

3GPP TSG CT Meeting #28
1st – 3rd June 2005. Quebec, CANADA.

CP-050067

Source: TSG CT WG1
Title: CR on Rel-6 WI “NTShar” for TS 24.008
Agenda item: 9.19
Document for: APPROVAL

This document contains 1**CR for Rel-6 WI “NTShar”**, that has been agreed by TSG CT WG1 meeting #38 and forwarded to TSG CT Plenary meeting #28 for approval.

TDoc #	Tdoc Title	Spec	CR #	Rev	CAT	C_Version	WI	Rel
C1-050573	Correction on handling of forbidden lists	24.008	982		F	6.8.0	NTShar	Rel-6

CR-Form-v7.1

CHANGE REQUEST

⌘ **24.008** **CR** **982** ⌘ rev **-** ⌘ Current version: **6.8.0** ⌘

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

Title:	⌘ Correction on handling of forbidden lists		
Source:	⌘ TeliaSonera		
Work item code:	⌘ NTShar	Date:	⌘ 15/04/2005
Category:	⌘ F	Release:	⌘ Rel-6
	<i>Use <u>one</u> of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use <u>one</u> of the following releases:</i> Ph2 (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) Rel-7 (Release 7)

Reason for change:	⌘ The mobile equipment contains a list of "forbidden location areas for roaming", as well as a list of "forbidden location areas for regional provision of service". The same lists are used by both GMM and MM procedures.
Summary of change:	⌘ The LAI that is part of the RAI shall be added in the corresponding forbidden lists in GMM procedure in a shared network.
Consequences if not approved:	⌘ Wrong implementation of forbidden location area lists.

Clauses affected:	⌘ 4.7.3, 4.7.5										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications ⌘ Test specifications ⌘ O&M Specifications ⌘	Y	N	⌘	X	⌘	X	⌘	X		
Y	N										
⌘	X										
⌘	X										
⌘	X										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

*****First change*****

4.7.3 GPRS attach procedure

The GPRS attach procedure is used for two purposes:

- normal GPRS attach, performed by the MS to IMSI attach for GPRS services only. The normal GPRS attach procedure shall be used:
 - by GPRS MSs in MS operation mode C, independent of the network operation mode;
 - by GPRS MSs in MS operation modes A or B if the network operates in network operation mode II or III; and
 - by GPRS MSs in MS operation mode A, independent of the network operation mode, if a circuit-switched transaction is ongoing;
- combined GPRS attach procedure, used by GPRS MSs in MS operation modes A or B to attach the IMSI for GPRS and non-GPRS services provided that the network operates in network operation mode I.

With a successful GPRS attach procedure a GMM context is established.

Subclause 4.7.3.1 describes the GPRS attach procedure to attach the IMSI only for GPRS services. The combined GPRS attach procedure used to attach the IMSI for both GPRS and non-GPRS services is described in subclause 4.7.3.2.

If an IMSI attach for non-GPRS services is requested and a GMM context exists, the routing area updating procedure shall be used as described in subclause 4.7.5.2.

To limit the number of subsequently rejected attach attempts, a GPRS attach attempt counter is introduced. The GPRS attach attempt counter shall be incremented as specified in subclause 4.7.3.1.5. Depending on the value of the GPRS attach attempt counter, specific actions shall be performed. The GPRS attach attempt counter shall be reset when:

- the MS is powered on;
- a SIM/USIM is inserted;
- a GPRS attach procedure is successfully completed;
- a combined GPRS attach procedure is completed for GPRS services only with cause #2, #16, #17 or #22; or
- a GPRS attach procedure is completed with cause #11, #12, #13 or #15,

and additionally when the MS is in substate ATTEMPTING-TO-ATTACH:

- expiry of timer T3302;
- a new routing area is entered; or
- an attach is triggered by CM sublayer requests.

The mobile equipment shall contain a list of "forbidden location areas for roaming", as well as a list of "forbidden location areas for regional provision of service". The handling of these lists is described in subclause 4.4.1; the same lists are used by GMM and MM procedures.

The Mobile Equipment shall contain a list of "equivalent PLMNs". The handling of this list is described in subclause 4.4.1, the same list is used by GMM and MM procedures.

In a shared network, the MS shall choose one of the PLMN identities as specified in 3GPP TS 23.122 [14]. The MS shall construct the Routing Area Identification of the cell from this chosen PLMN identity, and the LAC and the RAC received on the BCCH. The chosen PLMN identity shall be indicated to the RAN in the RRC INITIAL DIRECT TRANSFER message (see 3GPP TS 25.331 [23c]). Whenever an ATTACH REJECT message with the cause "PLMN not allowed" is received by the MS, the chosen PLMN identity shall be stored in the "forbidden PLMN list".

Whenever an ATTACH REJECT message is received by the MS with the cause "Roaming not allowed in this location area", "Location Area not allowed", or "No suitable cells in Location Area", the [LAI that is part of the](#) constructed RAI shall be stored in the suitable list.

The network informs the MS about the support of specific features, such as LCS-MOLR, in the “Network feature support” Information Element. The information is either explicitly given by sending the “Network feature support” IE or implicitly by not sending it. The handling in the network is described in subclause 9.4.2.9. The MS may use the indication to inform the user about the availability of the appropriate services and it shall not request services that have not been indicated as available.

