).

6.2Call Transfer

Same as CFU (see I.252.4).

6.3Connected Line Identification Presentation

Same as CFU (see I.252.4).

6.4Connected Line Identification Restriction

Same as CFU.

6.5Calling Line Identification Presentation

Same as CFU (see I.252.4).

6.6Connected Line Identification Restriction

Same as CFU (see I.252.4).

6.7Closed User Group
Same as CFU (see I.252.4).

6.8Conference Calling

Same as CFU (see I.252.4).

6.9Direct Dialling In

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

6.10Diversion services

6.10.1Call Forwarding Busy

Not applicable.

6.10.2Call Forwarding No Reply

The invocation of CFB takes precedence over CFNR.

6.10.3Call Forwarding Unconditional

The invocation of CFU takes precedence over CFB.

the call has been forwarded but not completed (i.e. because of network congestion, invalid number, facility not available, etc.). If the forwarded call cannot be completed and if CFNR has occurred then the call should only be cleared back as far as the CFNR exchange and the calling user will, in the case of a telephony call, continue to receive inband ringing tone.

3.4 Alternate procedures

3.4.1 Activation/deactivation/registration

None identified.

3.4.2 Invocation and operation

None identified.

4. Network capabilities for charging

This Recommendation does not cover charging principles. Future Recommendations in the D-Series are expected to contain that information. It shall be possible to charge the subscriber accurately for the service.

5. Interworking requirements

Same as CFU (see I.252.4).

6. Interaction with other supplementary services

The ways in which Call Forwarding 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 the word "Call Forwarding Unconditional" should be replaced by "Call Forwarding Busy".

6.1 Call Waiting

Calling user: Same as CFU (see I.252.4).

Called user: No interaction. That is if the user is not NDUB, Call Waiting will take place. If the user is NDUB, Call Forwarding Busy will take place.

Forwarded-to user: A forwarded call can invoke Call Waiting.

2) cause for original forwarding;

3) last forwarding number Bx;

4) cause for last forwarding.

(Depending on the use of other supplementary services, the forwarded-to user C may also receive information such as the calling party A number and user-to-user signalling. See the descriptions of interactions with other supplementary services.)

Calling user A's view:

As a subscription option, the served user Bm can request that the calling user receives a notification that the call has been forwarded and as an additional subscription option that notification can include the forwarded to number B(m+1). Transfer of the forwarded-to user number will not take place if number restrictions at the forwarded-to user exist.

3.3 Exceptional procedures

3.3.1 Activation/deactivation/registration

Same as CFU.

3.3.2 Invocation and operation

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

Within an ISDN, or tandem ISDNs, the total number of all forwardings for each call should be limited. The maximum number of such connections should be limited to a value between 3 and 5 for each call. 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 in the following paragraph.

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 CNFR 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

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

When an incoming call is forwarded without being offered to the served user (i.e. NDUB condition) 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.

This notification includes the following information (on the call that has been forwarded):

1) indication that a call has been forwarded;

2) telecommunications service information (e.g. bearer capability, higher layer compatibility);

3) user-to-user information;

4) Bm's number;

5) calling party number A (if CLIP applicable).

If multiple forwardings have occurred and the served user is authorized to receive additional information, he may also receive:

6) originally called number B1;

7) cause for original forwarding;

8) last forwarding number B(m-1);

9) cause for last forwarding.

Forwarded-to user C's view:

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

As an option he may also receive:

1) originally called number B1;

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

Subscription options	Value
Served user receives notification that call has been forwarded (see 3.2.2)	- No - Yes, with call offering information
Calling user receives notification that his call has been forwarded	- No - Yes, with or without forwarded-to user number
Served user receives notification that CFB is currently activated	- No - Yes

3.2 Normal procedures

3.2.1 Activation/deactivation/registration

Same as for CFU.

3.2.2 Invocation and operation

The following illustration clarifies the CFB procedures. Assume that A calls B1, who forwards the call to B2, ..., Bm, ..., Bx. The final receiver of the call is C.

Served user Bm's view:

If 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.

2.2Specific terminology

A served user is a user of a particular ISDN 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.

A forwarded-to user is a user to whom the call shall be forwarded.

2.3Qualifications on the applicability to telecommunications services

No restrictions identified.

3.Procedures

3.1Provision/withdrawal

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

I.252.2 Call Forwarding Busy

1. Definition

Call Forwarding Busy (CFB) permits a served user to have the network send all incoming calls for the served user's ISDN number, or just those associated with a specified basic service, which meet busy at the served user's ISDN number to another number. The served user's originating service is unaffected.

