3GPP TSG_CN **Tdoc NP-000436**
Plenary Meeting #9, Oahu, Hawaii
20th – 22nd September 2000.

Source: **TSG_N WG 1**

Title: **CRs to R99 Work Item GSM/UMTS Interworking**

"Removal of "Service Accept" message

Agenda item: **8.16.1**

Document for: **APPROVAL**

Introduction:

This document contains 1 CRs on R99 Work Item GSM/ UMTS Interworking, that has been agreed by TSG_N WG1, and is forwarded to TSG_N Plenary meeting #9 for approval.
Another CR is presented for information.

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C	Ver_N	Notes
24.008	244	2	N1-001001	R99	Clarification to Service Request	F	3.4.1	3.5.0	Approva
23.060	??		N1-001031	R99	Clarification to Service Request	F	3.4.0		info

3GPP/SMG Meeting TSG-CN1 #13
Vancouver, Canada, 14-18 August 2000

Document N1-001001
revised N1-000984
revised N1-000885

CHANGE REQUEST

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24.008	CR	244 r2	Current Version:	3.4.1

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	TSG CN #9	For approval	X	strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

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: *(at least one should be marked with an X)* (U)SIM [ ] ME [X] UTRAN / Radio [ ] Core Network [X]

Source: TSGN1 **Date:** 2000-08-08

Subject: Clarification to Service Request procedure

Work item: GSM-UMTS Interworking

Category: *(only one category shall be marked with an X)*

F	Correction	X	**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature			Release 97	
C	Functional modification of feature			Release 98	
D	Editorial modification			Release 99	X
				Release 00	

Reason for change:

This CR proposes that:

- If the Service Request procedure was initiated when the MS is in PMM-IDLE mode, then an indication from the lower layers that the security mode control procedure is completed shall be treated as a successful completion of the procedure.
- If the Service Request procedure was initiated when MS is in PMM-CONNECTED mode, then the reception of the SERVICE ACCEPT message, shall be treated as a completion of the procedure when the Service Type indicates ‘data’.

Clauses affected: 4.7.13, 9.4.21, 9.4.22, 11.2.2

Other specs affected:

Other 3G core specifications	X	→ List of CRs:
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:

4.7.13 Service Request procedure (UMTS only)

The purpose of this procedure is to transfer the PMM mode from PMM-IDLE to PMM-CONNECTED mode, and/or to assign radio access bearer in case of PDP contexts are activated without radio access bearer assigned. In latter case, the PMM mode may be PMM-IDLE or PMM-CONNECTED mode. This procedure is used for;

- the initiation of CM layer service (e.g. SM or SMS) procedure from the MS in PMM-IDLE mode.
- the network to transfer down link signalling,
- uplink and downlink user packet.

For downlink transfer of signalling or user packet, the trigger is given from the network by the paging request procedure, which is out of scope of this specification.

Service type can take either of the following values, “signalling”, “data” or “paging response”. Each of the values shall be selected according to the criteria to initiate the Service request procedure.

The criteria to invoke the Service request procedure are when;

a) the MS has any signalling message, that requires security protection, to be sent to the network in PMM-IDLE mode (i.e., no secure PS signalling connection has been established). In this case, the service type shall be set to “signalling”.

b) the MS, either in PMM-IDLE and PMM-CONNECTED mode, has pending user packet to be sent and no radio access bearer is established for the PDP context. The procedure is initiated by an indication from the lower layers (see TS 24.007). In this case, the service type shall be set to “data”.

c) the MS receives a paging request for PS domain from the network in PMM-IDLE mode. In this case, the service type shall be set to “paging response”.

After completion of a Service request procedure, the pending service is resumed and uses then the connection established by the procedure. If the service type is indicating “data”, then the radio access bearers for all the activated PDP contexts are re-established. The selective re-assignment capability is not supported for the simplicity of the function.

4.7.13.1 Service Request procedure initiation

The MS initiates the Service request procedure by sending a SERVICE REQUEST message. The timer T3317 shall be started after the SERVICE REQUEST message has been sent and state GMM-SERVICE-REQUEST-INITIATED is entered. The message SERVICE REQUEST shall contain the P-TMSI and the Service type shall indicate either data, signalling or paging response.

4.7.13.2 GMM common procedure initiation

The network may initiate GMM common procedures, e.g. the GMM identification or the GMM authentication and ciphering procedure, depending on the received information such as GPRS ciphering key sequence number and P-TMSI.