*****Second change*****

4.7.5 Routing area updating procedure

This procedure is used for:

- normal routing area updating to update the registration of the actual routing area of an MS in the network. This procedure is used by GPRS MSs in MS operation mode C and by GPRS MSs in MS operation modes A or B that are IMSI attached for GPRS and non-GPRS services if the network operates in network operation mode II or III;
- combined routing area updating to update the registration of the actual routing and location area of an MS in the network. This procedure is used by GPRS MSs in MS operation modes A or B that are IMSI attached for GPRS and non-GPRS services provided that the network operates in network operation mode I;
- periodic routing area updating. This procedure is used by GPRS MSs in MS operation mode C and by GPRS MSs in MS operation modes A or B that are IMSI attached for GPRS or for GPRS and non-GPRS services independent of the network operation mode;
- IMSI attach for non-GPRS services when the MS is IMSI attached for GPRS services. This procedure is used by GPRS MSs in MS operation modes A or B, if the network operates in network operation mode I;
- in A/Gb mode, resuming GPRS services when the RR sublayer indicated a resumption failure after dedicated mode was left, see 3GPP TS 44.018 [84];
- in A/Gb mode, updating the network with the new MS Radio Access Capability IE when the content of the IE has changed;
- updating the network with the new DRX parameter IE when the content of the IE has changed;

NOTE 1: Such changes can be used e.g. when the MS activates a PDP context with service requirements that cannot be met with the current DRX parameter. As PDP context(s) are activated and deactivated, the GMM context will be updated with an appropriate DRX parameter;

- Iu mode to A/Gb mode and for A/Gb mode to Iu mode intersystem change, see subclause 4.7.1.7; or
- in Iu mode, to re-synchronize the PMM mode of MS and network after RRC connection release with cause "Directed signalling connection re-establishment", see subclause 4.7.2.5.

The routing area updating procedure shall also be used by a MS which is attached for GPRS services if a new PLMN is entered (see 3GPP TS 23.122 [14]).

Subclause 4.7.5.1 describes the routing area updating procedures for updating the routing area only. The combined routing area updating procedure used to update both the routing and location area is described in subclause 4.7.5.2.

The routing area updating procedure is always initiated by the MS. It is only invoked in state GMM-REGISTERED.

To limit the number of subsequently rejected routing area update attempts, a routing area updating attempt counter is introduced. The routing area updating attempt counter shall be incremented as specified in subclause 4.7.5.1.5. Depending on the value of the routing area updating attempt counter, specific actions shall be performed. The routing area updating attempt counter shall be reset when:

- a GPRS attach procedure is successfully completed; or
- a routing area updating procedure is successfully completed;

and additionally when the MS is in substate ATTEMPTING-TO-UPDATE:

- a new routing area is entered;
- expiry of timer T3302; or
- at request from registration function.

The mobile equipment shall contain a list of "forbidden location areas for roaming", as well as a list of "forbidden location areas for regional provision of service". The handling of these lists is described in subclause 4.4.1.

The Mobile Equipment shall contain a list of "equivalent PLMNs". The handling of this list is described in subclause 4.4.1.

In a shared network, the MS shall choose one of the PLMN identities as specified in 3GPP TS 23.122 [14]. The MS shall construct the Routing Area Identification of the cell from this chosen PLMN identity, and the LAC and the RAC received on the BCCH. If the constructed RAI is different from the stored RAI, the MS shall initiate the routing area updating procedure. The chosen PLMN identity shall be indicated to the RAN in the RRC INITIAL DIRECT TRANSFER message (see 3GPP TS 25.331 [23c]). Whenever a ROUTING AREA UPDATING REJECT message with the cause "PLMN not allowed" is received by the MS, the chosen PLMN identity shall be stored in the "forbidden PLMN list". Whenever a ROUTING AREA UPDATING REJECT message is received by the MS with the cause "Roaming not allowed in this location area", "Location Area not allowed", or "No suitable cells in Location Area", the [LAI that is part of the](#) constructed RAI which triggered the routing area updating procedure shall be stored in the suitable list.

In A/Gb mode, user data transmission in the MS shall be suspended during the routing area updating procedure; user data reception shall be possible. User data transmission in the network may be suspended during the routing area updating procedure.

In Iu mode, user data transmission and reception in the MS shall not be suspended during the routing area updating procedure. User data transmission in the network shall not be suspended during the routing area updating procedure.

In Iu mode, when a ROUTING AREA UPDATE REQUEST is received by the SGSN over a new PS signalling connection while there is an ongoing PS signalling connection (network is already in mode PMM-CONNECTED) for this UE, the network shall progress the routing area update procedure as normal and release the previous PS signalling connection when the routing area update procedure has been accepted by the network.

NOTE 2: The re-establishment of the radio bearers of active PDP contexts is done as described in subclause "Service Request procedure".

The network informs the MS about the support of specific features, such as LCS-MOLR, in the "Network feature support" Information Element. The information is either explicitly given by sending the "Network feature support" IE or implicitly by not sending it. The handling in the network is described in subclause 9.4.15.11. The MS may use the indication to inform the user about the availability of the appropriate services and it shall not request services that have not been indicated as available.

*****End of changes*****