SABM + MM LOCATION UPDATING REQUEST  Maryland TMSI, Maryland LAI  MM LOCATION UPDATING REQUEST  Maryland TMSI, Maryland LAI  MM LOCATION UPDATING REQUEST  Maryland TMSI, Maryland LAI  MM AUTHENTICATION REQUEST  RAND  MM AUTHENTICATION RESPONSE  SRES  MM LOCATION UPDATING ACCEPT  The new MSC replies back to message also assigns a new Temporary Mobile Subscribe (TMSI) to the terminal. Since TMSI assignment is being se after ciphering is enabled, the relationship between TMSI a the subscriber cannot be obtained by unauthorized use Indicating that the new TMSI as the subscriber cannot be obtained by unauthorized use Indicating that the new TMSI as indicating that the new TMSI as the subscriber cannot be obtained by unauthorized use Indicating that the new TMSI as the subscriber cannot be obtained by unauthorized use Indicating that the new TMSI as the subscriber cannot be obtained by unauthorized use Indicating that the new TMSI as the subscriber cannot be obtained by unauthorized use Indicating that the new TMSI as the subscriber cannot be obtained by unauthorized use Indicating that the new TMSI as the subscriber cannot be obtained by unauthorized use Indicating that the new TMSI as the subscriber cannot be obtained by unauthorized use Indicating that the new TMSI as the subscriber cannot be obtained by unauthorized use Indicating that the new IMSI as the subscriber cannot be obtained by unauthorized use Indicating that the new IMSI as the subscriber cannot be obtained by unauthorized use IMSI and IMSI are the IMSI and IMSI are t	-	SSM Location Up							
Databases   Coation Area   Coation Coation   Coation   Coation Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coation   Coa		\/irain!a		2 CCN/		Mandandle		Mandand	FventHelix com/EventStudio 2 F
Other GSM   Mobile   Wienna Cell   Wirginia   MSC VLR   HLR   Rockville   Bethesda   Cell   MSC VLR	GSIVI IVIODITES	Location	Vii girila Equipi	ment		jiviai yiafiu LC	JCALIOH AFEA	GŠM	
Maryland TMSI, Maryland LAI  assigned radio channel and sends the SABM to initiate the radio connection. The location update is also piggybacked of the message.  SABM + MM LOCATION UPDATING REQUEST Maryland TMSI, Maryland LAI  MM LOCATION UPDATING REQUEST Maryland TMSI, Maryland LAI  MM AUTHENTICATION REQUEST RAND  MM AUTHENTICATION RESPONSE SRES  MM AUTHENTICATION RESPONSE SRES  MM LOCATION UPDATING ACCEPT  MM LOCATION UPDATING ACCEPT  MM LOCATION UPDATING ACCEPT  Wirginia TMSI  MM LOCATION UPDATING ACCEPT  MM LOCATION UPDATING ACCEPT  MM LOCATION UPDATING ACCEPT  Wirginia TMSI  The cast mobile via the Virginia BSC. message also assigns a new Temporary Mobile Subscribe (TMSI) to the terminal. Since TMSI assignment is being se after ciphering is enabled, the relationship between TMSI at the subscriber cannot be obtained by unauthorized use of the mobile replies back indicating that the new TMSI indicating the new TMSI indicating that the new TMSI indicating the new TMSI indicating the new TMSI indicating the new		Vienna Cell		Virginia MSC VLR	HLR			Maryland	
	Mobile  RR SABM + MM L OCAT  Maryland TMS  SABM + N  MM  MM	HATION UPDATING AND LAI  H MM LOCATION Maryland TMSI, MM LOCATION CONTROL OF	BSC  IG REQUEST  I UPDATING  Maryland LAI  OCATION UPI  Maryland TMSI,  ATION RESPO  ES  PDATING ACC	REQUEST  DATING RECOMMENDED  Maryland LAI  DNSE  CEPT				Maryland MSC VLR	The mobile tunes to the assigned radio channel and sends the SABM to initiate the radio connection. The location update is also piggybacked on the message.  The BSC receives the location update with the SABM.  The location updating request is forwarded to the MSC in the "BSSMAP COMPLETE LAYER 3 INFORMATION" message.  LEG: Inter MSC-VLR location update  The MSC VLR decides to authenticate the subscriber. The RAND value received from the HLR is sent to the mobile.  The mobile passes the computed SRES value in the response.  The new MSC replies back to the mobile via the Virginia BSC. The message also assigns a new Temporary Mobile Subscriber Id (TMSI) to the terminal. Since the TMSI assignment is being sent after ciphering is enabled, the relationship between TMSI and

Cell	g Call)  Mobile Network		Fixed Network	EventHelix.com/EventStudio 2.5	
Mobile Station	Base Stations	NSS	PSTN		
User Mobile	BSS	MSC VLR	PSTN	31-Oct-04 21:29 (Page 2)	
•				LEC COM Makila Originated Call	
RR SABM + MM CM TCH, S	SERVICE REQUES	ST		LEG: GSM Mobile Originated Call  This is the first message that is sent after tuning to the channel. The Mobile initiates a LAPm connection with the BSC by sending a Set Asynchronous Balanced Mode (SABM) message service request message meant for the MS is also sent in this message.	
		57	CE REQUEST	The BSS receives the CM Service Request message from the mobile and forms a "BSSM COMPLETE LAYER 3 INFORMATION". The BSS then piggy backs the message on the SCCP connection request message.  LEG: Initiate Authentication Procedure	
<b>—</b>	THENTICATION RE RAND THENTICATION RE SRES				
	JINCJ			LEG: Mobile initiates call release	