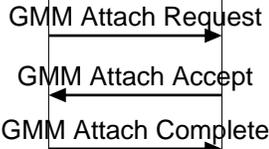


Processor Interfaces (IMS Registration for an Unauthenticated User)

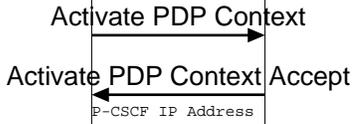
Visited Network		Internet	Home Network		EventStudio System Designer 4.0
User Equipment	Visited CN	Visited IMS	DNS Server	Home IMS	Home CN

GPRS Attach



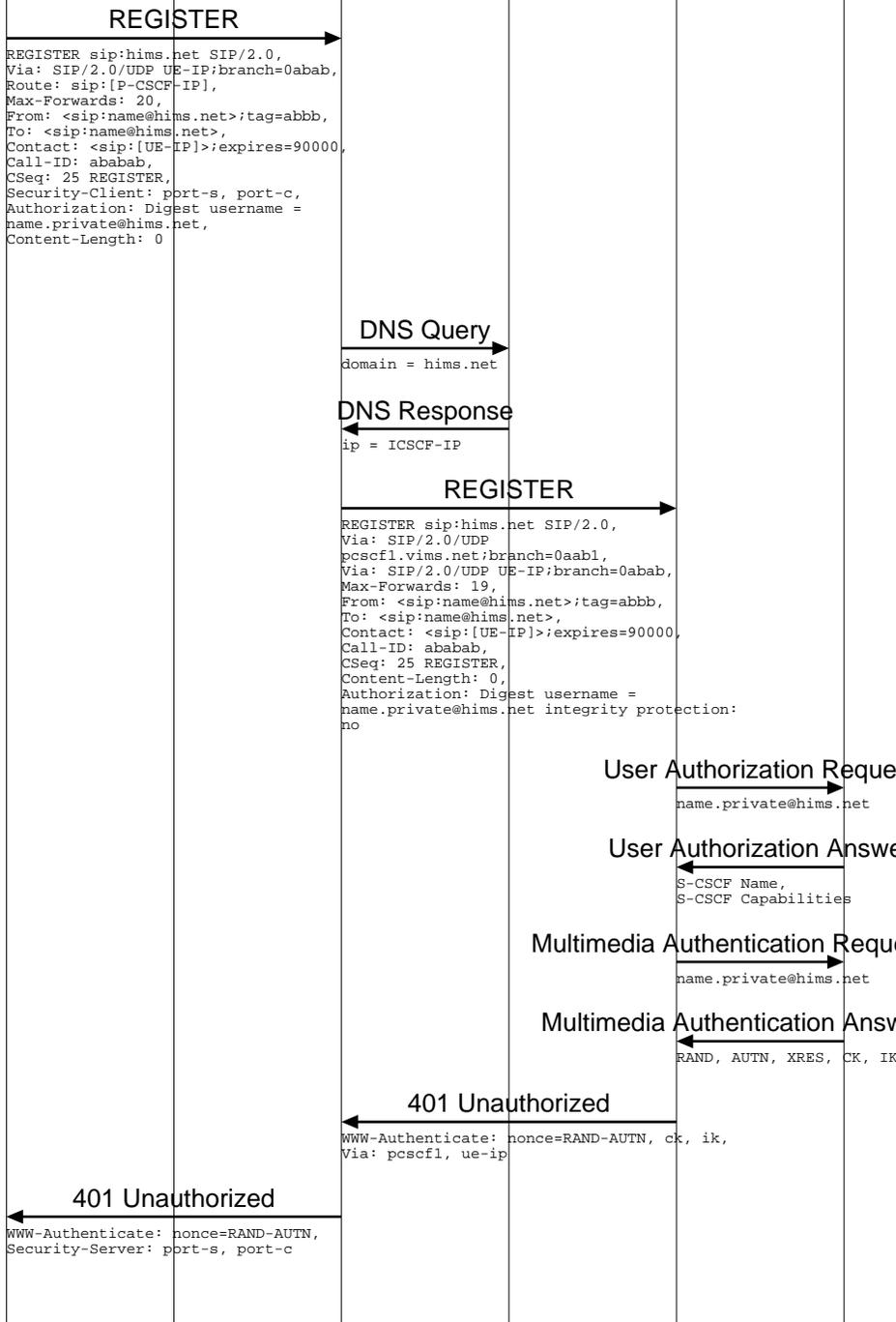
The terminal powers up and attaches to the GPRS network.

