CHANGE REQUEST

| ⌘ | **23.079 CR** | **025** | ⌘ **rev** | **1** | ⌘ | Current version: | **5.2.0** | ⌘ |

Proposed change affects: UICC apps⌘ ☐   ME ☐ Radio Access Network ☐ Core Network **X**

Title: ⌘	Correction to interaction between ORLCF and forwarding notification	
Source: ⌘	Ericsson L.M.	
Work item code: ⌘	CAMEL4	***Date:*** ⌘ 28/05/2003
Category: ⌘	F	***Release:*** ⌘ Rel-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*

Use one of the following releases:
2 *(GSM Phase 2)*
R96 *(Release 1996)*
R97 *(Release 1997)*
R98 *(Release 1998)*
R99 *(Release 1999)*
Rel-4 *(Release 4)*
Rel-5 *(Release 5)*
Rel-6 *(Release 6)*

Reason for change: ⌘	According to TS 23.079, the T-CSI CAMEL Service should be notified about the call forwarding in the GMSC, before the GMSC has verified that the call forwarding can be performed at the GMSC server due to optimal routeing. If the GMSC denies the optimal routeing request from the VMSC, the optimal routeing will be performed by the VMSC. However, the T-CSI CAMEL Service was already informed about the pending forwarding in the GMSC. Hence, this means that the T-CSI CAMEL Service does not know where the call forwarding takes place.
Summary of change: ⌘	The T-CSI CAMEL Service should be informed after the GMSC has verified that the optimal routeing can apply in the GMSC.
Consequences if not approved: ⌘	Incorrect charging for pre-paid subscribers; this may hamper the deployment of optimal routeing.

Clauses affected: ⌘	9.4.2 (Procedure OR_Handle_RCH)

	Y	N		
Other specs affected: ⌘		X	Other core specifications ⌘	
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘	

9.4.2   Procedure OR_Handle_RCH

~~Sheet 2: the procedure Activate_CF_Process is specified in 3GPP TS 23.018 [6].~~

~~Sheet 1: if the GMSC interrogates the HLR for a Forwarded-to number, the Routeing address is the Forwarded-to number received in the Send Routeing Info ack; otherwise the Routeing address is the Forwarded-to number received in the Resume Call Handling.~~

~~Sheet 31: the procedure CAMEL_MT_GMSC_Notify_CF is specific to CAMEL phase 2 or higher; it is specified in 3GPP TS 23.078 [7]. If the GMSC does not support CAMEL phase 2 or higher, processing continues from the "Continue" exit of the test "Result".~~

~~Sheet 2: the task "Destination address:=FTN" is executed only if the GMSC supports optimal routeing of basic mobile-to-mobile calls.~~

~~Sheet 2: the process MT_CF_MSC is specified in 3GPP TS 23.018 [6].~~

~~Sheet 32: the procedure UUS_GMSC_Check_Forwarding is specific to UUS; it is specified in 3GPP TS 23.087 [9].~~

~~Sheet 32: the procedure CAMEL_Store_Destination_Address is specific to CAMEL phase 3 or higher; it is specified in 3GPP TS 23.078 [7].~~

~~Sheet 32: the called party address sent in the IAM to the process MT_CF_MSC is the Forwarded-to number received in the Perform Call Forwarding ack.~~

Sheet 1: if the GMSC interrogates the HLR for a Forwarded-to number, the Routeing address is the Forwarded-to number received in the Send Routeing Info ack; otherwise the Routeing address is the Forwarded-to number received in the Resume Call Handling.

Sheet 1: the task "Destination address:=FTN" is executed only if the GMSC supports optimal routeing of basic mobile-to-mobile calls.

Sheet 1: the procedure Route_permitted is called to verify the number received in Resume Call Handling or the number received from HLR. If the result is "False", then the GMSC disallows the Optimal Routeing. The call forwarding will now be done by the VMSC.

>   Note   When the procedure Route_permitted returns result "False", then the gsmSCF is not informed about the forwarding and can therefore not provide an alternative destination address. Reason is that once the gsmSCF is informed about forwarding, the call forwarding can not be returned to the VMSC.

Sheet 2: the procedure CAMEL_MT_GMSC_Notify_CF is specific to CAMEL phase 2 or higher; it is specified in 3GPP TS 23.078 [7]. If the GMSC does not support CAMEL phase 2 or higher, processing continues from the "Continue" exit of the test "Result".

