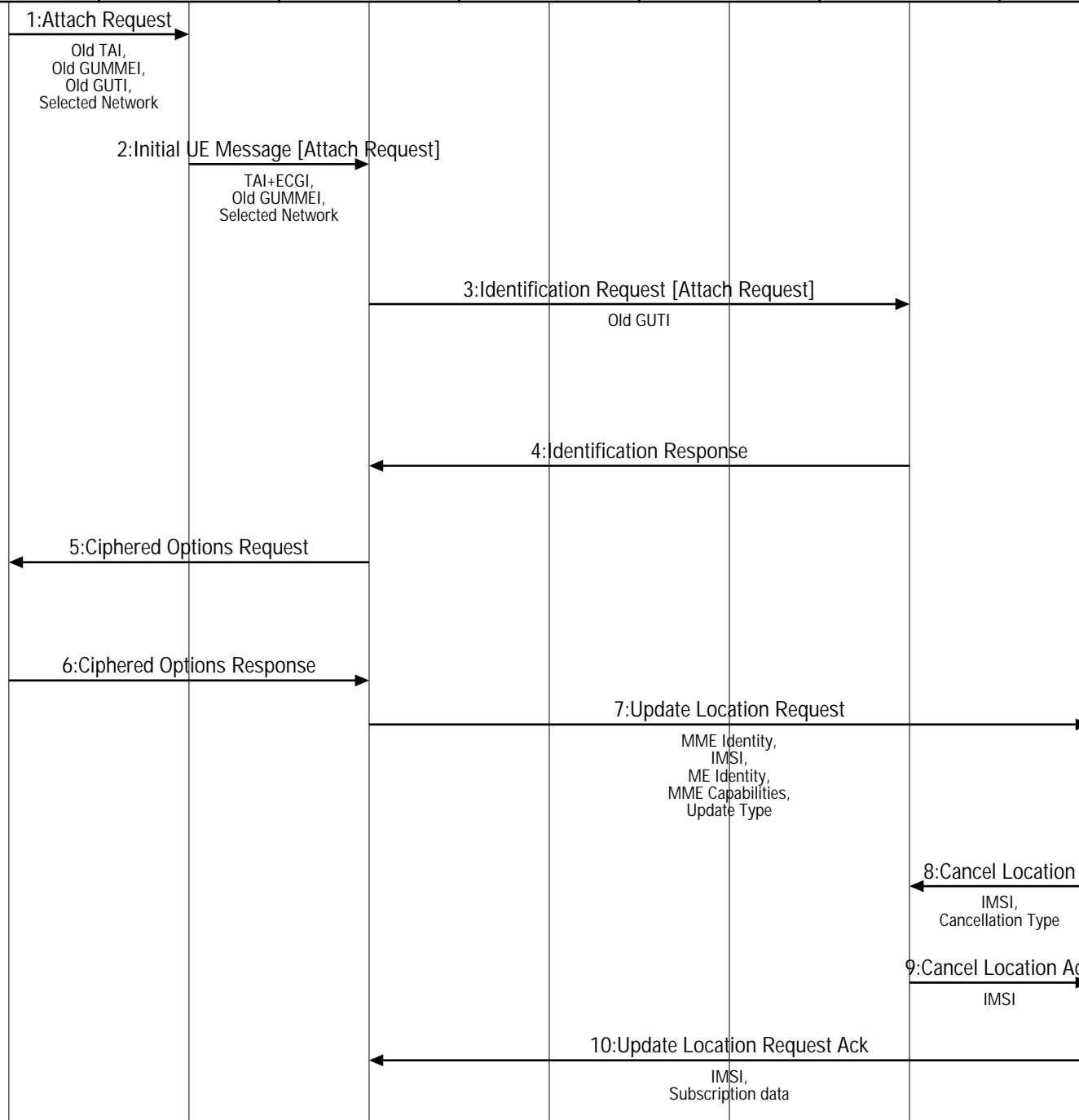


Long Term Evolution (LTE) Attach (Moving from Old to New MME)						
Cell Sites	LTE/SAE				CN	EventStudio System Designer 4.0
Cell	New E-UTRAN	New EPC		Old EPC	Databases	
UE	eNodeB	New MME	Serving GW	PDN GW	Old MME	HSS
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The UE initiates the Attach procedure by sending the Attach Request to the eNodeB. The message contains the old GUTI - Globally Unique Temporary Identifier.

Identify the MME from the Old GUMMEI - Globally Unique MME Identifier. The "Attach Request" is embedded in the Initial UE Message. The Tracking Area Identify (TAI) and E-UTRAN Cell Global Identifier (ECGI) are also included.

Since the UE identified itself with GUTI and the MME has changed since detach, the new MME uses the GUTI received from the UE to derive the old MME, and send an Identification Request (old GUTI, complete Attach Request message) to the old MME to request the IMSI.