PDP Context Activation



Once the attach is completed, the terminal initiates a PDP context activation. The terminal receives an IP address for the PDP context. The terminal also receives the IP address of the P-CSCF. The P-CSCF serves as the initial SIP proxy into the IP Multimedia System (IMS).

Unauthenticated IMS Registration Attempt



The subscriber sends a Register message to inform the network that the specified user public identify (myname@mynetwork.com) is available at the IP address indicated in the Contact Header. The User Equipment (UE) also adds a via header to record that the message had traversed the UE. The REGISTER message also includes the server and client ports. Note that the message itself is sent on the standard SIP port 5060. The SIP REGISTER message also includes the private identity of the user. This identity will be used by the S-CSCF and HSS to identify the user. The P-CSCF receives the REGISTER message and uses the DNS to translate from the domain hims.net to the IP address of the home network.

P-CSCF adds a Via header and removes the Route header. The REGISTER message will be routed to the IP address obtained from the DNS response. Note that the integrity protection flag is set to false to signify that the user has not been authenticated.

User Authorization Request Query the HSS to assign the S-CSCF.

User Authorization Answer HSS replies with the S-CSCFs.

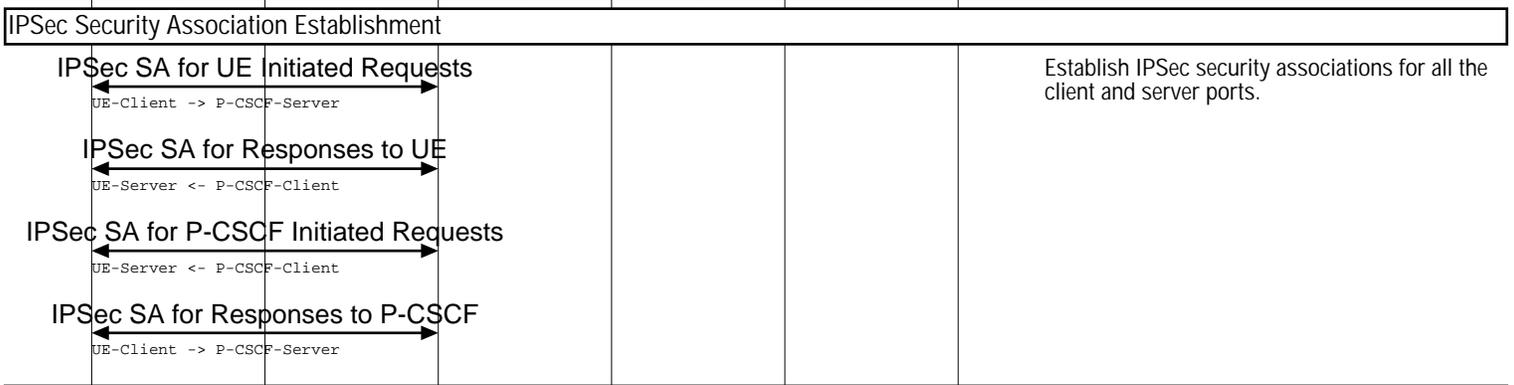
Multimedia Authentication Answer HSS passes the Random number (RAND), Authentication token (AUT), signed result (XRES), Cipher key (CK) and Integrity Key (IK).

Pass the message to the P-CSCF. CK and IK are carried in the WWW-Authenticate header.

Pass the RAND and AUTN values to the subscriber. The CK and IK are removed from the WWW-Authenticate header. The P-CSCF side client and server ports are also included in the message. The message itself is sent on the standard SIP port 5060.

Processor Interfaces (IMS Registration for an Unauthenticated User)

Visited Network		Internet	Home Network		EventStudio System Designer 4.0
User Equipment	Visited CN	Visited IMS	DNS Server	Home IMS	Home CN
					24-Nov-07 18:36 (Page 2)



Authenticated IMS Registration