Note - In normal situations, the CFB service is provided per access basis. (In these situations, there is a one-to-one relationship between ISDN number and access.) However, the network may recognize multiple numbers on a single interface; in addition, it may not undertstand a complete ISDN number (e.g., DDI). In these cases, the CFB service is offered on the basis of the part of the ISDN number which the network can recognize.

2. Description

2.1 General description

For a given ISDN 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. Since subscription is on an ISDN number basis, the same Call Forwarding subscriptions will apply to all terminals using this number.

Note - In this service description, it is assumed that a single ISDN number is not shared across multiple interfaces. A single ISDN number may, however, be shared by multiple terminals on the same interface. Procedures permitting an ISDN number to be shared across multiple interfaces are for further study. For multiple access installations, it may be possible for the user to specify, on activation, if the service is applicable to a specific access or all accesses associated with that installation.

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

An indication that CFB 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 a special indication in the proceed response.

FIGURE 3/I.252.1

Handling of busy condition when establishing connections A-->C prior to invoking Explicit Call Transfer

FIGURE 2/I.252.1

Handling of Busy Condition in Normal Call Transfer

FIGURE 1/I.252.1

Call Transfer Service Overall SDL

6.14Multiple Subscriber Number

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

6.15Call Hold

Parties held by users A, B and C, before invoking a transfer process will continue to be held by the parties after the transfer process, for example, if user B places its call to user A on hold during user A's transfer of the call to user C, the resulting call from user B to user C shall remain held by user B until it is retrieved by user B. The only exception to this is for the Explicit Call Transfer procedure when user A transfers user B to user C. In this case, user B will no longer be held by user A after the transfer is completed.

Special case: Assume users A and B were in an active call and user A places user B on hold, and user B places user A on hold, if user A transfers user B to user C by invoking this Explicit Call Transfer procedure, then the transfer shall take effect with the resulting call between users B and C remaining held by user B and the held call between user A to user B shall be discarded (i.e. user B cannot retrieve user A after the transfer).

6.16Advice of Charge

Refer to § 6.2 of I.256.2, Advice of charge.

7.Dynamic description

The dynamic description of this service is shown in Figure 1/ I.252.1.

cated states of Three-Party Service:

Three-Party Service State	Call Transfer: normal	Call Transfer: Single-Step	Call Transfer: Explicit
Active/Held	Yes	NA	YeS
Three-Way Conversion	Yes*	NA	NA

* See Figure 1 of I.254.2 (Three-Party Service service description)

6.13User-to-User Signalling

Prior to transfer: Prior to beginning a transfer user A can employ UUS services 1, 2 and 3 as normal.

During transfer: UUS services 1, 2 and 3 are only allowable between user A and user B and/or between user A and user C. UUI sent by user B will be delivered to user A, not user C. UUI cannot be transferred between users B and C during this time. The delivery of service 3 UUI cannot be guaranteed during transfer.

After completion of transfer: Only if user B and user A both request service(s) 1, 2 and/or 3, is that service(s) available for use between users B and C after the transfer is completed. If user A did not request a given service in the setup to user C, user B will be informed that he can no longer employ that service on this call. If user A requested a particular service in the setup to user C but the service was not requested by user B in the initial setup message to user A, user C will be informed at the completion of the transfer that he can no longer employ the service.

Note - The procedures to be followed if transfer of charge is permitted are for further study.

Note - The procedures to be followed if the number of allowable messages has been reached by any party are for further study.

described below.

The count for the number of forwarding "hops" should be cleared each time a call transfer occurs.

Assume that a user A has an established call with a user B and wishes to transfer this call with user B to a user C.

6.10.1 Call Forwarding Busy (CFB)

User C may be busy on another call when user A's call is received, and has subscribed to CFB. The call from user A would then be routed to another user D. For Normal and Explicit Call Transfers, user A would, in general, be aware of the forwarding and could make a decision as to whether or not the transfer of user B should be completed to the forwarded-to user D. For Single- Step Call transfer, user B would be connected to the forwarded-to user D.

6.10.2 Call Forwarding No Reply (CFNR)

User C, who has subscribed to CFNR, may have a free access but does not answer user A's call. Upon expiration of the CFNR timer, user A's call would be routed to another user D. For Normal and Explicit call transfers, user A would, in general, be aware of the forwarding and could make a decision as to whether or not the transfer of user B should be completed to the forwarded-to user D. For Single-Step Call Transfer, user B would be connected to the forwarded-to user D.

