

**Technical Specification Group Services and System Aspects TSGS#9(00)0487
Meeting #9, Kapolei, Hawaii, USA, 25-28 September 2000**

Source: TSG SA WG2
Title: CR 184r2 on 23.060 v.3.4.0
Agenda Item: 11

In addition to the CRs on 23.060 presented in SP-000448, SA2 presents this additional CR to TSG SA plenary #9, approved recently by e-mail on the S2 reflector.

Spec	Rel	CR #	Cat	Title	S2 tdoc #
23.060	R99	184r2	F	Clarification to Service Request procedure	S2-001638

Annex:

Summary of the CRs to 23.060 v.3.4.0 presented by SA2 to SA #9:

CRs on 23.060 v.3.4.0

Spec	Rel	CR #	Cat	Title	S2 tdoc #
23.060	R99	147r3	F	Change of the Cell update procedure	S2-001409
23.060	R99	170	F	DTM: simultaneous LAU and RAU procedures on an SDCCH	S2-001362
23.060	R99	171r1	F	DTM: reuse of the GPRS Suspension procedure in cells with no DTM capabilities	S2-001523
23.060	R99	172r1	F	DTM: download of the IMSI from the SGSN to the BSC	S2-001524
23.060	R99	173	F	CS Paging procedure in UMTS	S2-001371
23.060	R99	174	F	Clarification on P-TMSI and P-TMSI signature at Detach	S2-001372
23.060	R99	175r1	F	Serving RNS Relocation Procedure	S2-001532
23.060	R99	176r1	F	DRX and MS network capabilities within UMTS	S2-001533
23.060	R99	177r1	F	Compatibility GTPv0/GTPv1 in case of SGSN change	S2-001531
23.060	R99	178r1	F	Correction on Iu Release Procedure	S2-001654
23.060	R99	182r1	F	Removal of PDP type OSP:IHOSS in R99	S2-001536
23.060	R99	184r2	F	Clarification to Service Request procedure	S2-001638

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

23.060 CR 184 r2

Current Version: **3.4.0**

GSM (AA.BB) or 3G (AA.BBB) specification number ↑

↑ CR number as allocated by MCC support team

For submission to: **TSG SA#9**
list expected approval meeting # here ↑

for approval
for information

strategic
non-strategic (for SMG use only)

Form: CR cover sheet, version 2 for 3GPP and SMG The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc

Proposed change affects: (U)SIM ME UTRAN / Radio Core Network
(at least one should be marked with an X)

Source: **S2**

Date: **2000-08-10**

Subject: **Clarification to Service Request procedure**

Work item: **GSM-UMTS Interworking**

Category:
F Correction
A Corresponds to a correction in an earlier release
B Addition of feature
C Functional modification of feature
D Editorial modification
(only one category shall be marked with an X)

Release:
Phase 2
Release 96
Release 97
Release 98
Release 99
Release 00

Reason for change:

This CR proposes:
- If the Service Request procedure was initiated when MS is in PMM-CONNECTED mode, then the receipt of the Service Accept message in the MS will lead to a successful completion of the procedure.

Clauses affected: **6.12.1**

Other specs affected:
Other 3G core specifications → List of CRs: **TS 24.008 CR 244 r2**
Other GSM core specifications → List of CRs:
MS test specifications → List of CRs:
BSS test specifications → List of CRs:
O&M specifications → List of CRs:

