

Title: LS regarding Relocation and GSM-UMTS handover

**To: 3GPP TSG RAN WG2
ETSI SMG2 WPA**

CC: ETSI SMG2 Plenary, 3GPP TSG SA WG2

Source: 3GPP TSG RAN WG3

3GPP RAN WG3 has been studying the procedures required for relocation of SRNS, which will be used in UMTS for inter RNC hard handovers (with CN switch), SRNS relocation and for inter system hard handovers between UMTS and GSM (CS-domain). The assumed Iu RANAP procedures are similar to those of GSM A interface BSSMAP used for external handovers.

3GPP RAN WG3 would like to initiate the discussion regarding this issue between ETSI SMG2, 3GPP RAN WG2 and 3GPP RAN WG3. This LS indicates 3GPP RAN WG3 working assumptions and information that we are requesting to receive from addressed groups.

RAN WG3 would like to ask the addressed groups to study the working assumptions stated below and give some comments regarding the questions listed in this liaison statement.

Currently RAN WG3 has adopted following assumptions:

1) Usage of Source RNC to Target RNC Transparent field

Within UMTS, in principle the source RNC should provide all necessary information regarding the UTRAN-UE connection that is required by target RNC to start the Serving RNC operation without the UE noticing any change in UTRAN behaviour (except the allocation of new identifiers etc). This information should be passed from source RNC to the target RNC in a 'Source RNC to target RNC Transparent Field' carried over Iu interfaces in RANAP messages RELOCATION REQUIRED and RELOCATION REQUEST.

2) Usage of Target RNC to Source RNC Transparent field

For a relocation of SRNS which involves a simultaneous change in radio resources (inter RNC hard handovers (with CN switch) and inter system hard handovers UMTS<-> GSM) the information required for the air interface Handover Command message shall be mainly given by the relocation target (target RNC or target GSM BSS) in a 'Target RNC to Source RNC Transparent Field'.

3) Adaptation to the requirements of the other system in case of inter system handover

In principle the source side for the inter system handover should be able to adapt to the requirements of the target side.

Especially this means that

- In case of UMTS to GSM handover the GSM BSS would receive in BSSMAP HANDOVER REQUEST a 'Source BSS to target BSS Information' from UMTS as is defined in GSM specifications

(GSM 08.08). As a response GSM BSS should send a 'Target BSS to source BSS information' in BSSMAP HANDOVER REQUEST ACK as defined for GSM (GSM 08.08).

- In case of GSM to UMTS handover the GSM BSS should be able to produce a 'Source RNC to target RNC Transparent Field' as defined in UMTS specifications (UMTS 25.413) and to include this to the HANDOVER REQUIRED or equivalent BSSMAP message used for handover from GSM to UMTS. Additionally the GSM BSS should be able to receive a 'Target RNC to Source RNC Transparent Field' as defined in UMTS specifications (UMTS TS 25.413) in HANDOVER COMMAND or in equivalent BSSMAP message used for handover from GSM to UMTS.

Questions regarding the Working Assumptions:

- 1) ETSI SMG2: Is the 3GPP RAN WG3 working assumption 3 seen as a feasible fundamental principle for inter system handover between GSM and UMTS?
- 2) 3GPP RAN WG2: Are the 3GPP RAN WG3 working assumptions 1, 2 and 3 seen as a feasible fundamental principles for relocation of SRNS?
- 3) 3GPP RAN WG2: What and how much information is required to be transmitted from source RNC to target RNC in the 'Source RNC to Target RNC transparent Field' in case of intra UMTS relocation in order to enable the target RNC to start as a Serving RNC?
- 4) 3GPP RAN WG2: What and how much information is required to be transmitted from GSM BSS to target RNC in the 'Source RNC to Target RNC Transparent Field' in case of handover from GSM to UMTS?
- 5) ETSI SMG2: Is the information indicated by 3GPP RAN WG2 for the above question 4 seen feasible to be provided by the GSM BSS?
- 6) ETSI SMG2: What and how much information (if any) is required to be transmitted from UTRAN to target GSM BSS in the 'Source BSS to target BSS Information' in case of handover from UMTS to GSM?
- 7) 3GPP RAN WG2: Is the information indicated by ETSI SMG2 for the above question 6 seen feasible to be provided by the UTRAN?
- 8) 3GPP RAN WG2: What and how much information (if any) is required to be transmitted from target RNS to source GSM BSS in the 'Target RNC to Source RNC Transparent Field' in case of handover from GSM to UMTS?
- 9) ETSI SMG2: What and how much information is required to be transmitted from target GSM BSS to source UTRAN RNS in the 'Target BSS to Source BSS Information' in case of handover from UMTS to GSM?