6.10.3 Call Forwarding Unconditional (CFU)

If user C has subscribed to CFU, then user A's call will be routed to another user D. For Normal and Explicit Call Transfers, user A would, in general, be aware of the forwarding and could make a decision as to whether or not the transfer of user B should be completed to the forwarded-to user D. For Single-Step CallTransfer, user B would be connected to the forwarded-to user D.

6.11 Line Hunting

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

6.12 Three-Party Service

The following forms of call transfer are applicable to the indi-

6.7 Closed User Group (CUG)

The intention of CUG is to allow some connections and prohibit others; call transfer must not compromise this intention.

Assume that a user A has an established call with user B and wishes to transfer this call with user B to a user C. When considering CUG requirements and restrictions, the transfer process (all three procedures) should be considered as three separate call processings:

1) when users A and B established their original connection, if user A and/or user B was a member of a CUG, then CUG requirements must have been met before the two parties were connected;

2) when user A invokes a transfer procedure, both user A and user C must meet CUG requirements before the call can be completed if either user A or user C is a member of a CUG;

3) finally, the transfer connection of user B to user C must first meet all CUG requirements (if either user B and/or user C is a member of a CUG) before the two parties can establish communications.

The above requirements insure that CUG security is not violated. They prevent, for example, a user A who meets CUG requirements with user C from transferring a user B who does not meet CUG requirements with user C.

6.8 Conference Calling

See text in section 6 of the Conference Calling Service description.

6.9 Direct Dialling In

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

6.10 Diversion services (Call Forwarding Busy, Call Forwarding No Reply, and Call Forwarding Unconditional)

In general, if the served user attempts to establish a call to a party that is forwarding calls, the forwarded-to party will be alerted and may be transferred to. Specific procedures are

6.4 Connected Line Identification Restriction (COLR)

Assume that a user A has an established call with a user B and wishes to transfer this call with user B to a user C.

If user C has subscribed to COLR then user A shall not receive user C's number when user A invokes any Call Transfer procedure and user B shall not receive user C's number during the transfer of user B to user C.

6.5 Calling Line Identification Presentation (CLIP)

For Normal and Explicit Call Transfers user A shall have his number presented to user C and user B shall have his number presented to user C unless:

1) User A or B has a number presentation restrictions; or

2) the call transfer process requires interworking with a non-ISDN network.

For Single-Step Call Transfer, if user C has subscribed to CLIP he shall receive the number of user B unless:

1) User B has address presentation restrictions; or

2) the call transfer process requires interworking with a non-ISDN network.

User C may also receive user A's address as a "redirecting party" unless:

1) User A has address presentation restrictions; or

2) the call transfer process requires interworking with a non-ISDN network.

6.6 Calling Line Identification Restriction (CLIR)

Assume that a user A has an established call with a user B and wishes to transfer this call with user B to a user C.

If user A has subscribed to CLIR, then user C shall not receive a calling number when user A invokes any Call Transfer procedure. If user B has subscribed to CLIR, then user C shall not receive a calling number during the transfer of user B to user C.

call from user D arrives before the call from user A, the call from user A will receive call waiting treatment.

iii) User A is invoking Explicit Call Transfer

- The interaction for users A, B, or C with call waiting are the same as for i) above.

6.2 Call Transfer

It shall be possible for both users (user A and user B) in a normal call, who have each subscribed to the Call Transfer Service, to simultaneously transfer the call. That is, if user A and user B are active in an established call, user A could transfer the call to a user C and user B could transfer the call to a user D). Call progress signals and other notifications will be delivered to the appropriate party at the time the signal is received.

6.3 Connected Line Identification Presentation (COLP)

Assume that user A has an established call with user B and wishes to transfer this call with user B to user C, except in the case where user C prohibits the presentation of his/her number, user C's number shall be presented:

- to user B upon the successful completion of the transfer to user C (independent of the type of transfer procedure invoked by user A) provided that user B has subscribed to COLP;

- to user A when user A is using the Normal or Explicit Call Transfer procedures and has subscribed to COLP. The reached party's number will not be presented to user A if user A invokes the Single-Step Call Transfer procedure.

Note - that number presentation may not be possible if interworking with a non-ISDN network is involved in the call transfer.

then user A shall receive a call waiting indication. When user B is transferred to user C, a B-channel would normally become idle, enabling user A to accept the waiting call.

