TSG-RAN Working Group 3   *TSGR3#29(02) 1550*
Gyeongju, KOREA, 13th – 17th May 2002

Title:	Answer Liaison on Mandatory Use Of Transport Addresses sent by the MSC in a RAB Modification Request
Source:	RAN3
To:	CN4, TSG SA, TSG RAN
Cc:	
Response to:	LS *N4#13(02) 0517* on Liaison Statement on Mandatory Use of Transport Addresses sent by the MSC in a RAB Modification Request

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Attachments: R3-021619.

1. Overall Description:

RAN3 thanks CN4 for their answer liaison on "Mandatory Use of Transport Addresses sent by the MSC in a RAB Modification Request" (CN4#13-see reference above) requesting a R99 and R4 RNC to mandatory use the transport layer addresses when they are provided by the MSC in a RAB Modification Request and some other changes seen as potential issues.

RAN3 would like to inform CN4 that after lengthy discussions, it came to the following conclusions:

1. After investigation, the proposed change was not recognized as a faulty behaviour of a R99 RNC. As solutions were available to be introduced on CN side RAN3 believes that the requested change is not an essential correction and therefore was not agreed on release 99. Indeed, RAN3 understanding is that any optimisation introduced in a given release N has to take care of backwards compatibility towards releases N-1 and below N-1. RAN cannot anymore agree on any such R99 CR.
2. However, in order to provide the maximum support to CN4, RAN3 agreed to have this optimization from R4 onwards instead of release 5 making here an exception since release 4 is normally frozen, because release 4 is the one introducing the split architecture,
3. RAN3 believes that this issue is definitely closed.

Details of RAN3 investigations are summarized in the following table, provided in a similar format as CN4 liaison in order to provide accurate answers. These answers take into account the agreed release 4 optimization:

	REL 4 MSC **MGW does not support MSLC.**	**REL4 MSC/** **MGW does support MSLC.**
REL99 UTRAN **- this is prior to AAL2 CS2 or IP bearer and thus no modification of transport link within same addresses is possible**	MSC gets informed that MSLC is not supported as MGW does not support MSLC. MSC reserves new terminations and provides them as transport address in RAB Assign Modification. UTRAN is permitted to ignore addresses and not modify	MSC gets informed that MSLC is not supported as MGW does not receive MSLC support in ERQ from UTRAN. MSC reserves new terminations and sends them to UTRAN in RAB Assign Modification. UTRAN is permitted to ignore

	bearer. It is assumed that this would only happen when the bandwidth requirement is less than currently established. MSC currently assumes that the bearer is modified to the new terminations and deletes the old terminations. This would infact release the bearer unintentionally if the UTRAN had not modified to the new transport address.	addresses and not modify bearer. It is assumed that this would only happen when the bandwidth requirement is less than currently established. MSC currently assumes that the bearer is modified to the new terminations and deletes the old terminations. This would infact release the bearer unintentionally if the UTRAN had not modified to the new transport address.
RAN WG3 ANSWER	Backwards compatible solution towards R99: 2 cases: 1. all nodes are post Rel4 No issue since the UTRAN will have used the new addresses. 2. some R99 nodes still on the field MSC-Server has the possibility to use the "notification of bearer established" within the Prepare Bearer procedure that will indicate to it whether a new bearer has been established before deleting any terminations.	Same answer as when MGW does not support MSLC.
REL 4 UTRAN MSLC not supported	Same as above case.	Same as above case as MGW does not receive MSLC support in ERQ from RNC.
RAN WG3 ANSWER	No longer the same case as above since the already approved changes for release 5 were agreed to cover also release 4: MSC gets informed that MSLC is not supported as MGW does not support MSLC. MSC reserves new terminations and sends them to UTRAN in RAB Assign Modification. UTRAN modifies connection to new terminations. MSC deletes the old terminations. No incompatibilities.	Same answer as when MGW does not support MSLC.
REL4 UTRAN MSLC is supported.	Same as above.	MSC receives an indication that MSLC is support ed for the link. MSC does not reserve new terminations and sends RAB Assign Modification without transport addresses. UTRAN performs modification of link characteristics as requested. UTRAN may decide not to modify link characteristics? It is assumed that this would only happen when bandwidth requirement is less than currently established. MSC assumes Iu bearer has been modified to the link characteristics indicated in the RAB Assignment