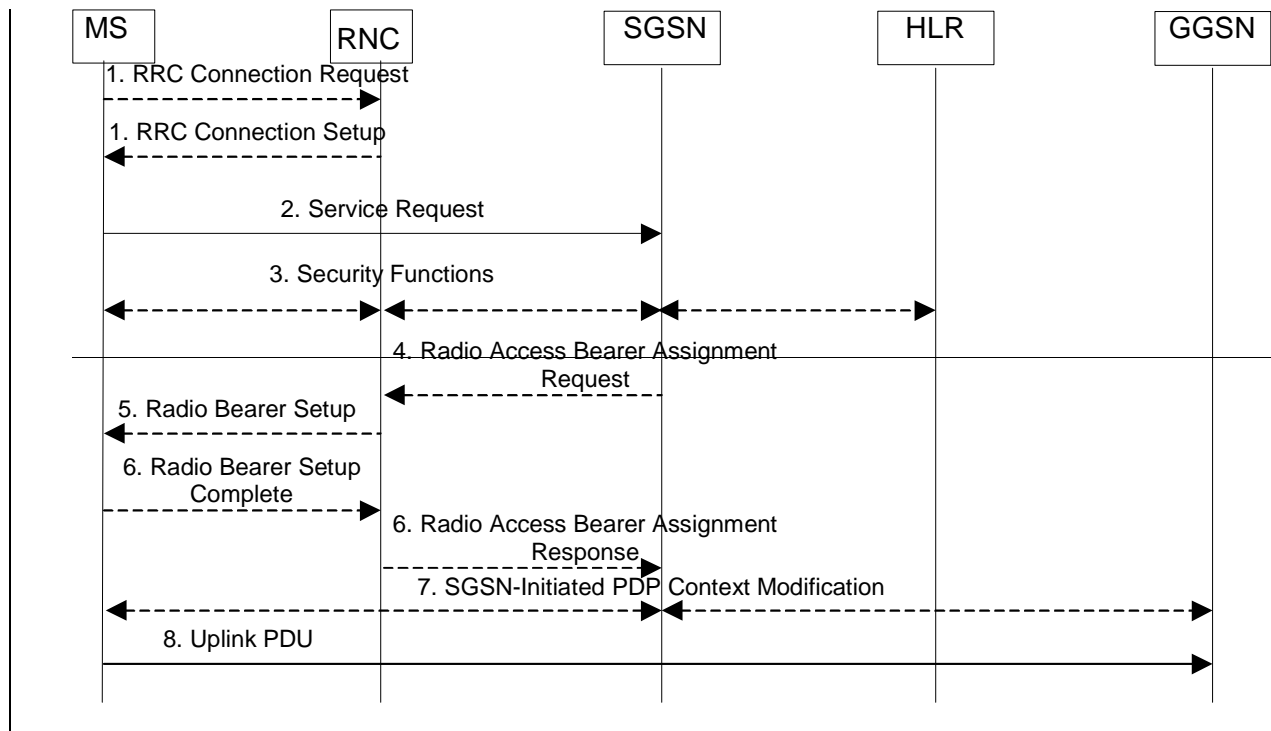
Other comments:

6.12 Service Request Procedure (UMTS Only)

The Service Request procedure is used by a 3G-MS in PMM-IDLE state to request the establishment of a secure connection to a 3G-SGSN. The MS in PMM-IDLE state initiates this procedure in order to send uplink signalling messages (e.g., Activate PDP Context Request), user data, or as paging response. This procedure is also used by an MS in PMM-CONNECTED state to request resource reservation for active PDP contexts.

6.12.1 Service Request Initiated by MS Procedure

The MS in PMM-IDLE state sends the Service Request message to the 3G-SGSN in order to establish the PS signalling connection for the upper layer signalling or for the resource reservation for active PDP context(s). After receiving the Service Request message the 3G-SGSN may perform authentication and it shall perform the security mode procedure. After the establishment of the secure PS signalling connection to a 3G-SGSN the MS may send signalling messages, e.g., Activate PDP Context Request, to the 3G-SGSN, or the 3G-SGSN may start the resource reservation for the active PDP contexts depending on the requested service in the Service Request message. This procedure is also used by an MS in PMM-CONNECTED state to request the resource reservation for the active PDP contexts.