If the result of the procedure CAMEL_MT_GMSC_Notify_CF is "Fail" or "Release", then the call will be released.

If the result of the procedure CAMEL_MT_GMSC_Notify_CF is "Reconnect", then the GMSC allows the Optimal Routeing. The GMSC will then start a call forwarding process.

Sheet 3: the procedure Activate_CF_Process is specified in 3GPP TS 23.018 [6]. When procedure Activate_CF_Process returns result "Release" or "Fail", the call is released.

If the result is "Pass", then the procedure Route_permitted is called, to verify the forwarding destination, which may have been modified in the procedure Activate_CF_Process. If the result of procedure Route_permitted is "False", then the call is released.

>   Note   In the case that the procedure Route_permitted returns result "False" after Pass, then it is not feasible to return the call forwarding to the VMSC, since the gsmSCF was already informed that forwarding will take place in the GMSC.

Sheet 3: the procedure UUS_GMSC_Check_Forwarding is specific to UUS; it is specified in 3GPP TS 23.087 [9].

Sheet 3: the procedure CAMEL_Store_Destination_Address is specific to CAMEL phase 3 or higher; it is specified in 3GPP TS 23.078 [7].

Sheet 3: the called party address sent in the IAM to the process MT_CF_MSC is the Forwarded-to number received in the Perform Call Forwarding ack.

Sheet 3: the process MT_CF_MSC is specified in 3GPP TS 23.018 [6].

Sheet 4: when the procedure Route_permitted on sheet 1 returns result "False", then the GMSC returns "OR not allowed" to the VMSC. The call forwarding will now be done by the VMSC.

*** Second Modified Section ***

Procedure   H_RCH1(2

Procedure in the GMSC to
handle a Resume Call Handling
request

Signals to/from the left are
to/from the originating exchange;
signals to/from the right are
to/from the destination exchange
unless indicated otherwise

Q-CSI or D-CSI included? — No / Yes

GMSC supports requested CAMEL Phases? — No

Yes

Forwarding interrogation required? — No / Yes

Set negative response: OR not allowed

Resume Call Handling negative response

Forwarding reason= Call deflection? — Yes / No

Result:= Refused

To HLR — Send Routeing Info (Forwarding Info)

Wait_For_ Forwarding_ Info

From HLR — Send Routeing Info ack

B

Send Routeing Info negative response

From HLR

Release

BOR:=OR

A

Set negative response: Forwarding failed

See TS 23.078 — CAMEL_ MT_GMSC_ Notify_CF

Resume Call Handling negative response

Reconnect — Result? — Continue / Fail / Release

Resume Call Handling ack

1

Release

Release

Release

Release call resources

Release call resources

Result:= Reconnect

Result:= Fail

Result:= Release

Figure 7a: Procedure OR_Handle_RCH (sheet 1)

Procedure H_RCH2(2)

Procedure in the GMSC to handle a Resume Call Handling request

Signals to/from the left are to/from the originating exchange; signals to/from the right are to/from the destination exchange unless indicated otherwise

(1)

Activate_ CF_Process —— See TS 23.018

(A)

Result?
— Release → (B)
— Fail → A

Pass

OR
— True
— False

Set negative response: Forwarding failed
—— Resume Call Handling negative response

Release

Release call resources

Result:= Fail

⊗

Reference address:= Routeing address

OR:=True

Destination address:= FTN

Route_Permitted (OR,FTN, Reference Address)