		Modification. If this is not the case problems may arise depending on the service using this Iu Bearer.
RAN WG3 ANSWER	Same answer as above case.	RANAP only allows a request for modification of RAB parameters not for Iu link characteristics. The mapping onto Transport layer link characteristics is RNC internal. Service related problems should not occur since the RNC commits through the positive RAB Modification Response to fulfil the new requested RAB parameters defining this service for the UTRAN.
REL5 UTRAN MSLC not supported (RANAP updated to mandate use of transport address)	MSC gets informed that MSLC is not supported as MGW does not support MSLC. MSC reserves new terminations and sends them to UTRAN in RAB Assign Modification. UTRAN modifies connection to new terminations. MSC deletes the old terminations. No incompatibilities.	Same as previous case as MGW does not receive MSLC support in ERQ from RNC.
RAN WG3 ANSWER	No Issue.	Same answer as when MGW does not support MSLC= no issue.
REL5 UTRAN MSLC supported (RANAP updated to mandate use of transport address)	Same as above.	MSC receives an indication that MSLC is support ed for the link. MSC does not reserve new terminations and sends RAB Assign Modification without new transport address. UTRAN performs modification of link characteristics as requested. UTRAN may NOT decide not to modify link characteristics ? This is desired case but it seems not to have been covered in the CR for RANAP Rel5 – would appear to still need to be changed.
RAN WG3 ANSWER	Same answer as above case= no issue.	Same answer as for the Rel 4 UTRAN= no issue.

The table shows there is no more issues for the R4 RNC now implementing the change.
The table shows that for Rel99 RNC, there is no fault but it is up to the MSC-Server to wait for the notification from MGW until RAB Modification Response is received.
The receipt of a successful RAB Modification Response means that the UTRAN has successfully performed the modification of the RAB parameters and commits to these new RAB Parameters to ensure the support of the service.

2. Actions:

RAN3 kindly asks CN4 to make the appropriate changes in the specifications under their responsibilities.

3. Date of Next RAN3 Meetings:

RAN3#30   24th – 28th June 2002 Sophia Antipolis, France

RAN3#31   19th – 23th August 2002 Stockholm, Sweden

CR-Form-v5

CHANGE REQUEST

⌘   **25.413 CR 476**   ⌘**rev 1** ⌘   Current version: **4.4.0** ⌘

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

Proposed change affects: ⌘   (U)SIM ☐   ME/UE ☐   Radio Access Network **X**   Core Network **X**

Title: ⌘	Transport Layer Address at RAB modification	
Source: ⌘	Ericsson	
Work item code: ⌘	TEI	***Date:*** ⌘ 2002-05-15

Category: ⌘ **F**	***Release:*** ⌘ REL-4

Use <u>one</u> 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)*
Detailed explanations of the above categories can
be found in 3GPP TR 21.900.

Use <u>one</u> 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)*

Reason for change: ⌘	The procedure text relating to the handling of RAB modifications currently allows a R99 and REL-4 RNC to decide whether to make use of provided Transport Layer Information or not. A liaison from CN4 (R3-021146) informed RAN3 that when MSLC is not supported for the link between a RNC (R99 or REL-4) and the MGW, and the RNC decides to ignore the provided Transport Layer Information the result will be that wrong bearer is released by the CN since the MSC currently assumes that the bearer is modified to the new terminations and deletes the old terminations. The situation where the RNC does not use the provided addresses would normally only appear when the bandwidth requirement for the modified RAB is less than currently established one. It was agreed during RAN#29 to remove the optionality from Rel4.
Summary of change: ⌘	The RNC shall during RAB modification make use of the new Transport Layer Information if provided. <u>Impact assessment towards the previous version of the specification (same release):</u> This CR has isolated impact towards the previous version of the specification (same release). The impact can be considered isolated because it only affects RAB Modification when: • MSLC is not supported for the link between RNC and MGW; • and the RNC applies the option to not make use of the provided Transport Layer Information. This CR has an impact under functional point of view since the current optionality in the RNC is restricted by removing the possibility for the "abnormal condition" where the RNC does not make use of the new Transport Layer Information

	⌘	provided at RAB Modification.
Consequences if not approved:	⌘	The wrong bearer may be released for the RAB modification case described above.

Clauses affected:	⌘	8.2.2

Other specs affected:	⌘	☐ Other core specifications	⌘	none
		☐ Test specifications		
		☐ O&M Specifications		

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/3G_Specs/CRs.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.