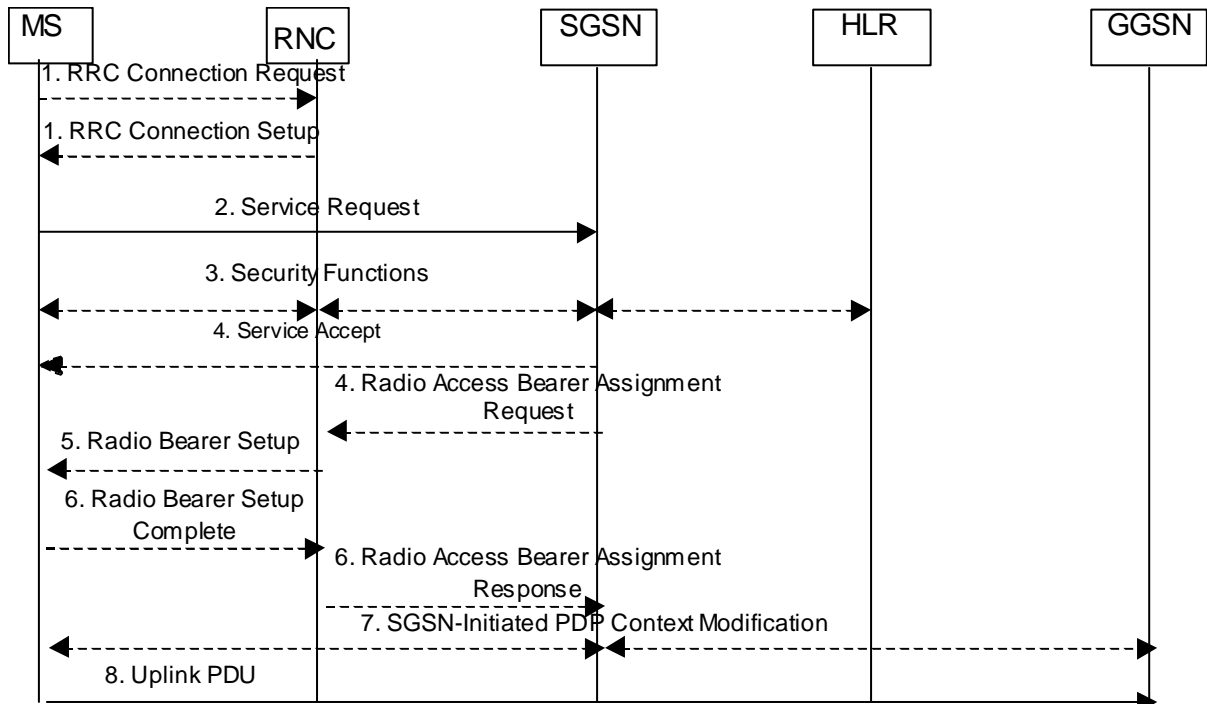


Figure 1: Service Request Initiated by MS Procedure

- 1) The MS establishes an RRC connection, if none exists for CS traffic.
- 2) The MS sends a Service Request (P-TMSI, RAI, CKSN, Service Type) message to the SGSN. Service Type specifies the requested service. Service Type shall indicate one of the following: Data or Signalling. At this point, the SGSN may perform the authentication procedure.

If Service Type indicates Data then a signalling connection is established between the MS and the SGSN, and resources for active PDP context(s) are allocated, i.e., RAB establishment for the activated PDP context(s).

If Service Type indicates Signalling then the signalling connection is established between the MS and the SGSN for sending upper-layer signalling messages, e.g., Activate PDP Context Request. The resources for active PDP context(s) are not allocated.
- 3) The SGSN shall perform the security functions if the service request was initiated by an MS in PMM-IDLE state.
- 4) ~~If the network is in PMM-CONNECTED state and the Service Type indicates Data, the SGSN shall respond with a Service Accept message towards the MS, in case the service request can be accepted.~~ In case Service Type indicates Data, the SGSN sends a Radio Access Bearer Assignment Request (NSAPIRAB ID(s), TEID(s), QoS Profile(s), SGSN IP Address(es)) message to re-establish radio access bearer for every activated PDP context.
- 5) The RNC indicates to the MS the new Radio Bearer Identity established and the corresponding RAB ID with the RRC radio bearer set up procedure.
- 6) SRNC responds with the Radio Access Bearer Assignment Response (RAB ID(s), TEID(s), QoS Profile(s), RNC IP Address(es)) message. The GTP tunnel(s) are established on the Iu interface. If the RNC returns a Radio Access Bearer Assignment Response message with a cause indicating that the requested QoS profile(s) can not be provided, e.g., "Requested Maximum Bit Rate not Available", then the SGSN may send a new Radio Access Bearer Assignment Request message with different QoS profile(s). The number of re-attempts, if any, as well as how the new QoS profile(s) values are determined is implementation dependent.
- 7) For each RAB re-established with a modified QoS profile, the SGSN initiates a PDP Context Modification procedure to inform the MS and the GGSN of the new negotiated QoS profile for the corresponding PDP context.
- 8) The MS sends the uplink packet.

For Service Type = Signalling, the MS knows that the Service Request message was successfully received in the SGSN when the MS receives the RRC Security Mode Control Command message.

For Service Type = Data, in PMM-IDLE, the MS knows that the Service Request was successfully received when the MS receives the ~~Radio Bearer Setup~~ RRC Security Mode Control Command message from the RNC.; in PMM-CONNECTED state, the MS knows that the Service Request was successfully received when the MS receives the Service Accept message.

Note: The reception of the Service Accept message does not imply the successful re-establishment of the RAB(s).

For any Service Type, in case the service request cannot be accepted, the network returns a Service Reject message to the MS with an appropriate cause value.

For Service Type = Data, in case the SGSN fails to re-establish RAB(s) for the PDP context(s), the SGSN determines if an SM procedure, such as SGSN-Initiated PDP Context Modification or PDP Context Deactivation, should be initiated. The appropriate action depends on the QoS profile of the PDP context and is an operator choice.