-If user D calls user B, then user B can use normal call waiting procedures to accept the waiting call (preferably once the transfer to user C is completed). If user B had a call waiting indication while the call was established with user A, the call waiting indication shall not be affected by the transfer of user B to user C.

-If user D calls user C during the transfer process (i.e. while user C is engaged on an active call with user A), the call waiting indication shall be presented to user C. User C could then use Normal Call Waiting procedures to accept the waiting call (preferably once the call transfer is completed).

ii) User A is invoking Single-Step Call Transfer

- User A may receive a call waiting indication any time before or during the transfer invocation. Once the Single-Step Call Transfer is invoked, then user A is disconnected from user B, thus, causing a B-channel to normally become idle, enabling user A to accept the waiting call.

- User B may receive a call waiting indication any time before or during the transfer invocation. User B could then use Normal Call Waiting procedures to accept the waiting call (preferably once the transfer is completed). If the transfer is not successful (e.g. user C is busy), then user B would normally release the call, causing a B-channel to become idle and enabling user B to accept the waiting call.

- If the call from user D arrives at user C's serving office afterthe call from A, user C would receive a call waiting indication. The call waiting indication shall not be affected by the transfer of user B to user C. User C could then use Normal Call Waiting procedures to accept the waiting call (preferably once the transfer is completed). If the

Address information available to	Address of A	Address of B	Address of C
User A	-	No	Yes
User B	Yes	-	No
User C	Yes	No	-

iv) A is in ISDN. B and C are in another network

Address information available to	Address of A	Address of B	Address of C
User A	-	No	Yes
User B	Yes	-	No
User C	No	No	-

6.Interaction with other supplementary services

6.1Call Waiting

Assume served user A has an established call with user B and wishes to transfer user B to user C, and users A, B and C all have subscribed to the Call Waiting Service. If a call from user D is received while:

i) User A is invoking Normal Call Transfer

- If user D calls user A at any time before A requests the completion of the transfer of user B to user C,

different scenarios are shown in the following tables. The tables assume that B is the originator of the call to A. The network may not be able to identify ..... identification if one or both of the calls requires interworking with non-ISDN network(s).

For illustrative purposes, assume that user B originates a call to user A, ... the call transfer service to connect user B to user C. The different scenarios are shown in the following tables:

i) A, B, and C are in ISDN

Address information available to	Address of A	Address of B	Address of C
User A	-	Yes	Yes
User B	Yes	-	Yes
User C	Yes	Yes	-

ii) A and B are in ISDN. C is in another network

Address information available to	Address of A	Address of B	Address of C
User A	-	Yes	Yes
User B	Yes	-	Yes
User C	No	No	-

iii) A and C are in ISDN. B is in another network

lishing a call to user C. When invoking a Single-Step Call Transfer, the served user would indicate to the service provider the address of user C. The service provider would then establish a connection between users B and C, and disconnect the served user, user A, from the original call with user B. It should be noted that the service provider is not required to reinstate the call A<->B if a Single-Step Call Transfer to user C fails. It is also necessary to notify user B of the progress of the establishment of the call to user C, particularly if the call A<->B cannot be reinstated.

3.4.2.2Explicit Call Transfer

In this procedure, the served user A puts the already established call (with user B) on hold and then proceeds to establish another call (to user C) or to accept an incoming call (from user C). If user A's attempt to establish a connection to user C is unsuccessful (e.g. user C is busy), user A will be so informed and will be able to either:

a) retrieve the original call A<->B; or

b) attempt a new connection (e.g. to C or to another party) (see Figure 3/I.252.1).

User A then explicitly requests that the call with user B be transferred to user C. (By contrast, in the Normal Call Transfer procedure the service provider "knows" that the two calls [A<->B and A->C] are related; requesting completion of Normal Call Transfer for call A->C implicitly means "connect user C with user B".) The remainder of the procedures are identical to "Normal" Call Transfer (with the possible exception of the failure procedures.)

4.Network capabilities for charging

This Recommendation does not cover charging principles. Future Recommendations in the D-Series are expected to contain that information. It shall be possible to charge the subscriber accurately for the service.

5.Interworking considerations

(Not discussed.)

User B and user C may not be able to receive each other's address if one (or both) of the calls exits from the ISDN network. The

user C.

The service provider will optionally notify users B and C of the transfer and, depending on interworking conditions and the supplementary services subscribed to by users B and C, will indicate to user B the number of user C and will indicate to user C the number of user B.

3.3 Exceptional procedures

3.3.1 Activation/deactivation/registration

None identified.