8.2 RAB Assignment

8.2.1 General

The purpose of the RAB Assignment procedure is to establish new RABs and/or to enable modifications and/or releases of already established RABs for a given UE. The procedure uses connection oriented signalling.

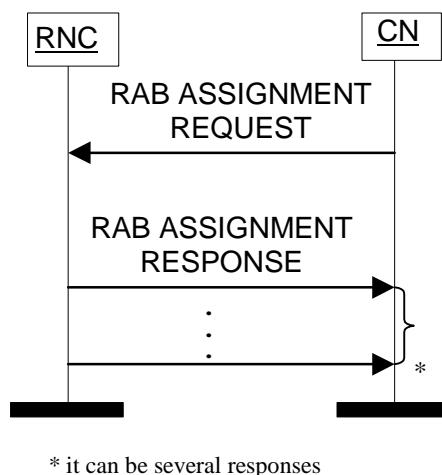## 8.2.2 Successful Operation

* it can be several responses

Figure 1: RAB Assignment procedure. Successful operation.

The CN shall initiate the procedure by sending a RAB ASSIGNMENT REQUEST message. When sending the RAB ASSIGNMENT REQUEST message, the CN shall start the $T_{RABAssgt}$ timer.

The CN may request UTRAN to:

- establish,

- modify,

- release

one or several RABs with one RAB ASSIGNMENT REQUEST message.

The CN shall include in the RAB ASSIGNMENT REQUEST message at least one request to either establish/modify or release a RAB.

The message shall contain the information required by the UTRAN to build the new RAB configuration, such as:

- list of RABs to establish or modify with their bearer characteristics;

- list of RABs to release.

For each RAB requested to establish, the message shall contain:

- RAB ID.

- NAS Synchronisation Indicator (only when available).

- RAB parameters (including e.g. Allocation/Retention Priority).

- User Plane Information (i.e required User Plane Mode and required UP Mode Versions).

- Transport Layer Information.

- PDP Type Information (only for PS)

- Data Volume Reporting Indication (only for PS).

- DL GTP-PDU sequence number (only when GTP-PDU sequence number is available in cases of intersystem change from GPRS to UMTS or when establishing a RAB for an existing PDP context or in some further cases described in [21]).

- UL GTP-PDU sequence number (only when GTP-PDU sequence number is available in cases of intersystem change from GPRS to UMTS or when establishing a RAB for an existing PDP context or in some further cases described in [21]).

- DL N-PDU sequence number (only when N-PDU sequence number is available in case of intersystem change from GPRS to UMTS or in some further cases described in [21]).

- UL N-PDU sequence number (only when N-PDU sequence number is available in case of intersystem change from GPRS to UMTS or in some further cases described in [21]).

For each RAB requested to modify, the message may contain:

- RAB ID (mandatory).

- NAS Synchronisation Indicator.

- RAB parameters.

- Transport Layer Information.

- User Plane Information.

The *Transport Layer Information* IE may be present at a RAB modification except in the case when the only other present IE, besides the *RAB ID* IE, is the *NAS Synchronisation Indicator* IE.

At a RAB modification, the *RAB parameter* IE and the *User Plane Information* IE shall be present in RAB ASSIGNMENT REQUEST message only when any previously set value is requested to be modified.

If, for a RAB requested to be modified, one (or more) of these IEs except *RAB ID* IE are not present in RAB ASSIGNMENT REQUEST message the RNC shall continue to use the value(s) currently in use for the not present IEs.

For each RAB request to release, the message shall contain:

- RAB ID.

- Cause.

Upon reception of the RAB ASSIGNMENT REQUEST message UTRAN shall execute the requested RAB configuration. The CN may indicate that RAB QoS negotiation is allowed for certain RAB parameters and in some cases also which alternative values to be used in the negotiation.

The same RAB ID shall only be present once in the whole RAB ASSIGNMENT REQUEST message.

The RAB ID shall identify uniquely the RAB for the specific CN domain for the particular UE, which makes the RAB ID unique over the Iu connection on which the RAB ASSIGNMENT REQUEST message is received. When a RAB ID already in use over that particular Iu instance is used, the procedure is considered as modification of that RAB.

The RNC shall pass the contents of *RAB ID* IE to the radio interface protocol for each RAB requested to establish or modify.

