

3GPP TSG_CN#7
ETSI SMG3 Plenary Meeting #7,
Madrid, Spain
13th – 15th March 2000

NP-000112

Agenda item: 5.4.3
Source: TSG_N SS ad hoc
Title: CRs to 3G Work Item CAMEL phase 2

Introduction:

This document contains “1” CRs on **CAMEL phase 2**, that have been agreed by **TSG_N SS ad hoc**, and are forwarded to **TSG_N Plenary** meeting #7 for approval.

Tdoc	Spec	CR	Rev	Cat	Rel	Old ver	New ver	Subject
NS-000009	23.082	005		A		3.1.0	3.2.0	Inclusion of TIF-CSI

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

23.082 CR 005

Current Version: **3.1.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **CN#7**
list expected approval meeting # here ↑

for approval
for information

strategic
non-strategic (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: <ftp://ftp.3gpp.org/Information/CR-Form-v2.doc>

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: SS ad hoc **Date:** 10/02/2000

Subject: Inclusion of TIF-CSI

Work item: CAMEL Phase 2

Category: (only one category shall be marked with an X)	F Correction	<input type="checkbox"/>	Release:	Phase 2	<input type="checkbox"/>
	A Corresponds to a correction in an earlier release	<input checked="" type="checkbox"/>		Release 96	<input type="checkbox"/>
	B Addition of feature	<input type="checkbox"/>		Release 97	<input type="checkbox"/>
	C Functional modification of feature	<input type="checkbox"/>		Release 98	<input type="checkbox"/>
	D Editorial modification	<input type="checkbox"/>		Release 99	<input checked="" type="checkbox"/>
			Release 00	<input type="checkbox"/>	

Reason for change: CR 02.82-004r7 was agreed at SMG#29 and incorporated into GSM 03.82 v7.0.0. However, the changes are not contained in 3G TS 23.082 v3.1.0. This is the equivalent Release 99 change request.

Clauses affected:

Other specs affected:	Other 3G core specifications	<input type="checkbox"/>	→ List of CRs:	CR 02.82-004r7
	Other GSM core specifications	<input checked="" type="checkbox"/>	→ List of CRs:	
	MS test specifications	<input type="checkbox"/>	→ List of CRs:	
	BSS test specifications	<input type="checkbox"/>	→ List of CRs:	
	O&M specifications	<input type="checkbox"/>	→ List of CRs:	

Other comments:



help.doc

<----- Double-click here for help and instructions on how to create a CR.

*****First Modified Section*****

0.1 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.
- A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

- [1] GSM 01.04: "Digital cellular telecommunications system (Phase 2+); Abbreviations and acronyms".
- [2] GSM 02.04: "Digital cellular telecommunications system (Phase 2+); General on supplementary services".
- [3] 3G TS 22.078: "Customised Applications for Mobile network Enhanced Logic (CAMEL); Service description, Stage 1".
- ~~[43]~~ GSM 02.82: "Digital cellular telecommunications system (Phase 2+); Call Forwarding (CF) Supplementary Services - Stage 1".
- ~~[53]~~ GSM 03.11: "Digital cellular telecommunications system (Phase 2+); Technical realization of supplementary services".
- ~~[64]~~ GSM 03.15: "Digital cellular telecommunications system (Phase 2+); Technical realization of operator determined barring".
- [7] 3G TS 23.078: "Customised Applications for Mobile network Enhanced Logic (CAMEL) Phase 3 – Stage 2".

*****Next Modified Section*****

0.3 The forwarded-to number

As indicated in ~~GSM 02.82~~ 3G TS 22.082 the forwarded-to numbers are stored in the international format.

If according to 3G TS 22.082 the served subscriber is provided with a Translation Information Flag (TIF-CSI) then the HPLMN shall treat the forwarded-to number transparently at the time of registration, i.e. not perform any checks or translations. In this case the forwarded-to number shall be stored in the format as it was received from the MS.

Therefore, ~~The~~ if transferred, the forwarded-to number is transferred from the HLR to other network entities and stored ~~age~~ in the VLR ~~shall always also be~~ in the ~~international~~ format as stored in the HLR.

*****Next Modified Section*****

1.1.1 Registration

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The forwarded-to number

If the forwarded-to number is a number in the HPLMN country, it may be entered by the served mobile subscriber in three different formats, independent of his actual location, according to the schemes:

- 1) national (significant) number;
- 2) (trunk) prefix plus national (significant) number;
- 3) international prefix, country code, national (significant) number.

The received number may have to be converted to an international number before further processing ~~(see figure 1.2)~~.

The network may also validate the forwarded-to number before accepting the call forwarding registration request.

If a served mobile subscriber is provided with the Translation Information Flag (TIF-CSI) as part of the CAMEL subscriber data (refer to 3G TS 23.078), the network shall accept and store the forwarded-to number transparently at the time of registration. In this case the network shall neither convert nor validate the received number. Therefore the forwarded-to number may not comply with the schemes indicated above.

For further details related to the handling of the forwarded-to number refer to figure 1.2.