4.7.13.3 Service request procedure accepted by the network

An indication from the lower layers that the security mode ~~setting~~ control procedure is completed, or reception of a SERVICE ACCEPT message, shall be treated as a successful completion of the procedure. The timer T3317 shall be stopped, and the MS enters GMM-REGISTERED state and PMM-CONNECTED mode.

4.7.13.4 Service request procedure not accepted by the network

- If the Service request cannot be accepted, the network returns a SERVICE REJECT message to the mobile station. An MS that receives a SERVICE REJECT message stops timer T3317. The MS shall then take different actions depending on the received reject cause value:

  # 3 (Illegal MS); or

  # 6 (Illegal ME)

- The MS shall set the GPRS update status to GU3 ROAMING NOT ALLOWED (and shall store it according to section 4.1.3.2) and enter the state GMM-DEREGISTERED. Furthermore, it shall delete any P-TMSI, P-TMSI signature, RAI and GPRS ciphering key sequence number and shall consider the SIM as invalid for GPRS services until switching off or the SIM is removed.

- A GPRS MS operating in MS operation mode A shall in addition set the update status to U3 ROAMING NOT ALLOWED, shall delete any TMSI, LAI and ~~GPRS~~ ciphering key sequence number. The new MM state is MM IDLE. The SIM shall be considered as invalid also for non-GPRS services until switching off or the SIM is removed.

  # 7 (GPRS services not allowed)

- The MS shall set the GPRS update status to GU3 ROAMING NOT ALLOWED (and shall store it according to section 4.1.3.2.9) and shall delete any P-TMSI, P-TMSI signature, RAI and GPRS ciphering key sequence number. The SIM shall be considered as invalid for GPRS services until switching off or the SIM is removed. The new state is GMM-DEREGISTERED.

  # 9 (MS identity cannot be derived by the network)

- The MS shall set the GPRS update status to GU2 NOT UPDATED (and shall store it according to section 4.1.3.2), enter the state GMM-DEREGISTERED, and shall delete any P-TMSI, P-TMSI signature, RAI and GPRS ciphering key sequence number. Subsequently, the MS may automatically initiate the GPRS attach procedure.

  # 10 (Implicitly detached)

- The MS shall change to state GMM-DEREGISTERED.NORMAL-SERVICE. The MS shall then perform a new attach procedure. The MS should also activate PDP context(s) to replace any previously active PDP contexts.

NOTE: In some cases, user interaction may be required and then the MS cannot activate the PDP context(s) automatically.

  # 11 (PLMN not allowed);

  # 12 (Location area not allowed); or

  # 13 (Roaming not allowed in this location area)

- The MS shall delete any RAI, P-TMSI, P-TMSI signature and GPRS ciphering key sequence number, shall set the GPRS update status to GU3 ROAMING NOT ALLOWED (and shall store it according to section 4.1.3.2) and enter the state GMM-DEREGISTERED.

- A GPRS MS operating in MS operation mode A shall in addition set the update status to U3 ROAMING NOT ALLOWED and shall delete any TMSI, LAI and ~~GPRS~~ ciphering key sequence number. The new MM state is MM IDLE.

- The MS shall store the LAI or the PLMN identity in the appropriate forbidden list, i.e. in the “forbidden PLMN list” for cause #11, in the list of “forbidden location areas for regional provision of service” for cause #12 or in the list of “forbidden location areas for roaming” for cause #13. If #11or #13 was received, the MS shall perform a PLMN selection instead of a cell selection.

  # 40 (No PDP context activated)

- The MS shall deactivate locally all active PDP contexts and the MS shall enter the state GMM-REGISTERED.NORMAL-SERVICE. The MS may also activate PDP context(s) to replace any previously active PDP contexts.

NOTE: In some cases, user interaction may be required and then the MS cannot activate the PDP context(s) automatically.

Other values are considered as abnormal cases. The specification of the MS behaviour in those cases is described in section 4.7.13.5.

4.7.13.5 Abnormal cases in the MS

The following abnormal cases can be identified:

a) Access barred because of access class control

The Service request procedure shall not be started. The MS stays in the current serving cell and applies normal cell reselection process. The Service request procedure may be started by CM layer if it is still necessary, i.e. when access is granted or because of a cell change.

b) Lower layer failure before the security mode ~~setting~~ control procedure is completed, SERVICE ACCEPT or SERVICE REJECT message is received

The procedure shall be aborted.

c) T3317 expired

The MS shall enter GMM-REGISTERED state.