The RNC shall establish or modify the resources according to the values of the *Allocation/Retention Priority* IE (priority level, pre-emption indicators, queuing) and the resource situation as follows:

- The RNC shall consider the priority level of the requested RAB, when deciding on the resource allocation.

- If the requested RAB is allowed for queuing and the resource situation so requires, RNC may place the RAB in the establishment queue.

- The priority levels and the pre-emption indicators may (singularly or in combination) be used to determine whether the RAB assignment has to be performed unconditionally and immediately. If the requested RAB is marked as "may trigger pre-emption" and the resource situation so requires, RNC may trigger the pre-emption procedure which may then cause the forced release of a lower priority RAB which is marked as "pre-emptable". Whilst the process and the extent of the pre-emption procedure is operator dependent, the pre-emption indicators, if given in the RAB ASSIGNMENT REQUEST message, shall be treated as follows:

  1. The values of the last received *Pre-emption Vulnerability* IE and *Priority Level* IE shall prevail.

  2. If the *Pre-emption Capability* IE is set to "may trigger pre-emption", then this allocation request may trigger the pre-emption procedure.

  3. If the *Pre-emption Capability* IE is set to "shall not trigger pre-emption", then this allocation request shall not trigger the pre-emption procedure.

  4. If the *Pre-emption Vulnerability* IE is set to "pre-emptable", then this connection shall be included in the pre-emption process.

  5. If the *Pre-emption Vulnerability* IE is set to "not pre-emptable", then this connection shall not be included in the pre-emption process.

  6. If the *Priority Level* IE is set to "no priority" the given values for the *Pre-emption Capability* IE and *Pre-emption Vulnerability* IE shall not be considered. Instead the values "shall not trigger pre-emption" and "not pre-emptable" shall prevail.

- If the *Allocation/Retention Priority* IE is not given in the RAB ASSIGNMENT REQUEST message, the allocation request shall not trigger the pre-emption process and the connection may be pre-empted and considered to have the value "lowest" as priority level. Moreover, queuing shall not be allowed.

- The UTRAN pre-emption process shall keep the following rules:

  1. UTRAN shall only pre-empt RABs with lower priority, in ascending order of priority.

  2. The pre-emption may be done for RABs belonging to the same UE or to other UEs.

If the *NAS Synchronisation Indicator* IE is contained in the RAB ASSIGNMENT REQUEST message, the RNC shall pass it to the radio interface protocol for the transfer to the UE.

If the RAB ASSIGNMENT REQUEST message includes the *PDP Type Information* IE, the UTRAN may use this to configure any compression algorithms.

If the *Service Handover* IE is included, this tells if the RAB

- should be handed over to GSM, i.e. from NAS point of view, the RAB should be handed over to GSM as soon as possible although the final decision whether to perform a handover to GSM is still made in UTRAN.

- should not be handed over to GSM, i.e. from NAS point of view, the RAB should remain in UMTS as long as possible although the final decision whether to perform a handover to GSM is still made in UTRAN.

- shall not be handed over to GSM, i.e. the RAB shall never be handed over to GSM. This means that UTRAN shall not initiate handover to GSM for the UE unless the RABs with this indication have first been released with the normal release procedures.

The value of the *Service Handover* IE is valid throughout the lifetime of the RAB or until changed by a RAB modification.

The *Service Handover* IE shall only influence decisions made regarding UTRAN initiated inter-system handovers.

If the *Service Handover* IE is not included, the decision whether to perform an inter-system handover to GSM is only an internal UTRAN matter.

UTRAN shall report to CN, in the first RAB ASSIGNMENT RESPONSE message, the result for all the requested RABs, such as:

- List of RABs successfully established or modified.

- List of RABs released.

- List of RABs queued.

- List of RABs failed to establish or modify.

- List of RABs failed to release.

The same RAB ID shall only be present once in the whole RAB ASSIGNMENT RESPONSE message.

For each RAB successfully established towards the PS domain, the RNC shall include the *Transport Layer Address* IE and the *Iu Transport Association* IE in the RAB ASSIGNMENT RESPONSE message.

For each RAB successfully modified or released towards the PS domain, for which data volume reporting has been requested, the RNC shall include the *DL Data Volumes* IE in the RAB ASSIGNMENT RESPONSE message.

For each RAB successfully released towards the PS domain, the RNC shall include in the RAB ASSIGNMENT RESPONSE message, if available, the *DL GTP-PDU Sequence Number* IE and the *UL GTP-PDU Sequence Number* IE, if the release was initiated by UTRAN.