Supplementary Service interaction

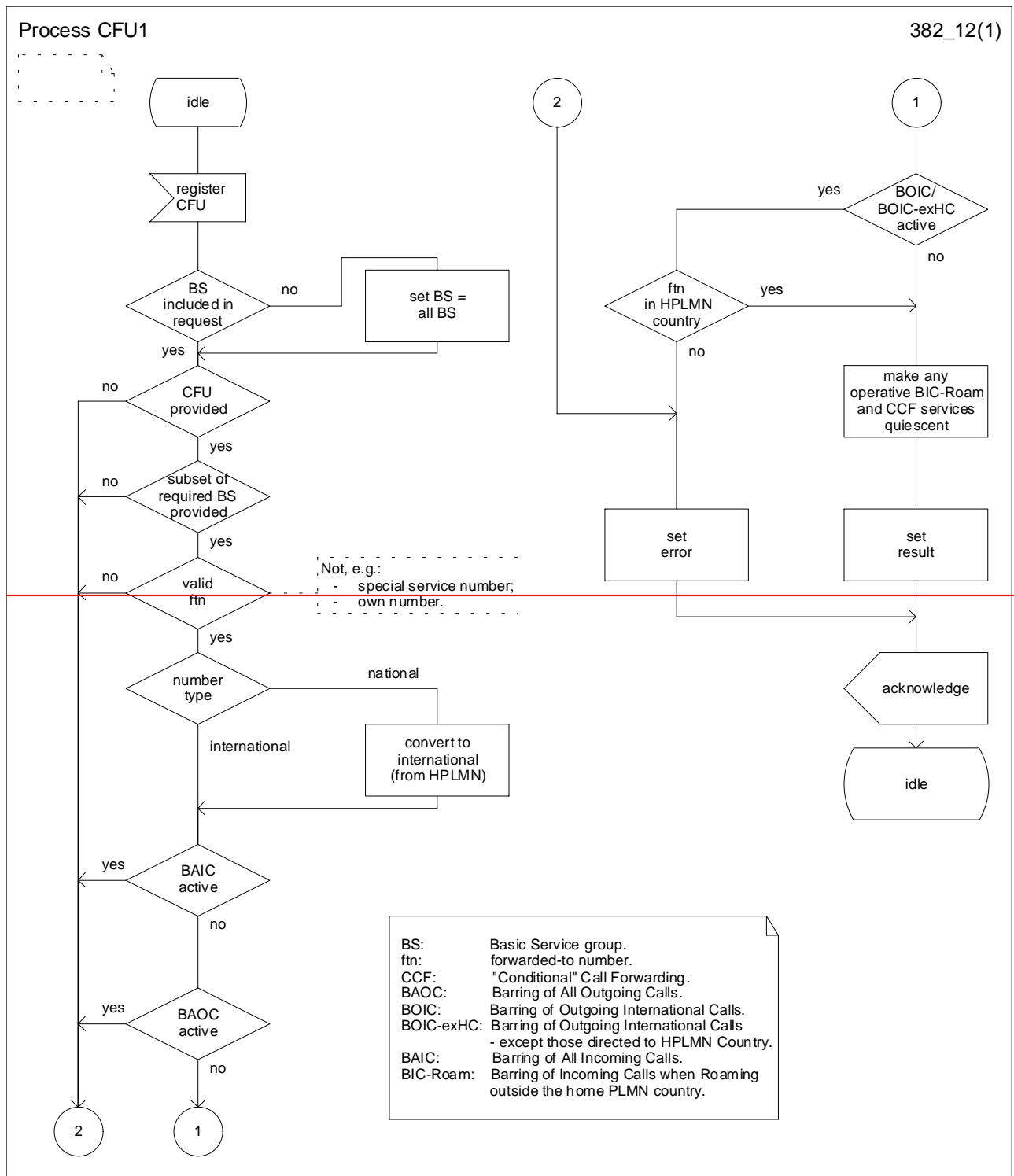
Possible interaction situations between CFU and other call forwarding and barring supplementary services must then be checked. This is described in figure 1.2. Also see technical specifications GSM 02.04 and 02.82. For interaction between CFU and other supplementary services (ie not call barring or call forwarding services), the reader is referred to the respective technical specification for those supplementary services.

Interaction with CAMEL Phase 2 or higher

Possible interaction between CFU and CAMEL Phase 2 or higher is described in figure 1.2. If CAMEL Phase 2 or higher is not supported in the HLR, processing continues from the "No" exit of the test "Result=Pass".