If the MS is in PMM-IDLE mode then ~~T~~the procedure shall be aborted and the MS shall initiate a PS signalling connection release.

If the MS is in PMM-CONNECTED mode, then an expiry of the timer T3317 shall be treated as a completion of the service request procedure.

d) SERVICE REJECT received other causes than those treated in section 4.7.x.4

The procedure shall be aborted.

e) Routing area update procedure is triggered

If a cell change into a new routing area occurs and the necessity of routing area update procedure is determined before the security mode ~~setting~~ control procedure is completed, a SERVICE ACCEPT or SERVICE REJECT message has been received, the Service request procedure shall be aborted and the routing area updating procedure is started immediately. Follow-on request pending may be indicated in the ROUTING AREA UPDATE REQUEST for the service, which was the trigger of the aborted Service request procedure, to restart the pending service i~~f~~tself or the Service Request procedure after the completion of the routing area updating procedure. If the service type of the aborted SERVICE REQUEST was indicating “data”, then the routing area update procedure may be followed by a re-initiated Service request procedure indicating “data”, if it is still necessary.

f) Power off

If the MS is in state GMM-SERVICE-REQUEST-INITIATED at power off, the GPRS detach procedure shall be performed.

g) Procedure collision

If the MS receives a DETACH REQUEST message from the network in state GMM-SERVICE-REQUEST-INITIATED, the GPRS detach procedure shall be progressed and the Service request procedure shall be aborted. If the cause IE, in the DETACH REQUEST message, indicated a “reattach request”, the GPRS attach procedure shall be performed.

4.7.13.6 Abnormal cases on the network side

The following abnormal cases can be identified:

a) Lower layer failure

If a low layer failure occurs before the security mode ~~setting~~ control procedure is completed a SERVICE ACCEPT or SERVICE REJECT message has been sent to the MS, the network enters/stays in PMM-IDLE.

b) Protocol error

If the SERVICE REQUEST message is received with a protocol error, the network shall return a SERVICE REJECT message with one of the following reject causes:

#96: Mandatory information element error;

#99: Information element non-existent or not implemented;

#100: Conditional IE error;

#111: Protocol error, unspecified.

The network stays in PMM-IDLE mode.

~~c.1) SERVICE REQUEST received~~

~~If one or more of the information elements in the SERVICE REQUEST message differ from the ones received within the previous SERVICE REQUEST message, the previously initiated Service request procedure shall be aborted and the new Service request procedure shall be progressed, or.~~

~~If no information element differ, then the SERVICE ACCEPT message shall be resent.~~

c~~.2~~) More than one SERVICE REQUEST received and the procedure has not been completed (i.e., the security mode ~~setting~~ control procedure has not been completed or SERVICE ACCEPT, SERVICE REJECT message has not been sent),

- If one or more of the information elements in the SERVICE REQUEST message differs from the ones received within the previous SERVICE REQUEST message, the previously initiated Service request procedure shall be aborted and the new Service request procedure shall be progressed ;

- If the information elements do not differ, then the network shall continue with the previous Service request procedure and shall not treat any further this SERVICE REQUEST message.

d) ATTACH REQUEST received before the security mode ~~setting~~ control procedure has been completed or an SERVICE ACCEPT or an SERVICE REJECT message has been sent.

If an ATTACH REQUEST message is received and the security mode ~~setting~~ control procedure has not been completed or an SERVICE ACCEPT or an SERVICE REJECT message has not been sent, the network may initiate the GMM common procedures, e.g. the GMM authentication and ciphering procedure. The network may e.g. after a succesful GMM authentication and ciphering procedure execution, abort the Service request procedure, the GMM context and PDP contexts, if any, are deleted and the new ATTACH REQUEST is progressed.

e) ROUTING AREA UPDATE REQUEST message received before the security mode ~~setting~~ control procedure has been completed or an SERVICE ACCEPT or an SERVICE REJECT message has been sent

If an ROUTING AREA UPDATE REQUEST message is received and the security mode ~~setting~~ control procedure has not been completed or an SERVICE ACCEPT or an SERVICE REJECT message has not been sent, the network may initiate the GMM common procedures, e.g. the GMM authentication and ciphering procedure. The network may e.g. after a successful GMM authentication and ciphering procedure execution, abort the Service request procedure and progress the routing area update procedure.

f) If the Service Type indicates 'data' and the network fails to re-establish some or all RAB(s) then the SGSN may determines if 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.

