

CR-Form-v7

## CHANGE REQUEST

# **24.008 CR 652** # rev **1** # Current version: **5.4.0** #

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

**Proposed change affects:** UICC apps#  ME  Radio Access Network  Core Network

<b>Title:</b>	# MS behavior in case of change of network mode of operation		
<b>Source:</b>	# Siemens AG		
<b>Work item code:</b>	# TEI5	<b>Date:</b>	# 28.08.2002
<b>Category:</b>	# <b>F</b>	<b>Release:</b>	# Rel-5
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	<b>F</b> (correction)		2 (GSM Phase 2)
	<b>A</b> (corresponds to a correction in an earlier release)		R96 (Release 1996)
	<b>B</b> (addition of feature),		R97 (Release 1997)
	<b>C</b> (functional modification of feature)		R98 (Release 1998)
	<b>D</b> (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900.		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

<b>Reason for change:</b>	# In case of a GSM to UMTS inter-system change it is defined for the change from GSM II/III->UMTS II it is defined that a Normal Location Update shall be performed. Nevertheless this LU is not needed, if the MS doesn't enter a new LA.
<b>Summary of change:</b>	# As the sec. 4.7.1.6.4 describes the change of network mode of operation at GSM to UMTS inter-system change the case GSM II/III->UMTS II must not be described at all in this section.
<b>Consequences if not approved:</b>	# Unnecessary network load and MS power consumption as the MS is required to perform a LU even if the LA hasn't change and thus the LU would not be necessary at all.

<b>Clauses affected:</b>	# 4.7.1.6.1; 4.7.1.6.2; 4.7.1.6.3; 4.7.1.6.4										
<b>Other specs affected:</b>	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;"><input type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	# 51.010
	Y	N									
	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
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<input type="checkbox"/>	<input checked="" type="checkbox"/>										
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Test specifications									
<input type="checkbox"/>	<input checked="" type="checkbox"/>	O&M Specifications									
<b>Other comments:</b>	#										

4.7.1.6 Change of network mode of operation

In the following tables below the abbreviations 'GSM I', 'GSM II' and 'GSM III' are used for network operation mode I, II and III in GSM.

In the following tables below the abbreviations 'UMTS I' and 'UMTS II' are used for network operation modes I and II in UMTS.

4.7.1.6.1 Change of network mode of operation in GSM (GSM only)

Whenever an MS moves to a new RA, the procedures executed by the MS depend on the network mode of operation in the old and new routing area.

In case the MS is in state GMM-REGISTERED or GMM-ROUTING-AREA-UPDATING-INITIATED and is in operation mode:

- a) A or B (with the exceptions in b and c below), the MS shall execute:

**Table 4.7.1.6.1/3GPP TS 24.008: Mode A or B**

Network operation mode change	Procedure to execute
I → II or I → III	Normal Location Update(*), followed by a Normal Routing Area Update
II → III or III → II	Normal Location Update (see subclause 4.2.2) if a new LA is entered, followed by a Normal Routing Area Update
II → I or III → I	Combined Routing Area Update with IMSI attach(**)

- b) B which reverts to operation mode C in network operation mode III, the MS shall execute:

**Table 4.7.1.6.2/3GPP TS 24.008: Mode B which reverts into mode C in network operation mode III**

Network operation mode change	Procedure to execute
I → II	Normal Location Update(*), followed by a Normal Routing Area Update
I → III or II → III	IMSI Detach (see subclause 4.3.4), followed by a Normal Routing Area Update
II → I or III → I	Combined Routing Area Update with IMSI attach(**)
III → II	IMSI attach (see subclause 4.4.3), followed by a Normal Routing Area Update

- c) B which reverts to IMSI attached for CS services only in network operation mode III, the MS shall execute:

**Table 4.7.1.6.3/3GPP TS 24.008: Mode B which reverts into IMSI attached for CS services only in network operation mode III**

Network operation mode change	Procedure to execute
I → II	Normal Location Update(*), followed by a Normal Routing Area Update
I → III	Normal Location Update(*), followed by a GPRS Detach with type indicating "GPRS Detach"
II → III	Normal Location Update (see subclause 4.2.2) if a new LA is entered, followed by a GPRS Detach with detach type indicating "GPRS Detach"
II → I	Combined Routing Area Update with IMSI attach(**)
III → I	Combined GPRS Attach(**)
III → II	Normal Location Update (see subclause 4.2.2) if a new LA is entered, followed by a Normal GPRS Attach

(\*) \_\_\_\_\_ Intended to remove the Gs association in the MSC/VLR. [editors note: style changed to NO]

(\*\*) Intended to establish the Gs association in the MSC/VLR.

Further details are implementation issues.

#### 4.7.1.6.2 Change of network mode of operation in UMTS (UMTS only)

Whenever an MS moves to a new RA, the procedures executed by the MS depend on the network mode of operation in the old and new routing area.