Notifications to the subscriber

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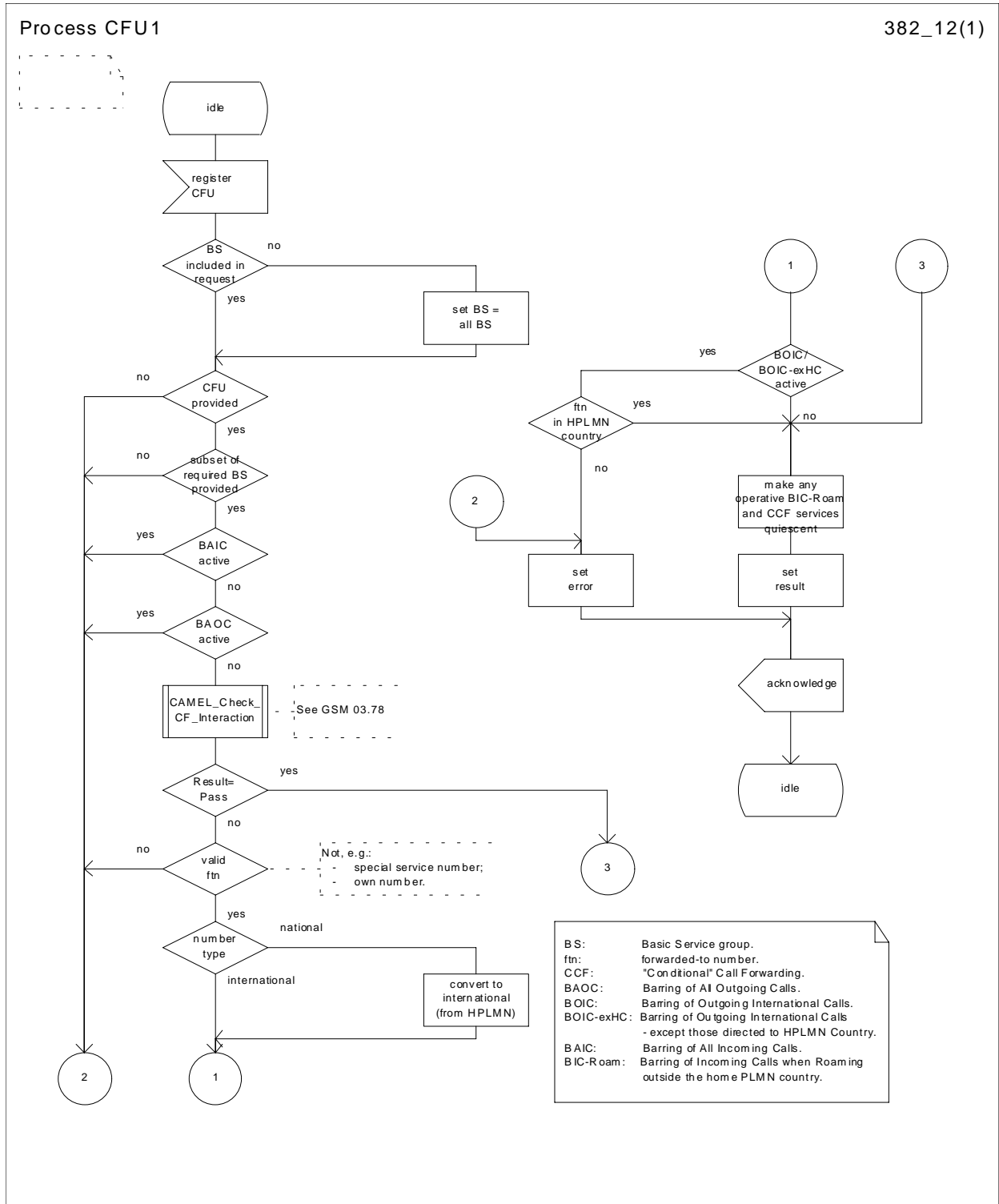


Figure 1.2: CFU1 -Call forwarding unconditional registration process

*****New Section*******1.8.5 GMSC does not support CAMEL or supports CAMEL Phase 1 only**

If the activation state of CFU is "Active and Operative" and if the forwarded-to number is registered in a format other than international and if the GMSC does not support CAMEL or supports CAMEL Phase 1 only, then when a request for routing information for a mobile terminated call is received in the HLR, CFU shall not be invoked, i.e. the mobile terminated call establishment will be continued towards the served mobile subscriber.

*****Next Modified Section*******2.1.1 Registration**

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Supplementary Service Interaction

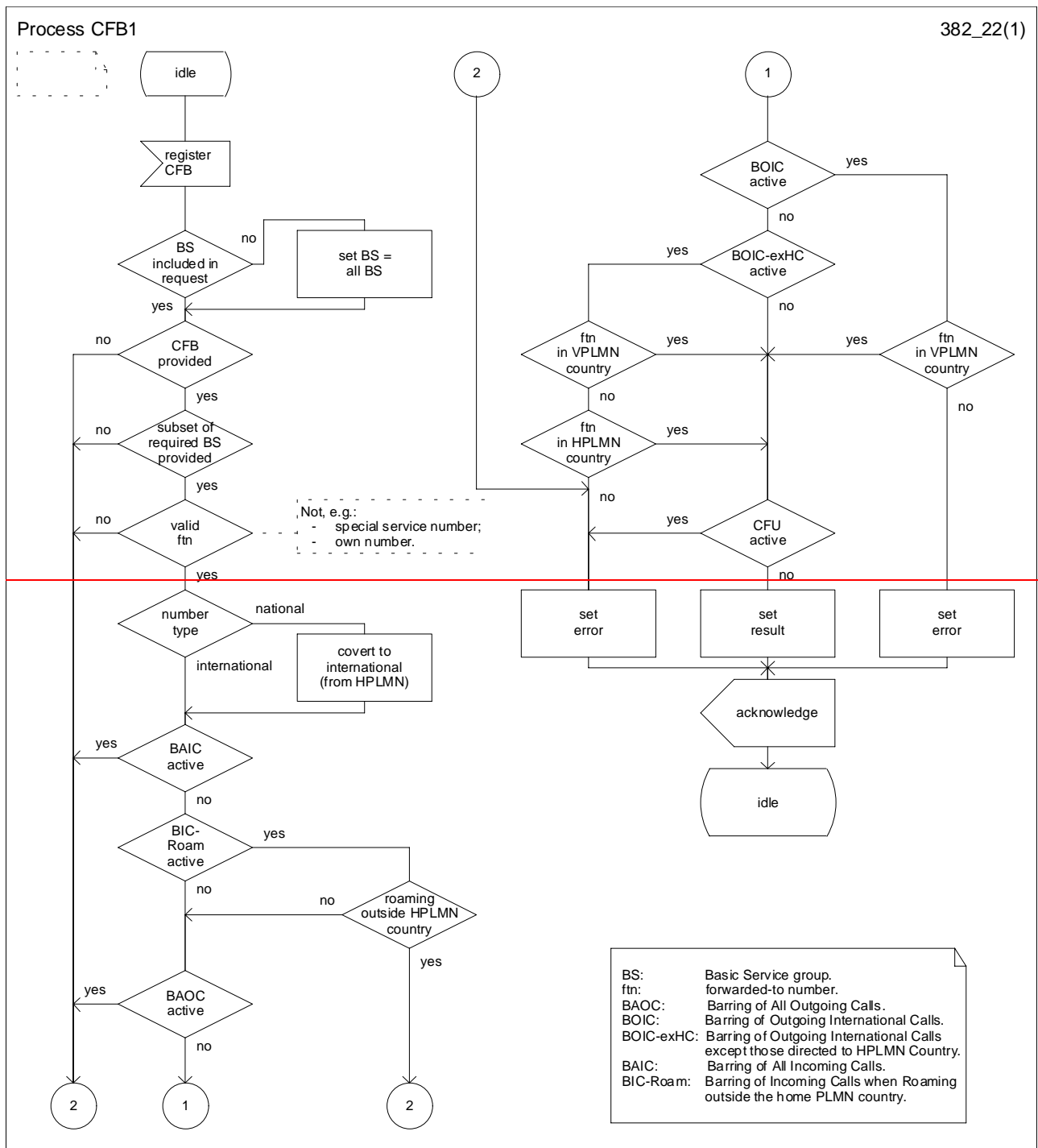
Possible interaction situations between CFB and other supplementary services must then be checked. This is described in figure 2.2. Also see GSM 02.04 and 02.82. For interaction between CFB and other supplementary services (ie not call barring or call forwarding services), the reader is referred to the respective technical specification for those supplementary services.