9.4.22 Service Reject (UMTS only)

This message is sent by the network to the UE in order to reject the Service request procedure. See table 9.4.22/TS 24.008.

Message type: Service ~~Accept~~ Reject

Significance: dual

Direction: network to MS

Table 9.4.22/TS 24.008: Contents of Service Reject message content

IEI	Information Element	Type/Reference	Presence	Format	Length
	Protocol discriminator	Protocol discriminator 10.2	M	V	1/2
	Skip indicator	Skip indicator 10.3.1	M	V	1/2
	Service Reject	Message type 10.4	M	V	1
	GMM cause	GMM cause 10.5.5.14	M	V	1

***** Next Modification *****

11.2.2 Timers of GPRS mobility management

Table 11.3/TS 24.008: GPRS Mobility management timers - MS side

TIMER NUM.	TIMER VALUE	STATE	CAUSE OF START	NORMAL STOP	ON THE 1st, 2nd, 3rd, 4th EXPIRY Note 3
T3310	15s	GMM-REG-INIT	ATTACH REQ sent	ATTACH ACCEPT received ATTACH REJECT received	Retransmission of ATTACH REQ
T3311	15s	GMM-DEREG ATTEMPTING TO ATTACH or GMM-REG ATTEMPTING TO UPDATE	ATTACH REJ with other cause values as described in chapter 'GPRS Attach' ROUTING AREA UPDATE REJ with other cause values as described in chapter 'Routing Area Update' Low layer failure	Change of the routing area	Restart of the Attach or the RAU procedure with updating of the relevant attempt counter
T3321	15s	GMM-DEREG-INIT	DETACH REQ sent	DETACH ACCEPT received	Retransmission of the DETACH REQ
T3330	15s	GMM-ROUTING-UPDATING-INITIATED	ROUTING AREA UPDATE REQUEST sent	ROUTING AREA UPDATE ACC received ROUTING AREA UPDATE REJ received	Retransmission of the ROUTING AREA UPDATE REQUEST message

Table 11.3a/TS 24.008: GPRS Mobility management timers – MS side

TIMER NUM.	TIMER VALUE	STATE	CAUSE OF START	NORMAL STOP	ON EXPIRY
T3302	Default 12 min Note 1	GMM-DEREG or GMM-REG	At attach failure and the attempt counter is greater than or equal to 5. At routing area updating failure and the attempt counter is greater than or equal to 5.	At successful attach At successful routing area updating	On every expiry, initiation of the GPRS attach procedure Or RAU procedure
T3312	Default 54 min Note1	GMM-REG	In GSM, when READY state is left. In UMTS, when PMM-CONNECTED mode is left.	When entering state GMM-DEREG	Initiation of the Periodic RAU procedure
T3314 READY (GSM only)	Default 44 sec Note 2	All except GMM-DEREG	Transmission of a PTP PDU	Forced to Standby	No cell-updates are performed
T3317 (UMTS only)	10s	GMM-SERVICE-REQUEST-INITIATED~~GMM-REG~~	SERVICE REQ sent	Security mode ~~setting~~ control procedure is completed, SERVICE ACCEPT received, or SERVICE REJECT received	Abort the procedure

NOTE 1: The value of this timer is used if the network does not indicate another value in a GMM signalling procedure.

NOTE 2: The default value of this timer is used if neither the MS nor the Network send another value, or if the Network sends this value, in a signalling procedure.

NOTE 3: Typically, the procedures are aborted on the fifth expiry of the relevant timer. Exceptions are described in the corresponding procedure description.