Route permitted
— True
— False

Resume Call Handling ack

Release

UUS_GMSC_ Check_ Forwarding —— See TS 23.087

CAMEL_Store_ Destination_ Address (BOR, True) —— See TS 23.078

Initial Address (FTN) —— To Process MT_CF_MSC

Result:=Pass

⊗

Set negative response: OR not allowed
—— Resume Call Handling negative response

CF cancelled —— To process MT_CF_MSC

Result:= Refused

⊗

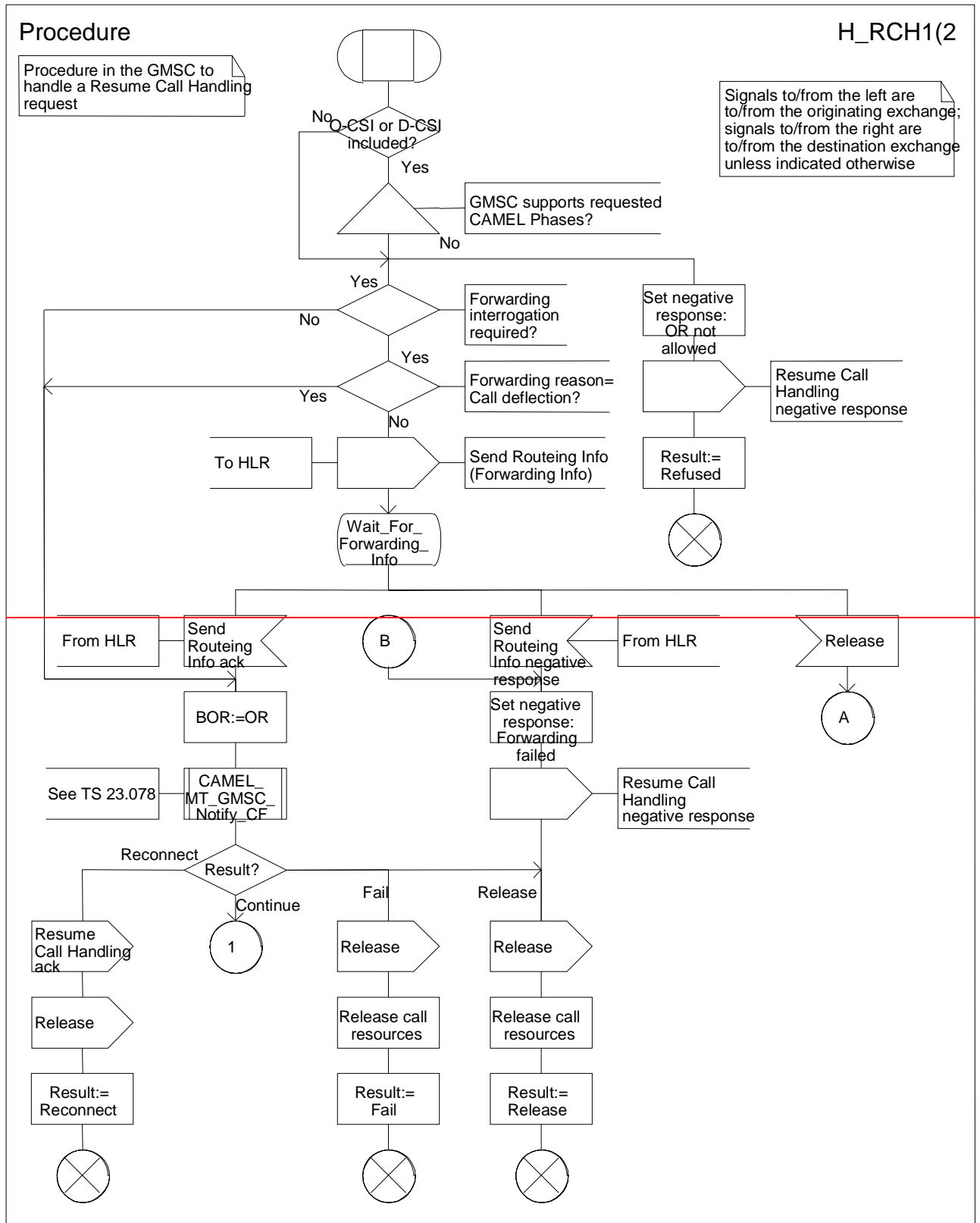**Figure 7b: Procedure OR_Handle_RCH (sheet 2)**

Figure 7a: Procedure OR_Handle_RCH (sheet 1)