The old MME responds with Identification Response (IMSI, unused EPS Authentication Vectors, KSIASME, KASME)

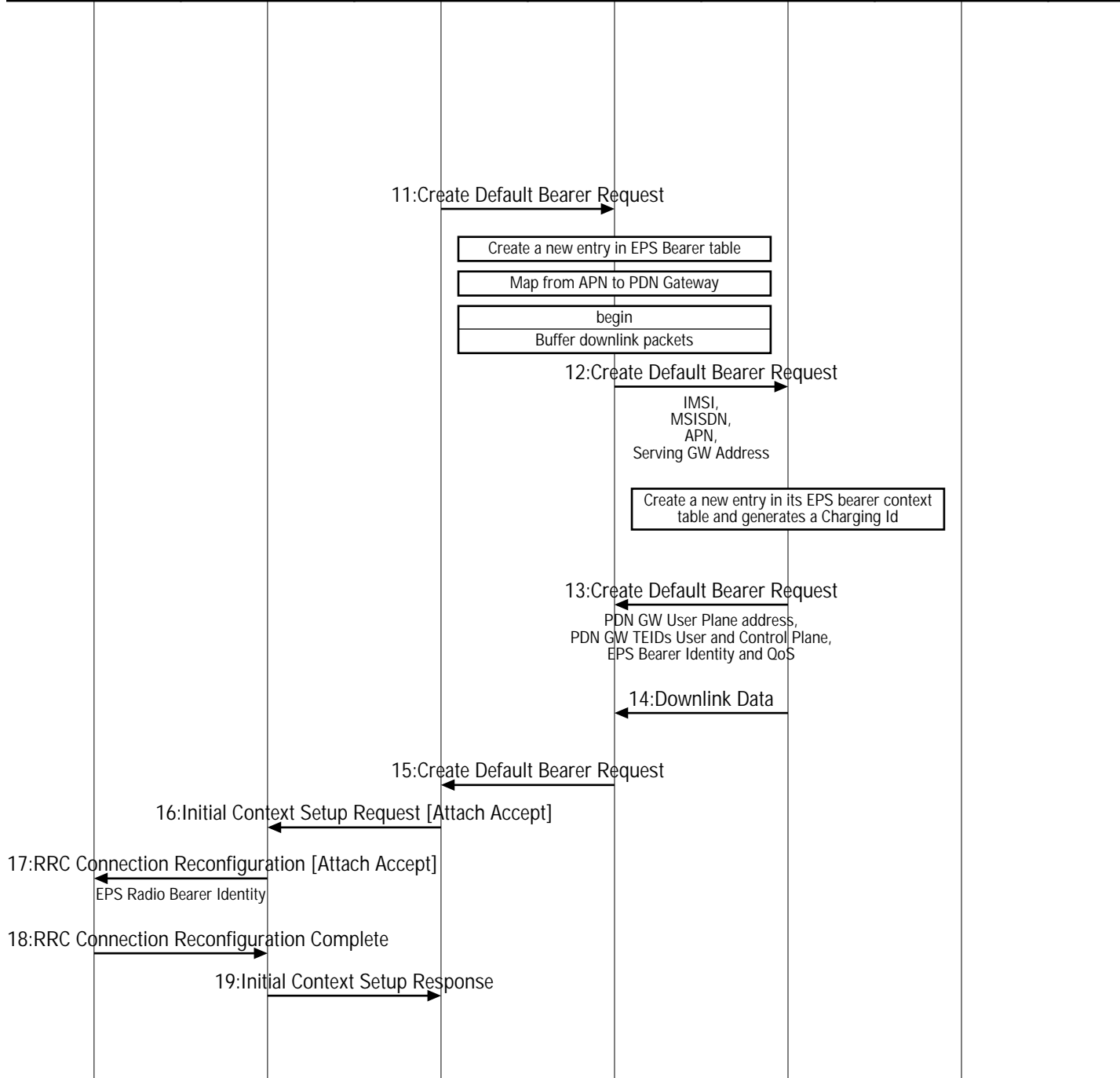
Since the UE has set the Ciphered Options Transfer Flag in the Attach Request message, the ciphered Options i.e. PCO or APN or both, shall now be retrieved from the UE.

Since the MME has changed since the last detach, the MME sends an Update Location Request message to the HSS. The MME capabilities indicate the MME's support for regional access restrictions functionality. Update Type indicates this is Attach procedure.

The HSS sends Cancel Location to the old MME. The old MME acknowledges with Cancel Location Ack and removes the MM and bearer contexts.

The HSS acknowledges the Update Location message by sending an Update Location Ack message to the new MME. The Subscription Data contains PDN

Long Term Evolution (LTE) Attach (Moving from Old to New MME)						
Cell Sites	LTE/SAE				CN	EventStudio System Designer 4.0
Cell	New E-UTRAN	New EPC		Old EPC	Databases	08-Feb-09 11:54 (Page 2)
UE	eNodeB	New MME	Serving GW	PDN GW	Old MME	HSS



subscription contexts. Each PDN subscription context contains an 'EPS subscribed QoS profile' and the subscribed APN-AMBR. The new MME validates the UE's presence in the (new) TA. If all checks are successful then the new MME constructs a context for the UE.

The APN specified by the UE is used for default bearer activation.

Serving Gateway sends Create Default Bearer Request message to the PDN GW.