Table 11.4/TS 24.008: GPRS Mobility management timers - network side

TIMER NUM.	TIMER VALUE	STATE	CAUSE OF START	NORMAL STOP	ON THE 1st, 2nd, 3rd, 4th EXPIRY Note 3
T3322	6s	GMM-DEREG-INIT	DETACH REQ sent	DETACH ACCEPT received	Retransmission of DETACH REQUEST
T3350	6s	GMM-COMMON-PROC-INIT	ATTACH ACCEPT sent with P-TMSI and/or TMSI RAU ACCEPT sent with P-TMSI and/or TMSI P-TMSI REALLOC COMMAND sent	ATTACH COMPLETE received RAU COMPLETE received P-TMSI REALLOC COMPLETE received	Retransmission of the same message type, i.e. ATTACH ACCEPT, RAU ACCEPT or REALLOC COMMAND
T3360	6s	GMM-COMMON-PROC-INIT	AUTH AND CIPH REQUEST sent	AUTH AND CIPH RESPONSE received AUTHENT- AND CIPHER- FAILURE received	Retransmission of AUTH AND CIPH REQUEST Procedural behaviour is FFS
T3370	6s	GMM-COMMON-PROC-INIT	IDENTITY REQUEST sent	IDENTITY RESPONSE received	Retransmission of IDENTITY REQUEST

Table 11.4a/TS 24.008: GPRS Mobility management timers - network side

TIMER NUM.	TIMER VALUE	STATE	CAUSE OF START	NORMAL STOP	ON EXPIRY
T3313	Note1	GMM_REG	Paging procedure initiated	Paging procedure completed	Network dependent
T3314 READY (GSM only)	Default 44 sec Note 2	All except GMM-DEREG	Receipt of a PTP PDU	Forced to Standby	The network shall page the MS if a PTP PDU has to be sent to the MS
Mobile Reachable	Default 4 min greater than T3312	All except GMM-DEREG	In GSM, change from READY to STANDBY state In UMTS, change from PMM-CONNECTED mode to PMM-IDLE mode.	PTP PDU received	Network dependent but typically paging is halted on 1st expiry

NOTE 1: The value of this timer is network dependent.

NOTE 2: The default value of this timer is used if neither the MS nor the Network send another value, or if the Network sends this value, in a signalling procedure. The value of this timer should be slightly shorter in the network than in the MS, this is a network implementation issue.

NOTE 3: Typically, the procedures are aborted on the fifth expiry of the relevant timer. Exceptions are described in the corresponding procedure description.

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Document ***N1-001031***
revised N1-001002
revised N1-000966
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23.060	CR	??? 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 [X] 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: *(at least one should be marked with an X)* (U)SIM [ ] ME [X] UTRAN / Radio [ ] Core Network [X]

Source: TSGN1 **Date:** 2000-08-10

Subject: Clarification to Service Request procedure

Work item: GSM-UMTS Interworking

Category: *(only one category shall be marked with an X)*

F	Correction	[X]
A	Corresponds to a correction in an earlier release	[ ]
B	Addition of feature	[ ]
C	Functional modification of feature	[ ]
D	Editorial modification	[ ]

Release:

Phase 2	[ ]
Release 96	[ ]
Release 97	[ ]
Release 98	[ ]
Release 99	[X]
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	[X]	→ 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:	

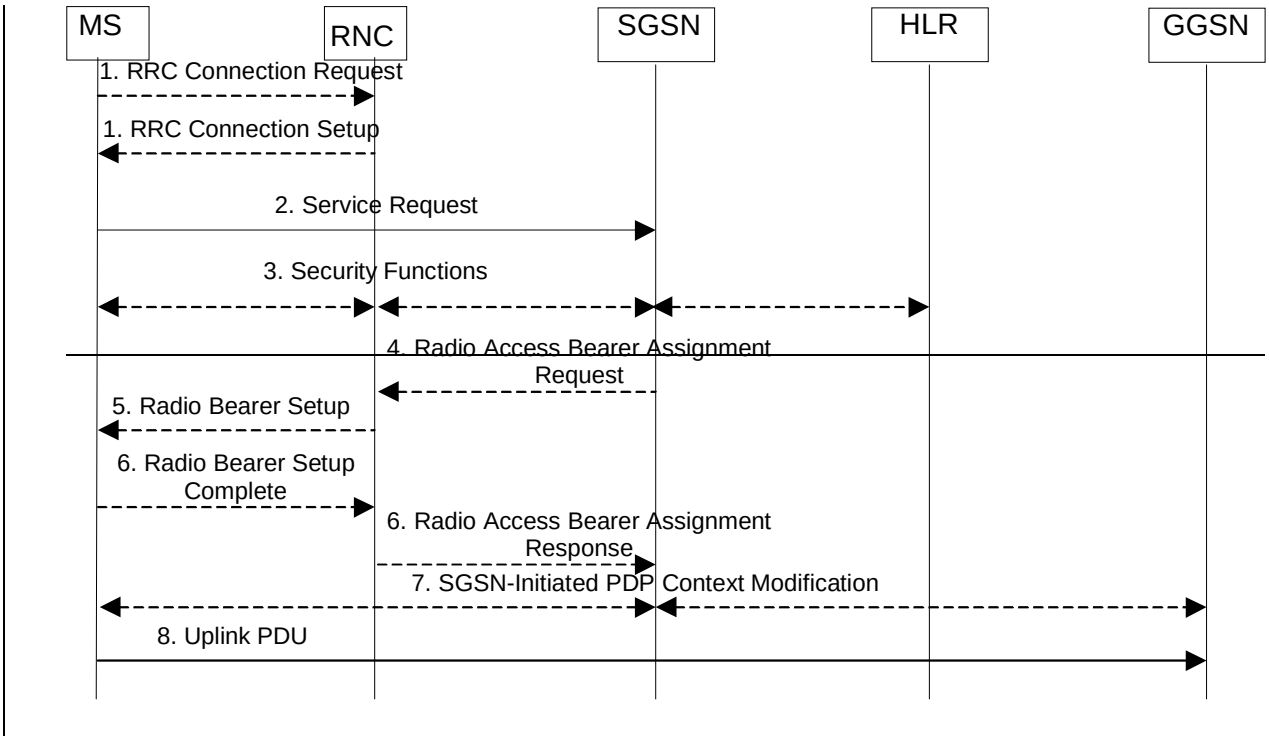
Other comments:

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.



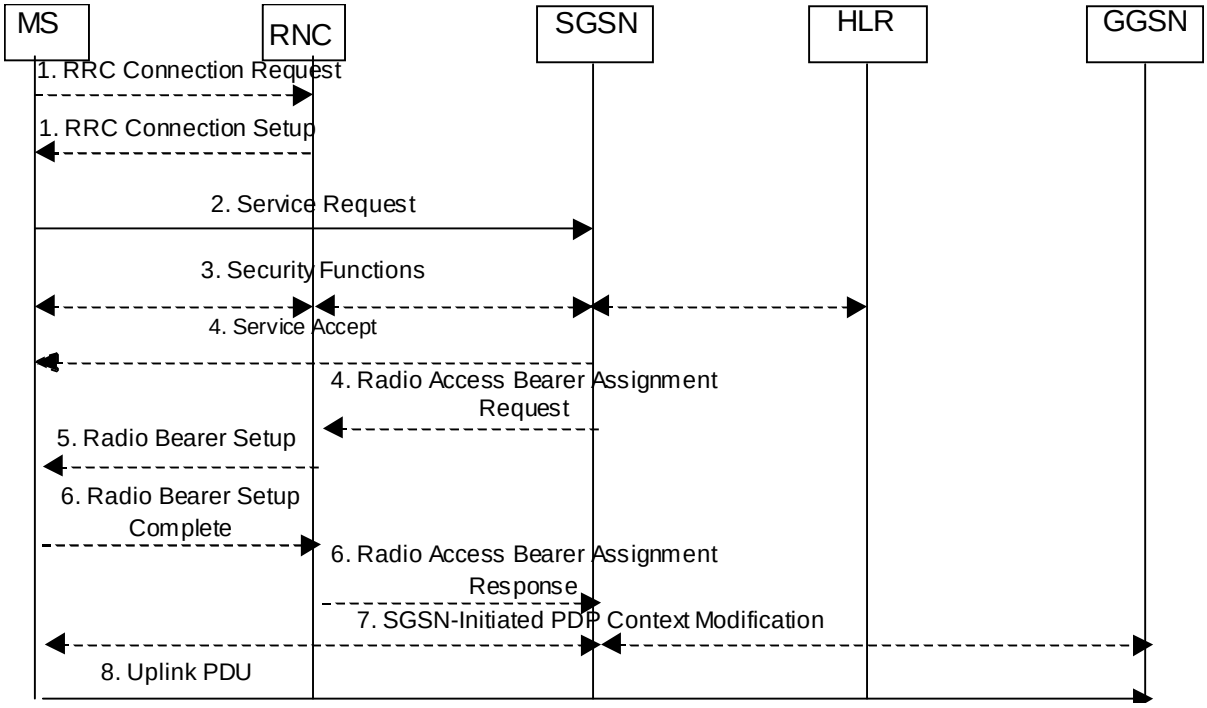


Figure 1: Service Request Initiated by MS Procedure

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.