The RNC shall report in the RAB ASSIGNMENT RESPONSE message at least one RAB:

- setup/modified or

- released or

- queued or

- failed to setup/modify or

- failed to release.

If any alternative RAB parameter values have been used when establishing or modifying a RAB, these RAB parameter values shall be included in the RAB ASSIGNMENT RESPONSE message.

For the CS domain, UTRAN shall report the outcome of a specific RAB to establish or modify only after the transport network control plane signalling, which is needed for RAB establishment or modification, has been executed. At a RAB establishment, the transport network control plane signalling shall use the *Transport Layer Address* IE and *Iu Transport Association* IE. At a RAB modification when *Transport Layer Address* IE and *Iu Transport Association* IE is included, it is up to the RNC to decide if any transport network control plane signalling shall be performed or if the already existing transport bearer shall be used. If the RNC decides to establish a new transport bearer,. the The transport network control plane signalling shall then use the possibly included *Transport Layer Address* IE and *Iu Transport Association* IE. Then the switch over to this new transport bearer shall be done immediately after transport bearer establishment and initialisation of the user plane mode. If *Transport Layer Address* IE and *Iu Transport Association* IE is not included, then the RNC decides tomay modify the already existing transport bearer, the transport network control plane signalling shall not use the possibly included *Transport Layer Address* IE and *Iu Transport Association* IE. That is, re-binding with *Iu Transport Association* IE shall not be done.

For each RAB successfully modified towards the PS domain, if the RNC has changed the *Transport Layer Address* IE and/or the *Iu Transport Association* IE, it shall include the new value(s) in the RAB ASSIGNMENT RESPONSE message.

Before reporting the successful outcome of a specific RAB to establish or modify, the RNC shall have executed the initialisation of the user plane mode as requested by the CN in the *User Plane Mode* IE. If the RNC can not initialise the requested user plane mode for any of the user plane mode versions in the *UP Mode Versions* IE according to the rules for initialisation of the respective user plane mode versions, as described in [6], the RAB Assignment shall fail with the cause value "RNC unable to establish all RFCs".

In case of establishment of a RAB for the PS domain, the CN must be prepared to receive user data before the RAB ASSIGNMENT RESPONSE message has been received.

If none of the RABs have been queued, the CN shall stop timer $T_{RABAssgt}$. And the RAB Assignment procedure terminates. In that case, the procedure shall also be terminated in UTRAN.

When the request to establish or modify one or several RABs is put in the queue, UTRAN shall start the timer $T_{QUEUING}$. This timer specifies the maximum time for queuing of the request of establishment or modification. The same timer $T_{QUEUING}$ is supervising all RABs being queued.

For each RAB that is queued the following outcomes shall be possible:

- successfully established or modified;

- failed to establish or modify;

- failed due to expiry of the timer $T_{QUEUING}$.

For the queued RABs, indicated in the first RAB ASSIGNMENT RESPONSE message, UTRAN shall report the outcome of the queuing for every RAB individually or for several RABs in subsequent RAB ASSIGNMENT RESPONSE message(s). This is left to implementation. UTRAN shall stop $T_{QUEUING}$ when all RABs have been either successfully established or modified or failed to establish or modify. The RAB Assignment procedure is then terminated both in CN and UTRAN when all RABs have been responded to.

When CN receives the response that one or several RABs are queued, CN shall expect UTRAN to provide the outcome of the queuing function for each RAB before expiry of the $T_{RABAssgt}$ timer. In case the timer $T_{RABAssgt}$ expires, the CN shall consider the RAB Assignment procedure terminated and the RABs not reported shall be considered as failed.

In the case the timer $T_{QUEUING}$ expires, the RAB Assignment procedure terminates in UTRAN for all queued RABs, and UTRAN shall respond for all of them in one RAB ASSIGNMENT RESPONSE message. The RAB Assignment procedure shall also be terminated in CN.

In case a request to modify or release a RAB contains the RAB ID of a RAB being queued, the RAB shall be taken out of the queue and treated according to the second request. The first request shall be responded to as a RAB failed to setup or modify with the cause value "Request superseded".