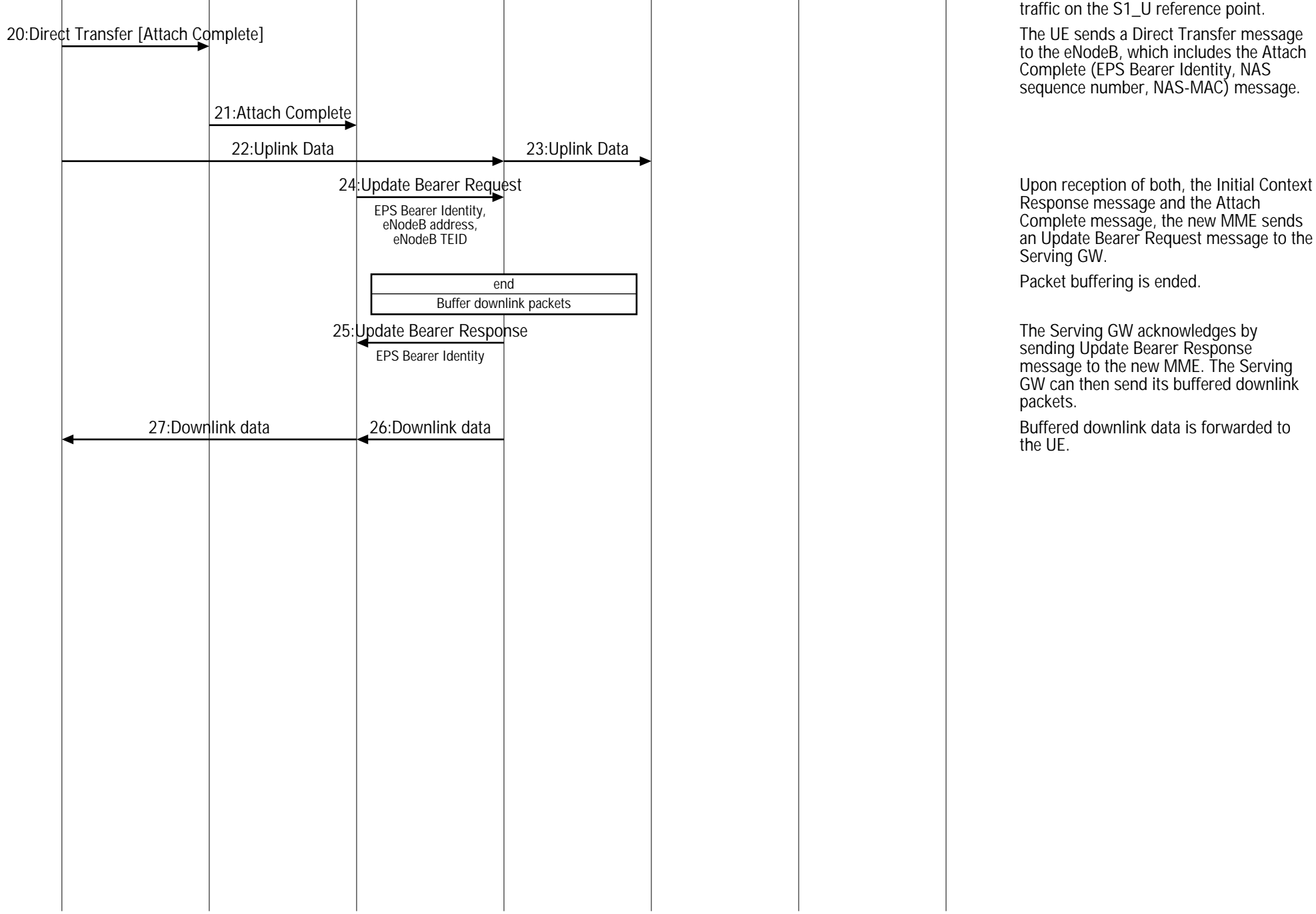
The new entry allows the P GW to route user plane PDUs between the S GW and the packet data network, and to start charging.

Serving Gateway receives the first downlink data block. This block is buffered at the Serving GW".

Attach Accept is sent to the in the Initial Context Setup Request message.

The eNodeB sends the Initial Context Response message to the new MME. This Initial Context Response message includes the TEID of the eNodeB and the address of the eNodeB used for downlink

Long Term Evolution (LTE) Attach (Moving from Old to New MME)						
Cell Sites	LTE/SAE				CN	EventStudio System Designer 4.0
Cell	New E-UTRAN	New EPC		Old EPC	Databases	08-Feb-09 11:54 (Page 3)
UE	eNodeB	New MME	Serving GW	PDN GW	Old MME	HSS



traffic on the S1_U reference point.
 The UE sends a Direct Transfer message to the eNodeB, which includes the Attach Complete (EPS Bearer Identity, NAS sequence number, NAS-MAC) message.

Upon reception of both, the Initial Context Response message and the Attach Complete message, the new MME sends an Update Bearer Request message to the Serving GW.

Packet buffering is ended.

The Serving GW acknowledges by sending Update Bearer Response message to the new MME. The Serving GW can then send its buffered downlink packets.

Buffered downlink data is forwarded to the UE.