Procedure OR_Handle_CH

Procedure in the GMSC
handle a Resume Call
Handling request

Signals to/from the left are
to/from the originating exchange;
signals to/from the right are
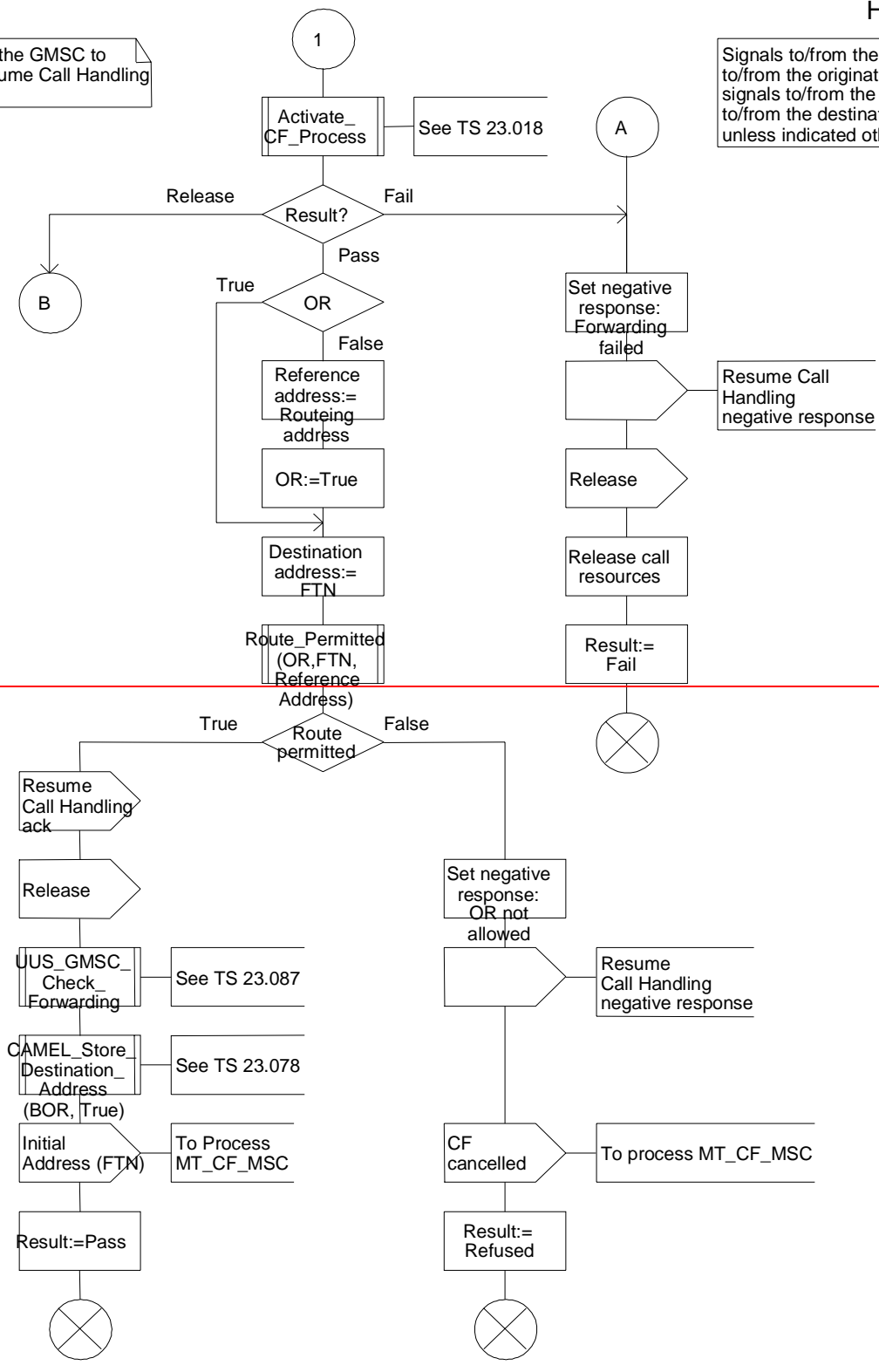to/from the destination exchange
unless indicated otherwise

(1)

CAMEL_MT_GMS
C_Notify_CF

Result

Continue   Fail   Release   Reconnect

(3)

Set negative
response:
Forwarding failed

Set negative
response:
Forwarding failed

Resume Call
Handling negative
response

Resume Call
Handling negative
response

Resume Call
Handling Ack

Release

Release

Release

Release call
resources

Release call
resources

Result:= Fail

Result:= Release

Result:= Reconnect

⊗   ⊗   ⊗

Figure 7b: Procedure OR_Handle_RCH (sheet 2)

Procedure   H_RCH3(4)

Procedure in the GMSC to
handle a Resume Call Handling
request

(3)