Interaction with CAMEL Phase 2 or higher

Possible interaction between CFB and CAMEL Phase 2 or higher is described in figure 2.2. If CAMEL Phase 2 or higher is not supported in the HLR, processing continues from the "No" exit of the test "Result=Pass".

The information flow for registration of CFB is shown in figure 2.1.

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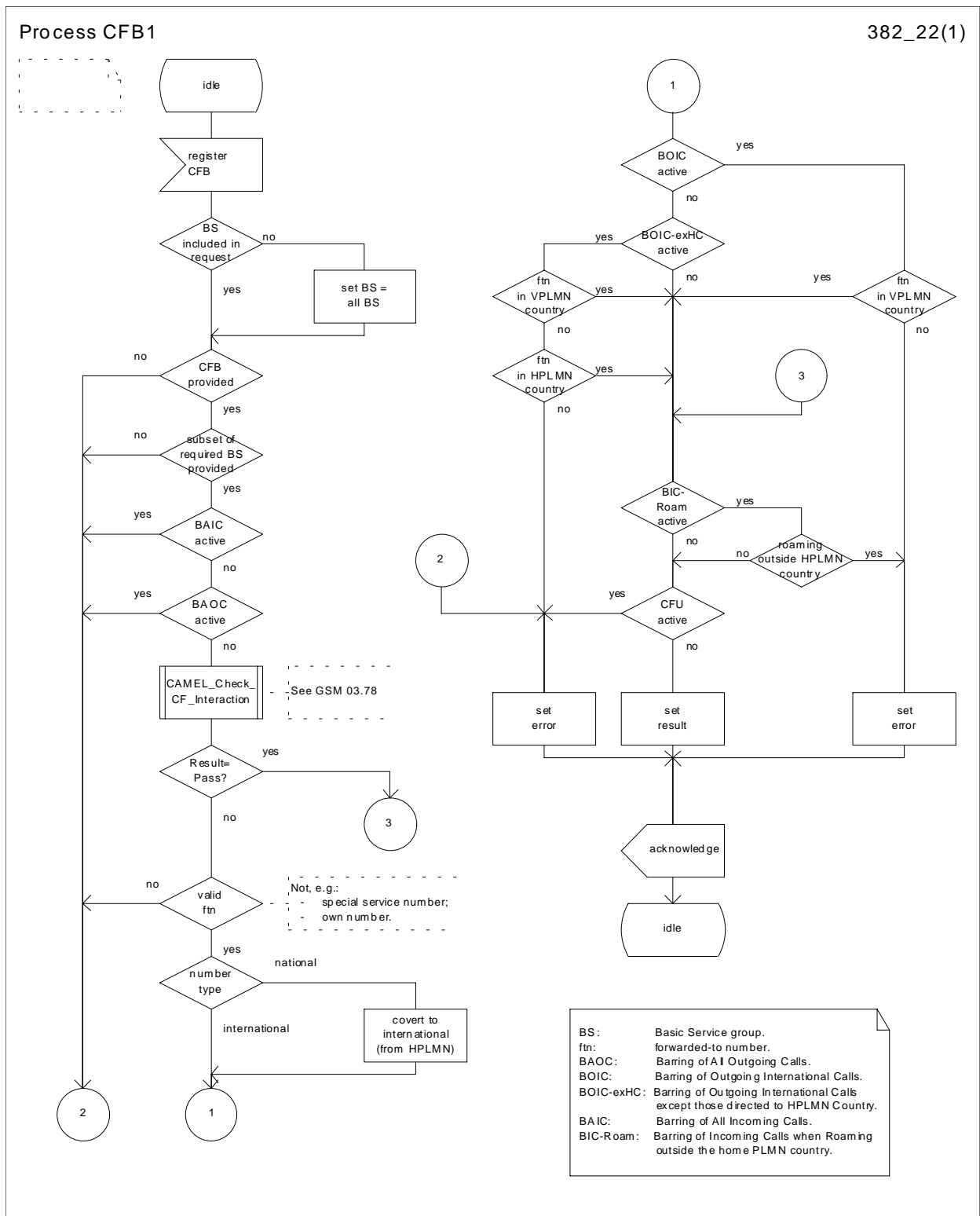


Figure 2.2: CFB1 Call forwarding on mobile subscriber busy registration process

*****New Modified Section*****

2.8.5 VLR does not support CAMEL or supports CAMEL Phase 1 only

When passing CFB information to a VLR not supporting CAMEL or supporting CAMEL Phase 1 only, the HLR shall send the registration parameter "forwarded-to number" only if it is registered in a format which the VLR can accept, i.e. international format.