*In case the MS is in state GMM-REGISTERED or GMM-ROUTING-AREA-UPDATING-INITIATED and is in operation mode A, the MS shall execute:*

**Table 4.7.1.6.4/3GPP TS 24.008: Mode A**

Network operation mode change	Procedure to execute
I → II	Normal Location Update(*), followed by a Normal Routing Area Update
II → I	Combined Routing Area Update with IMSI attach(**)

(\*) Intended to remove the Gs association in the MSC/VLR. [editors note: style changed to NO]

(\*\*) Intended to establish the Gs association in the MSC/VLR.

Further details are implementation issues.

#### 4.7.1.6.3 Change of network mode of operation at UMTS to GSM inter-system change

Whenever an MS moves to a new RA supporting the GSM radio interface, the procedures executed by the MS depend on the network mode of operation in the old and new routing area.

*In case the MS is in state GMM-REGISTERED or GMM-ROUTING-AREA-UPDATING-INITIATED and is in operation mode:*

- a) A in UMTS, an MS that changes to GPRS operation mode A or B in GSM shall execute:

**Table 4.7.1.6.5/3GPP TS 24.008: Mode A in UMTS changing to GPRS mode A or B in GSM**

Network operation mode change	Procedure to execute
UMTS I → GSM I	Combined Routing Area Update
UMTS II → GSM I	Combined Routing Area Update with IMSI attach(**)
UMTS I → GSM II or UMTS I → GSM III	Normal Location Update(*), followed by a Normal Routing Area Update

- b) A in UMTS, an MS that changes due to MS specific characteristics to GPRS operation mode C in network operation mode III in GSM shall execute:

**Table 4.7.1.6.6/3GPP TS 24.008: Mode A in UMTS changing to GPRS mode C in GSM**

Network operation mode change	Procedure to execute
UMTS I → GSM III or UMTS II → GSM III	IMSI detach (see subclause 4.3.4), followed by a Normal Routing Area Update

- c) A in UMTS, an MS that changes due to MS specific characteristics to IMSI attached for CS services only in network operation mode III in GSM shall execute:

**Table 4.7.1.6.7/3GPP TS 24.008: Mode A in UMTS changing to IMSI attached for CS services only in GSM**

Network operation mode change	Procedure to execute
UMTS I → GSM III or UMTS II → GSM III	Normal Location Update (see subclause 4.4.1)(*), followed by a GPRS Detach with detach type indicating "GPRS Detach"
UMTS II → GSM III	Normal Location Update (see subclause 4.4.1) if a new LA is entered, followed by a GPRS Detach with detach type indicating "GPRS Detach"

- d) C in UMTS, the MS shall change to GPRS operation mode C in GSM and shall execute the normal Routing Area Update procedure.
- e) CS in UMTS, the MS shall execute the normal Location Update procedure.

(\*) Intended to remove the Gs association in the MSC/VLR.

(\*\*) Intended to establish the Gs association in the MSC/VLR.

Further details are implementation issues.

**4.7.1.6.4 Change of network mode of operation at GSM to UMTS inter-system change**

Whenever an MS moves to a new RA supporting the UMTS radio interface, the procedures executed by the MS depend on the network mode of operation in the old and new routing area.

In case the MS is in state GMM-REGISTERED or GMM-ROUTING-AREA-UPDATING-INITIATED and is in operation mode:

- a) A or B in GSM, the MS shall change to operation mode A in UMTS and shall execute:

**Table 4.7.1.6.8/3GPP TS 24.008: Mode A or B in GSM changing to mode A in UMTS**

Network operation mode change	Procedure to execute
GSM I → UMTS I	Combined Routing Area Update
GSM II → UMTS I	Combined Routing Area Update with IMSI attach(**)
GSM I → UMTS II	Normal Location Update(*), followed by a Normal Routing Area Update
GSM II → UMTS II or GSM III → UMTS II	Normal Location Update if a new LA is entered, followed by a Normal Routing Area Update

- b) C in GSM, an MS that changes to operation mode C in UMTS shall execute a Normal Routing Area Update.
- c) C in GSM, an MS that, due to MS specific characteristics operated in GPRS operation mode C in network operation mode III in GSM changes to operation mode A in UMTS shall execute:

**Table 4.7.1.6.9/3GPP TS 24.008: Mode C changing to mode A in UMTS**

Network operation mode change	Procedure to execute
GSM III → UMTS I	Combined Routing Area Update with IMSI attach(**)
GSM III → UMTS II	IMSI attach (see subclause 4.4.3), followed by a Normal Routing Area Update

- d) IMSI attached for non-GPRS services only, an MS that, due to MS specific characteristics, operated in network operation mode III in GSM and changes to operation mode A in UMTS shall execute:

**Table 4.7.1.6.10/3GPP TS 24.008: IMSI attached for non-GPRS services only changing to mode A in UMTS**

Network operation mode change	Procedure to execute
GSM III → UMTS I	Combined GPRS Attach for GPRS and non-GPRS services <sup>(**)</sup>
GSM III → UMTS II	GPRS Attach

(\*) Intended to remove the Gs association in the MSC/VLR.

(\*\*) Intended to establish the Gs association in the MSC/VLR.

Further details are implementation issues.