Activate_
CF_Process ——— See TS 23.018

Signals to/from the left are
to/from the originating exchange;
signals to/from the right are
to/from the destination exchange
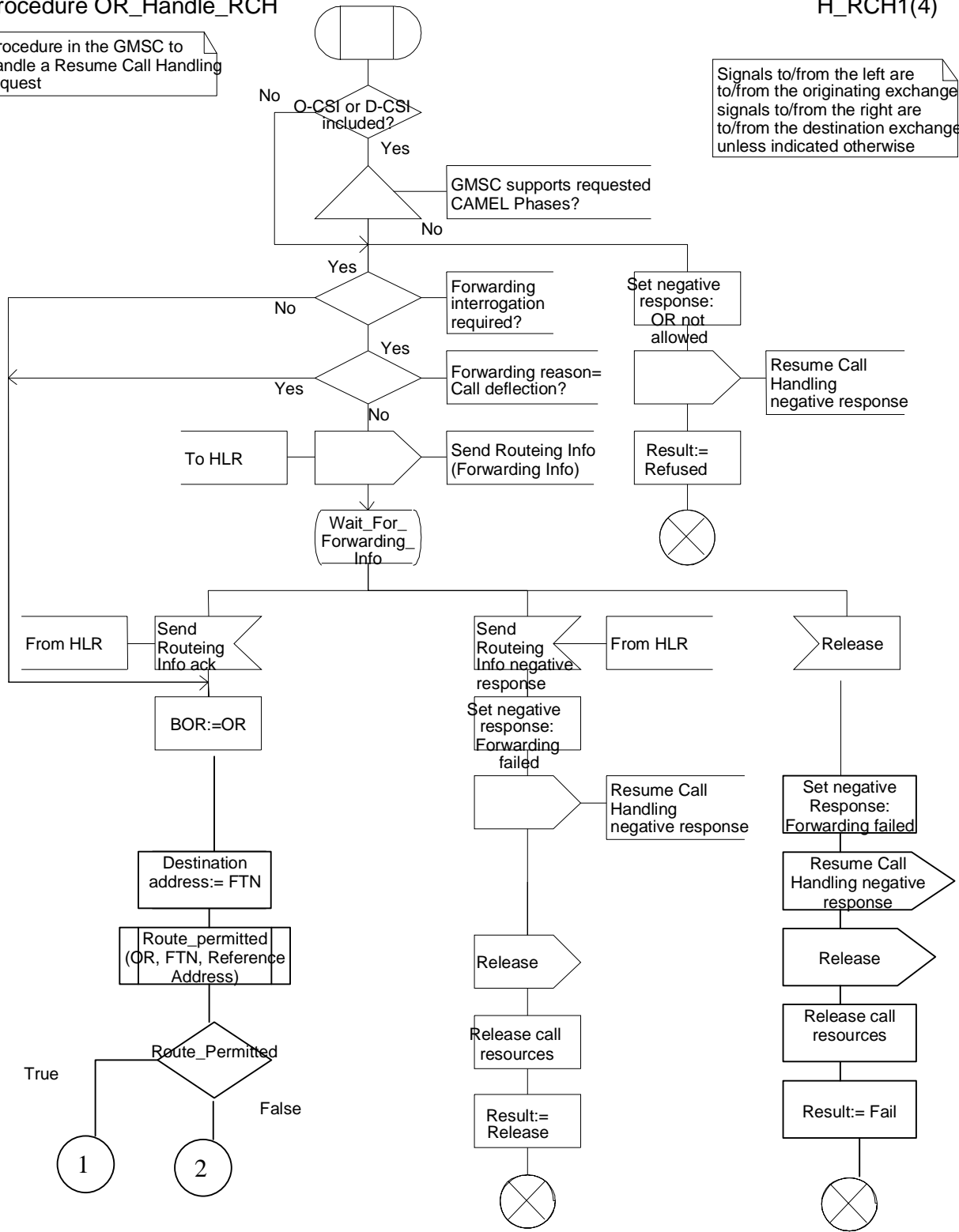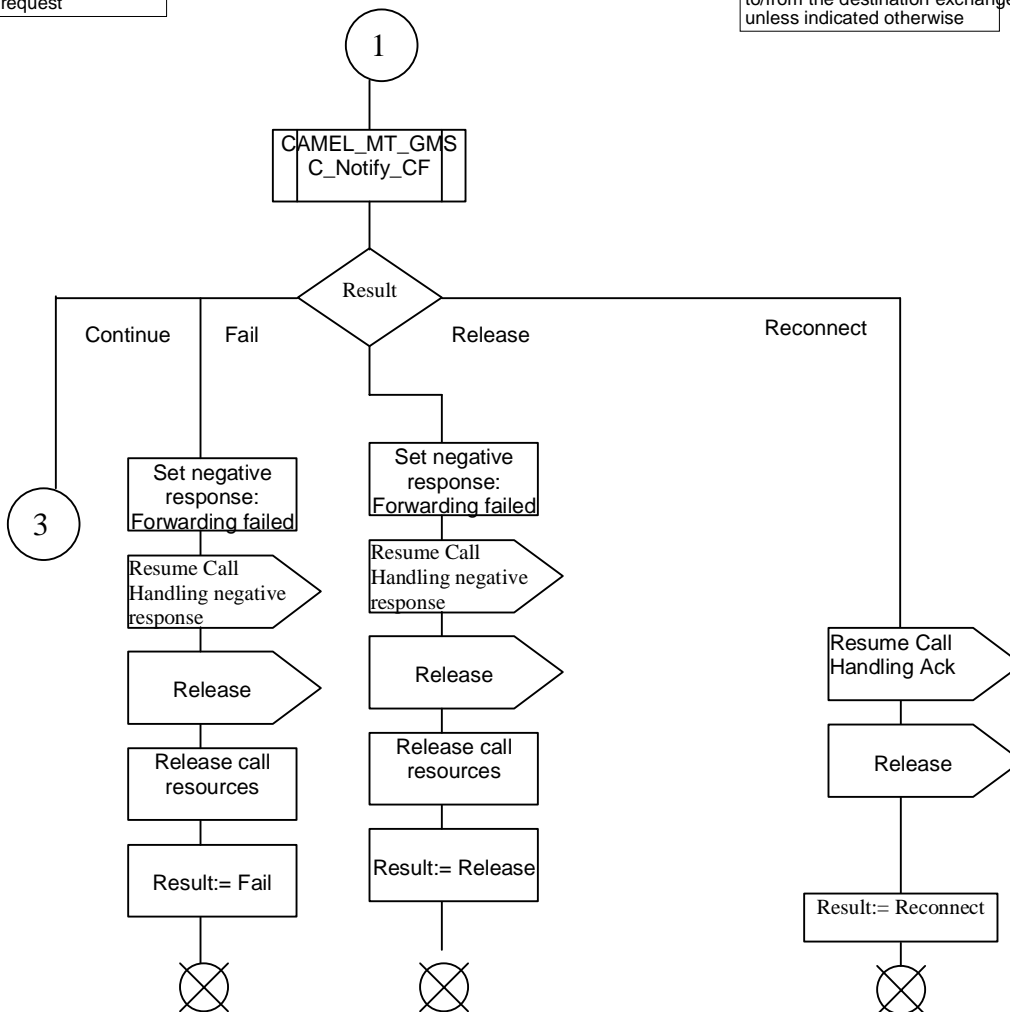unless indicated otherwise

