

UT Interfaces (GPRS Attach and PDP Context Activation for a Class B Terminal)												
GSM Coverage	GSM GPRS Network											EventHelix.com/EventStudio 2.5
Cell	BSS	Core Network			Old Core Network		GGSN Site			GSM Databases		01-Mar-05 06:07 (Page 1)
UT	BSC	SGSN	DNS Server	MSC VLR	Old SGSN	Old MSC VLR	GGSN	Radius Server	DHCP Server	EIR	HLR	

This sequence diagram was generated with EventStudio 2.5 (<http://www.EventHelix.com/EventStudio>).

We explore the sequence of interactions involved in a GPRS terminal attaching to the network. The combined attach and PDP context activation of a Class B GPRS terminal will be covered here.

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GPRS Attach



The terminal initiates the attach procedure after power on. The message contains the previously used TMSI (Temporary Mobile Subscriber Id). The mobile network identity, the location area and routing area information is also included in the message.

The SGSN asks the terminal to identify itself.

The terminal responds back.

The SGSN authenticates the GPRS mobile by sending a RAND value (a random value).

The SIM applies secret GSM algorithms on the RAND and the secret key Ki to obtain the session key Kc and SRES.

The computed SRES value is passed to the SGSN.

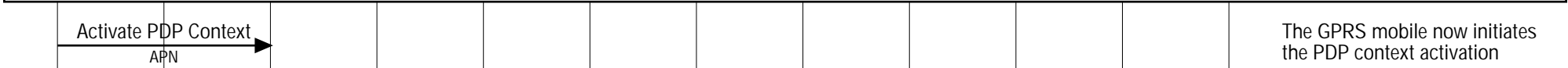
The SGSN then requests the identity of the GPRS mobile.

GPRS mobile responds back with the identity.

The SGSN responds back to the original GRPS combined attach request from the mobile.

The GPRS mobile acknowledges the receipt of "Attach Accept".

PDP Context Activation



The GPRS mobile now initiates the PDP context activation

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Activate PDP Context Accept

procedure to obtain the IP address for the device. The Access Point Name (APN) specified by the service provider is passed as a parameter.

The SGSN replies back to the GPRS mobile. This signals completion of the PDP context activation.