3.3.2 Invocation and operation

The service request would be rejected if the user invoking the service has not subscribed to the Call Transfer service (or the requested service option). The user would be notified of the cause for rejection and the original call A<->B would remain in the state it was in before the transfer request was received.

If user A's attempt to establish a connection to user C is unsuccessful, (e.g. user C is busy), user A will be so informed and will be able to either: a) retrieve the original call A<->B; or b) attempt a new connection (e.g. to C or to another party); See Figure 2/I.252.1.

The transfer request would be rejected if the network is unsuccessful in connecting users B and C (e.g. when user C is busy, when there is network congestion, or when transfer restrictions are violated). The user would be notified of the cause for rejection and the two calls would remain in the states they were in before the request was received.

3.4 Alternate procedures

3.4.1 Activation/deactivation/registration

None identified.

3.4.2 Invocation and operation

3.4.2.1 Single-Step Call Transfer

In this procedure, the served user can transfer an established call (with user B) to another user (user C) without first estab-

This supplementary service is considered meaningful when applied to the Telephony teleservice and the speech and 3.1 kHz audio bearer service. Furthermore, it may also be meaningful when applied to other services.

3. Procedures

3.1 Provision/withdrawal

The Call Transfer supplementary service is subscribed to by prior arrangements with the service provider. Subscription can be made for "Normal Call Transfer" and/or for either of the alternate procedures (i.e. "Single-Step Call Transfer" or "Explicit Call Transfer") offered by the service provider.

Withdrawal of the service is made by the service provider upon request by the subscriber or for service provider reasons.

3.2 Normal procedures

3.2.1 Activation/deactivation/registration

None identified.

3.2.2 Invocation and operation

The served user, user A, can transform an established call with user B into (effectively) a call from user B to a third party, user C. When the served user (user A) asks the service provider to begin the "Normal" Call Transfer, the service provider puts the already established call (with user B) on hold. User A then proceeds to establish the second call (to user C). Upon request from user A to complete the Call Transfer, the service provider would connect users B and C together while removing the connections between user A and the other two users. (The extent to which the service provider reuses the resources from the A<->B and A->C calls to form the B->C call is a service provider option.)

Note - In the resulting call B->C, user C will have all the relevant characteristics of the called party, but user B will not necessarily have all the characteristics of the calling party, depending on whether or not user B called user A and also depending on which service or supplementary service is under consideration.

In some networks, user A can request completion of the Call Transfer either during or after the establishment of the connection to

I.252.1 Call Transfer

1. Definition

The Call Transfer supplementary service enables a user to transfer an established (i.e. active) call to a third party. For the original call, the served user may have been either the calling or called party (i.e. it may have been either an incoming or outgoing call). This service differs from the call diversion supplementary services in that the Call Diversion services deal only with incoming calls that have not yet reached the "fully-established" state, whereas in the case of Call Transfer an established end-to-end connection exists.

2. Description

2.1 General description

Three methods of Call Transfer are identified in this document. One way, called "Normal" Call Transfer, is described in § 3.2, Normal Procedures. Two other ways are described below in § 3.4, Alternate Procedures. Although the invocation of these various methods differ, the essential operation of call transfer is to transform the served user's established call into a new call between the other party on the established call and a third party. It should be noted that there are several stages in a Three-Party Service call where the served user can effectively transfer the call. These are described in the Three-Party Service description.

2.2 Specific terminology

2.2.1 Served user, other parties

During the invocation and active phases, the service is under the control of the "served user", i.e. the one for whom the service was subscribed. This user is also referred to as "user A". Other parties associated with this service are defined as follows:

- User B is the other party in the original call (A<->B);

- User C is the "third party" - the other party in the subsequent call (A->C).

2.3 Qualifications on the applicability to telecommunication services

Recommendation I.252 – Call offering supplementary services

The purpose of this Recommendation is to provide the stage 1 description of the method defined in Recommendation I.130 using the means given in Recommendation I.210.

Supplementary services are described by a prose definition and description (step 1.1) and by a dynamic description (step 1.3). The application of the attribute technique, as defined in Recommendation I.140, for supplementary services is for further study.

This Recommendation describes the following call offering supplementary services:

I.252.1Call Transfer (CT)

I.252.2Call Forwarding Busy (CFB)

I.252.3Call Forwarding No Reply (CFNR)

I.252.4Call Forwarding Unconditional (CFU)

I.252.5Call Deflection (CD) (Note 1)

I.252.6Line Hunting (LH)

Note 1 – This service being identified needs to be further studied and the description is not yet included.