If the registration state for CFB is "Registered" and the forwarded-to number is registered in a format other than international, then when updating a VLR not supporting CAMEL or supporting CAMEL Phase 1 only the HLR shall modify the service state information of CFB as follows.

- 1) (Provisioned, Registered, Not Active, Not Induced)
=> (Provisioned, Not Registered, Not Active, Not Induced)
- 2) (Provisioned, Registered, Active and Operative, Not Induced)
=> (Provisioned, Not Registered, Not Active, Not Induced)
- 3) (Provisioned, Registered, Active and Quiescent, Not Induced)
=> (Provisioned, Not Registered, Not Active, Not Induced)

According to the definitions in section 2.5 no forwarded-to number will be passed to the VLR in these cases. The modification of the service state information sent to the VLR shall have no impact on the service state information stored in the HLR.

If the VLR supports Phase 1 updating of subscriber information only, a further translation of the service state information as defined in section 2.8.3 shall be performed by the HLR.

*****Next Modified Section*****

3.1.1 Registration

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Supplementary Service Interaction

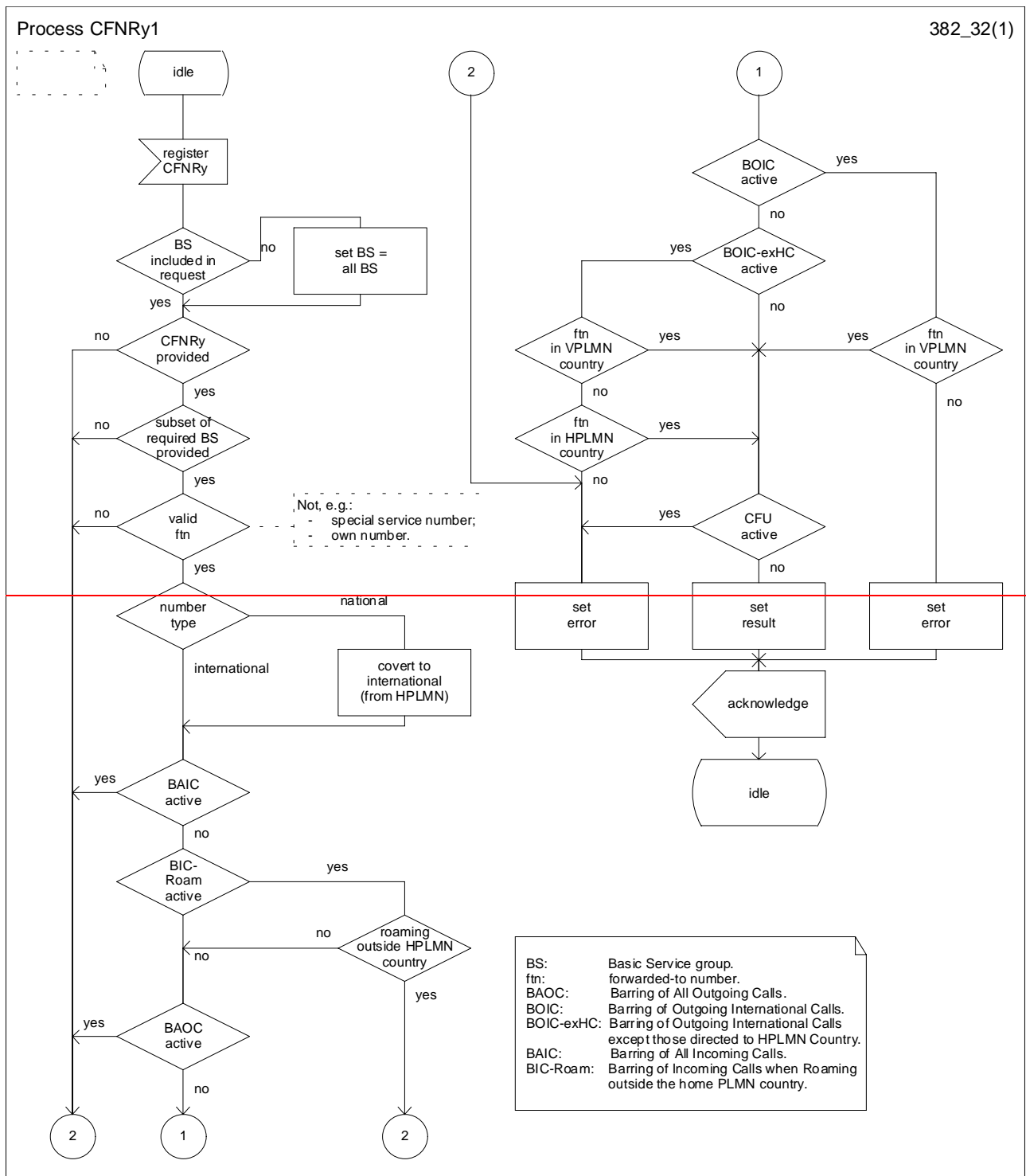
Possible interaction situations between CFNRy and other supplementary services must then be checked. This is described in figure 3.2. Also see GSM 02.04 and 02.82. For interaction between CFNRy and other supplementary services (ie not call barring or call forwarding services), the reader is referred to the respective technical specification for those supplementary services.