When UTRAN reports unsuccessful establishment/modification of a RAB, the cause value should be precise enough to enable the core network to know the reason for unsuccessful establishment/modification. Typical cause values are: "Requested Traffic Class not Available", "Invalid RAB Parameters Value", "Requested Maximum Bit Rate not Available", "Requested Maximum Bit Rate for DL not Available", "Requested Maximum Bit Rate for UL not Available", "Requested Guaranteed Bit Rate not Available", "Requested Guaranteed Bit Rate for DL not Available", "Requested Guaranteed Bit Rate for UL not Available", "Requested Transfer Delay not Achievable", "Invalid RAB Parameters Combination", "Condition Violation for SDU Parameters", "Condition Violation for Traffic Handling Priority", "Condition Violation for Guaranteed Bit Rate", "User Plane Versions not Supported", "Iu UP Failure", "Iu Transport Connection Failed to Establish".

If the RAB ID of a RAB requested to be released is unknown in the RNC, this shall be reported as a RAB failed to release with the cause value "Invalid RAB ID".

The RNC may indicate an impending directed retry attempt to GSM by sending RAB ASSIGNMENT RESPONSE message with a RAB ID included in the list of RABs failed to setup and a cause value of "Directed Retry".

The RNC shall be prepared to receive a RAB ASSIGNMENT REQUEST message containing a *RABs To Be Released* IE at any time and shall always reply to it. If there is an ongoing RAB Assignment procedure for a RAB indicated within the *RABs To Be Released* IE, the RNC shall discard the preceding RAB Assignment procedure for that specific RAB, release any related resources and report the released RAB within the RAB ASSIGNMENT RESPONSE message.

After sending RAB ASSIGNMENT RESPONSE message containing RAB ID within the *RABs Released* IE, the RNC shall be prepared to receive new establishment request of a RAB identified by the same RAB ID

8.2.3 Unsuccessful Operation

The unsuccessful operation for this Class 3 Elementary procedure is described under the Successful Operation chapter.

8.2.4 Abnormal Conditions

For a RAB requested to be modified, if only the *RAB ID* IE, the *NAS Synchronisation Indicator* IE and the *Transport Layer Information* IE are included in the *First Setup or Modify Item* IE this RAB shall not be modified, and the

corresponding *RAB ID* IE with *Cause* IE shall be included in the "RABs Failed To Setup Or Modify List" in the RAB ASSIGNMENT RESPONSE message.

If, for a RAB requested to be setup towards the PS domain, any of these following IEs:

- *PDP Type Information*.

- *Data Volume Reporting Indication*.

is not present, the RNC shall continue with the procedure.

Interactions with Relocation Preparation procedure:

If the relocation becomes necessary during the RAB Assignment procedure, the RNC may interrupt the ongoing RAB Assignment procedure and initiate the Relocation Preparation procedure as follows:

1. The RNC shall terminate the RAB Assignment procedure indicating unsuccessful RAB configuration modification:

   - for all queued RABs;

   - for RABs not already established or modified, and

   - for RABs not already released;

   with the cause "Relocation triggered".

2. The RNC shall terminate the RAB Assignment procedure indicating successful RAB configuration modification:

   - for RABs already established or modified but not yet reported to the CN, and

   - for RABs already released but not yet reported to the CN.

3. The RNC shall report this outcome of the procedure in one RAB ASSIGNMENT RESPONSE message.

4. The RNC shall invoke relocation by sending the RELOCATION REQUIRED message to the active CN node(s).

5. The CN shall terminate the RAB Assignment procedure at reception of the RAB ASSIGNMENT RESPONSE message.

Directed retry from UMTS to GSM (CS domain only):

In the case where the RNC has no RAB configuration for a particular UE in the CS domain, and the RNC receives a RAB ASSIGNMENT REQUEST message for that UE requesting the establishment of one RAB only, a directed retry to perform inter-system handover to GSM may be initiated. In this case the RNC may interrupt the ongoing RAB Assignment procedure and initiate the Relocation Preparation procedure as follows:

1. The RNC shall terminate the RAB Assignment procedure indicating unsuccessful RAB configuration modification of that RAB with the cause "Directed retry".

2. The RNC shall report this outcome of the procedure in one RAB ASSIGNMENT RESPONSE message.

3. The RNC shall invoke relocation by sending the RELOCATION REQUIRED message to the active CN node, with the cause "Directed Retry".

4. The CN shall terminate the RAB Assignment procedure at reception of the RAB ASSIGNMENT RESPONSE message.