Release ◇ Result? ◇ Fail

Pass

Set negative
Response:
Forwarding failed

Resume Call
Handling negative
response

Release

Release call
resources

Result:= Release

⊗

True ◇ OR ◇ False

Reference
address:=
Routeing
address

OR:=True

Destination
address:=
FTN

Route_Permitted
(OR,FTN,
Reference
Address)

True ◇ Route
permitted ◇ False

Set negative
response:
Forwarding
failed

Resume Call
Handling
negative response

Release

Release call
resources

Result:=
Fail

⊗

Resume
Call Handling
ack

Release

UUS_GMSC_
Check_
Forwarding ——— See TS 23.087

CAMEL_Store_
Destination_
Address
(BOR, True) ——— See TS 23.078

Initial
Address (FTN) ——— To Process
MT_CF_MSC

Result:=Pass

⊗

Set negative
response:
Forwarding failed

Resume
Call Handling
negative response

CF
cancelled ——— To process MT_CF_MSC

Result:=
Fail

⊗

Figure 7c: Procedure OR_Handle_RCH (sheet 3)

Procedure in the GMSC to
handle a Resume Call Handling
request

Signals to/from the left are
to/from the originating exchange;
signals to/from the right are
to/from the destination exchange
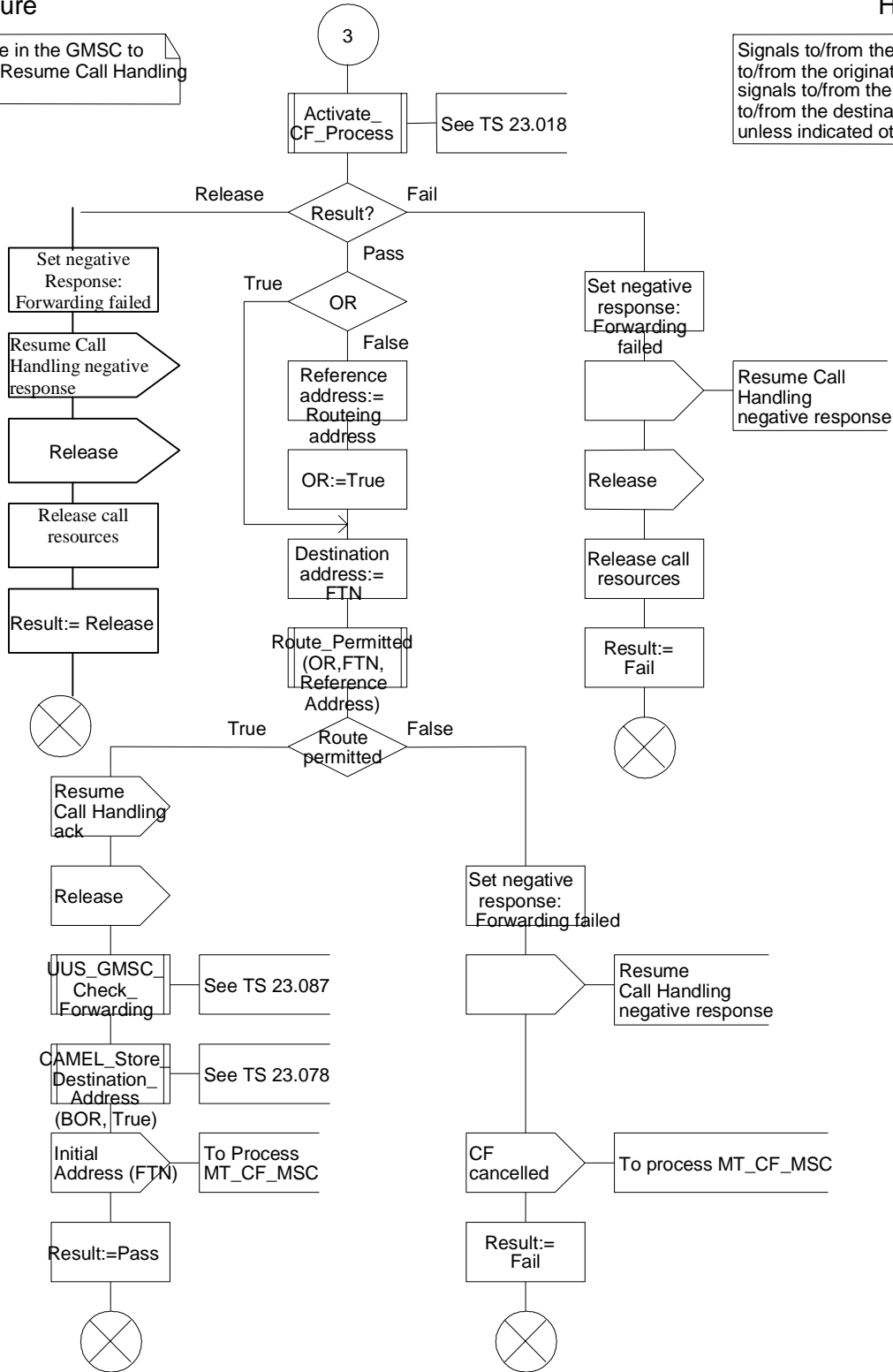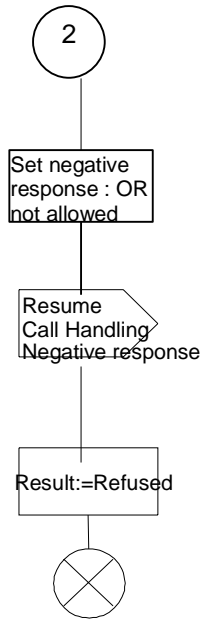unless indicated otherwise

(2)

Set negative
response : OR
not allowed

Resume
Call Handling
Negative response

Result:=Refused

⊗

Figure 7d: Procedure OR_Handle_RCH (sheet 4)

*** *End of Document* ***