Interaction with CAMEL Phase 2 or higher

Possible interaction between CFNRy and CAMEL Phase 2 or higher is described in figure 3.2. If CAMEL Phase 2 or higher is not supported in the HLR, processing continues from the "No" exit of the test "Result=Pass".

The information flow for registration of call forwarding on no reply is shown in figure 3.1.

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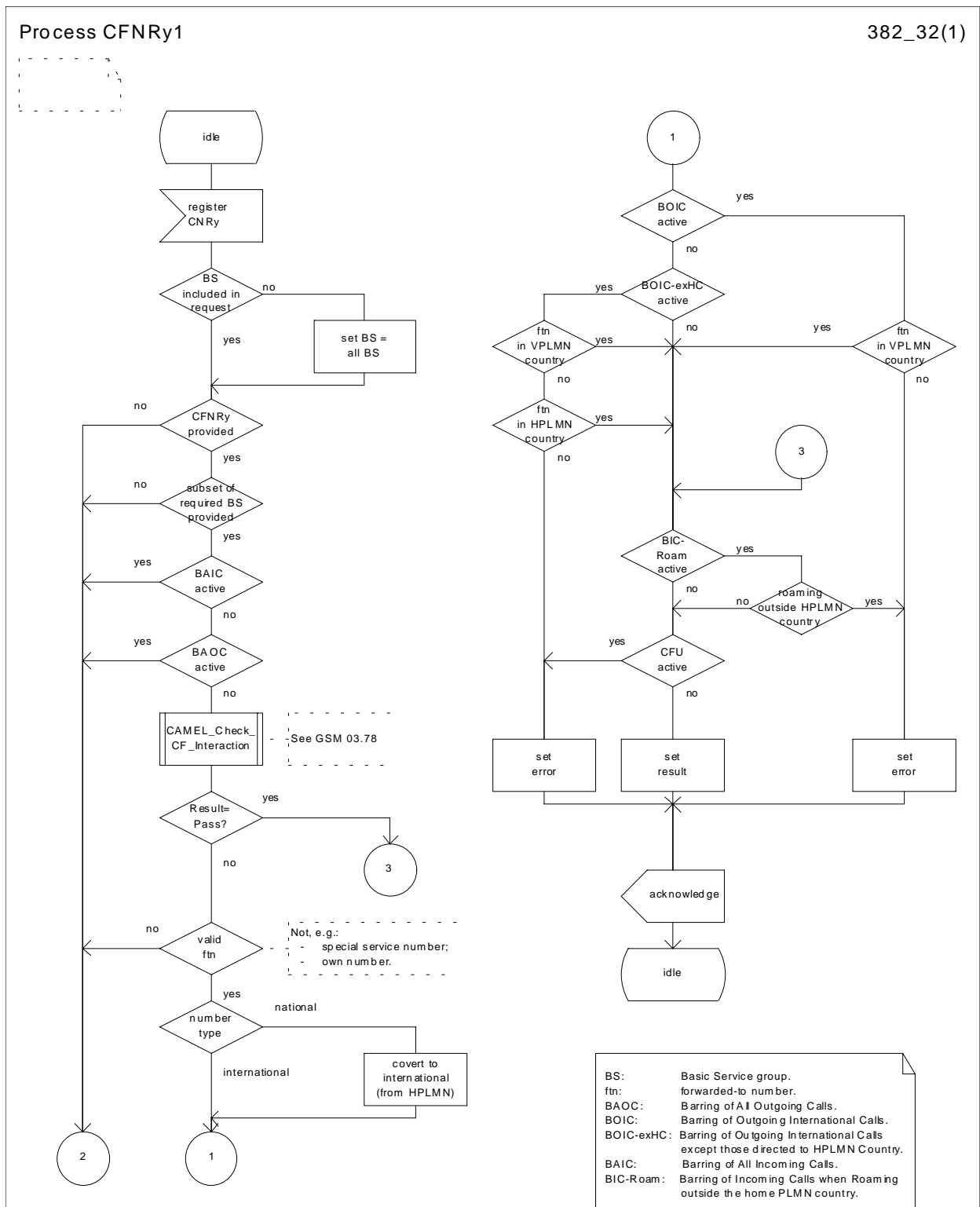


Figure 3.2: CFNRy1 -Call forwarding on no reply registration process

*****New Section*****

3.8.5 VLR does not support CAMEL or supports CAMEL Phase 1 only

When passing CFNRy information to a VLR not supporting CAMEL or supporting CAMEL Phase 1 only, the HLR shall send the registration parameter "forwarded-to number" only if it is registered in a format which the VLR can accept, i.e. international format.

If the registration state for CFNRy is "Registered" and the forwarded-to number is registered in a format other than international, then when updating a VLR not supporting CAMEL or supporting CAMEL Phase 1 only the HLR shall modify the service state information of CFNRy as follows.

- 1) (Provisioned, Registered, Not Active, Not Induced)
=> (Provisioned, Not Registered, Not Active, Not Induced)
- 2) (Provisioned, Registered, Active and Operative, Not Induced)
=> (Provisioned, Not Registered, Not Active, Not Induced)
- 3) (Provisioned, Registered, Active and Quiescent, Not Induced)
=> (Provisioned, Not Registered, Not Active, Not Induced)

According to the definitions in section 3.5 no forwarded-to number will be passed to the VLR in these cases. The modification of the service state information sent to the VLR shall have no impact on the service state information stored in the HLR.

If the VLR supports Phase 1 updating of subscriber information only, a further translation of the service state information as defined in section 3.8.3 shall be performed by the HLR.

*****Next Modified Section*****

4.1.1 Registration

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Supplementary Service Interaction

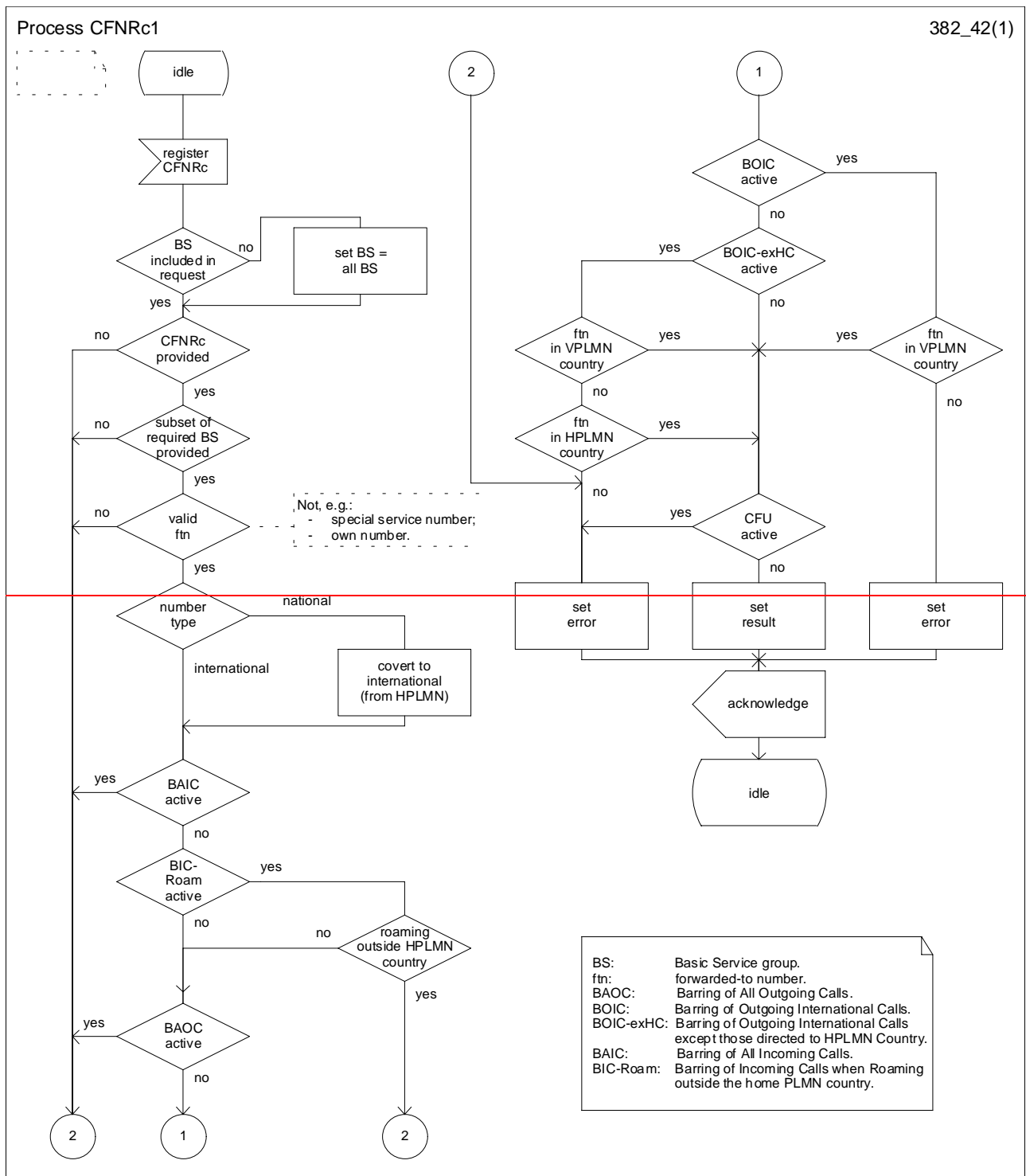
Possible interaction situations between CFNRc and other supplementary services must then be checked. This is described in figure 4.2. Also see GSM 02.04 and 02.82. For interaction between CFNRc and other supplementary services (ie not call barring or call forwarding services), the reader is referred to the respective technical specification for those supplementary services.

Interaction with CAMEL Phase 2 or higher

Possible interaction between CFNRc and CAMEL Phase 2 or higher is described in figure 4.2. If CAMEL Phase 2 or higher is not supported in the HLR, processing continues from the "No" exit of the test "Result=Pass".

The information flow for registration of call forwarding on mobile subscriber not reachable is shown in figure 4.1.

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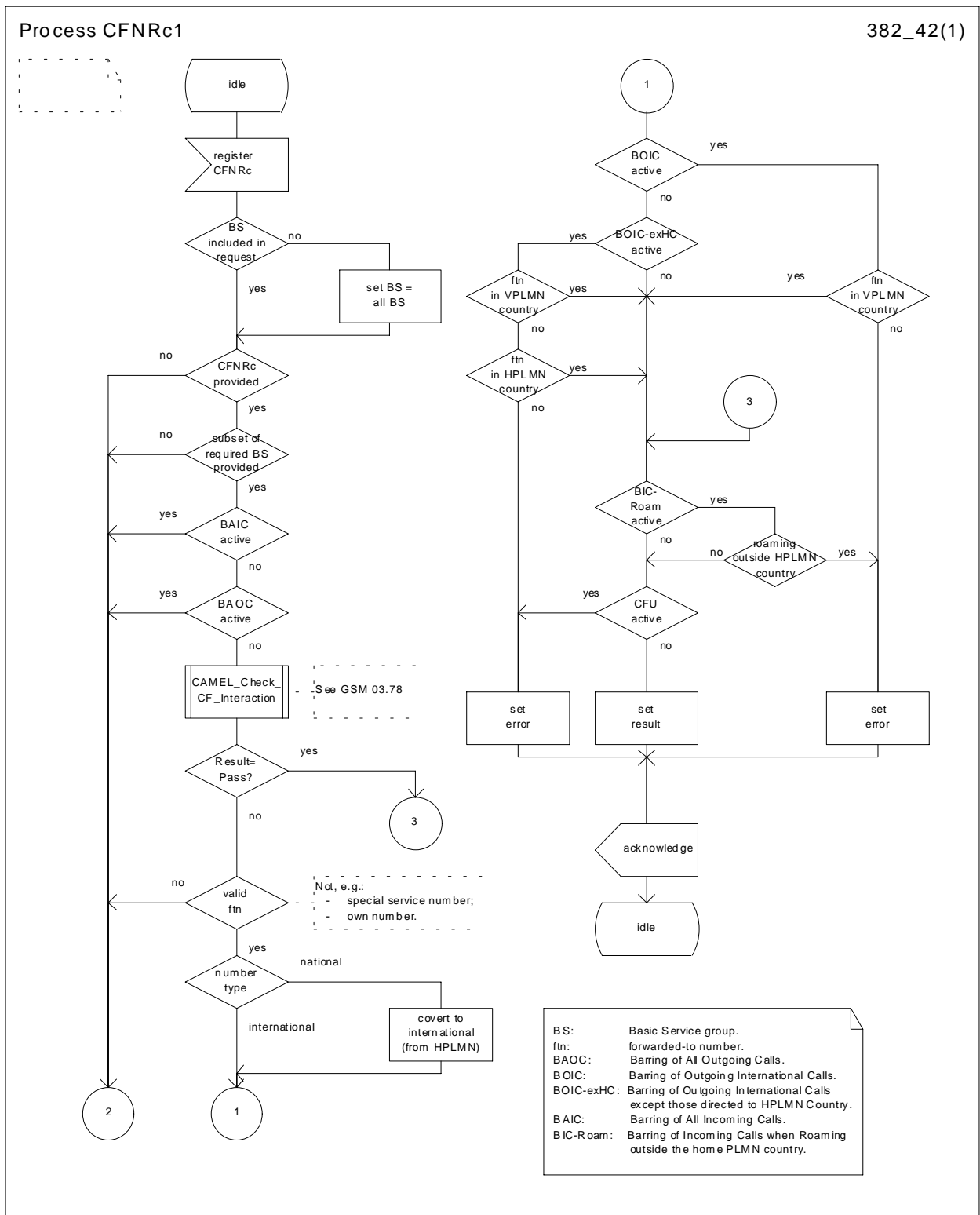


Figure 4.2: CFNRc1 Call forwarding on mobile subscriber not reachable registration process

*****New Modified Section*******4.8.6 VLR does not support CAMEL or supports CAMEL Phase 1 only**

When passing CFNRc information to a VLR not supporting CAMEL or supporting CAMEL Phase 1 only, the HLR shall send the registration parameter "forwarded-to number" only if it is registered in a format which the VLR can accept, i.e. international format.

If the registration state for CFNRc is "Registered" and the forwarded-to number is registered in a format other than international, then when updating a VLR not supporting CAMEL or supporting CAMEL Phase 1 only the HLR shall modify the service state information of CFNRc as follows.

- 1) (Provisioned, Registered, Not Active, Not Induced)
=> (Provisioned, Not Registered, Not Active, Not Induced)
- 2) (Provisioned, Registered, Active and Operative, Not Induced)
=> (Provisioned, Not Registered, Not Active, Not Induced)
- 3) (Provisioned, Registered, Active and Quiescent, Not Induced)
=> (Provisioned, Not Registered, Not Active, Not Induced)

According to the definitions in section 4.5 no forwarded-to number will be passed to the VLR in these cases. The modification of the service state information sent to the VLR shall have no impact on the service state information stored in the HLR.

If the VLR supports Phase 1 updating of subscriber information only, a further translation of the service state information as defined in section 4.8.3 shall be performed by the HLR.

*****New Modified Section*******4.8.7 GMSC does not support CAMEL or supports CAMEL Phase 1 only**

If the activation state of CFNRc is "Active and Operative" and if the forwarded-to number is registered in a format other than international and if the GMSC does not support CAMEL or supports CAMEL Phase 1 only, then when a request for routing information for a mobile terminated call is received in the HLR, CFNRc shall not be invoked in the HLR. The mobile terminated call establishment shall be continued towards the MSCb.

NOTE: CFNRc will be handled in the VLRb according to the service state information for CFNRc stored there.