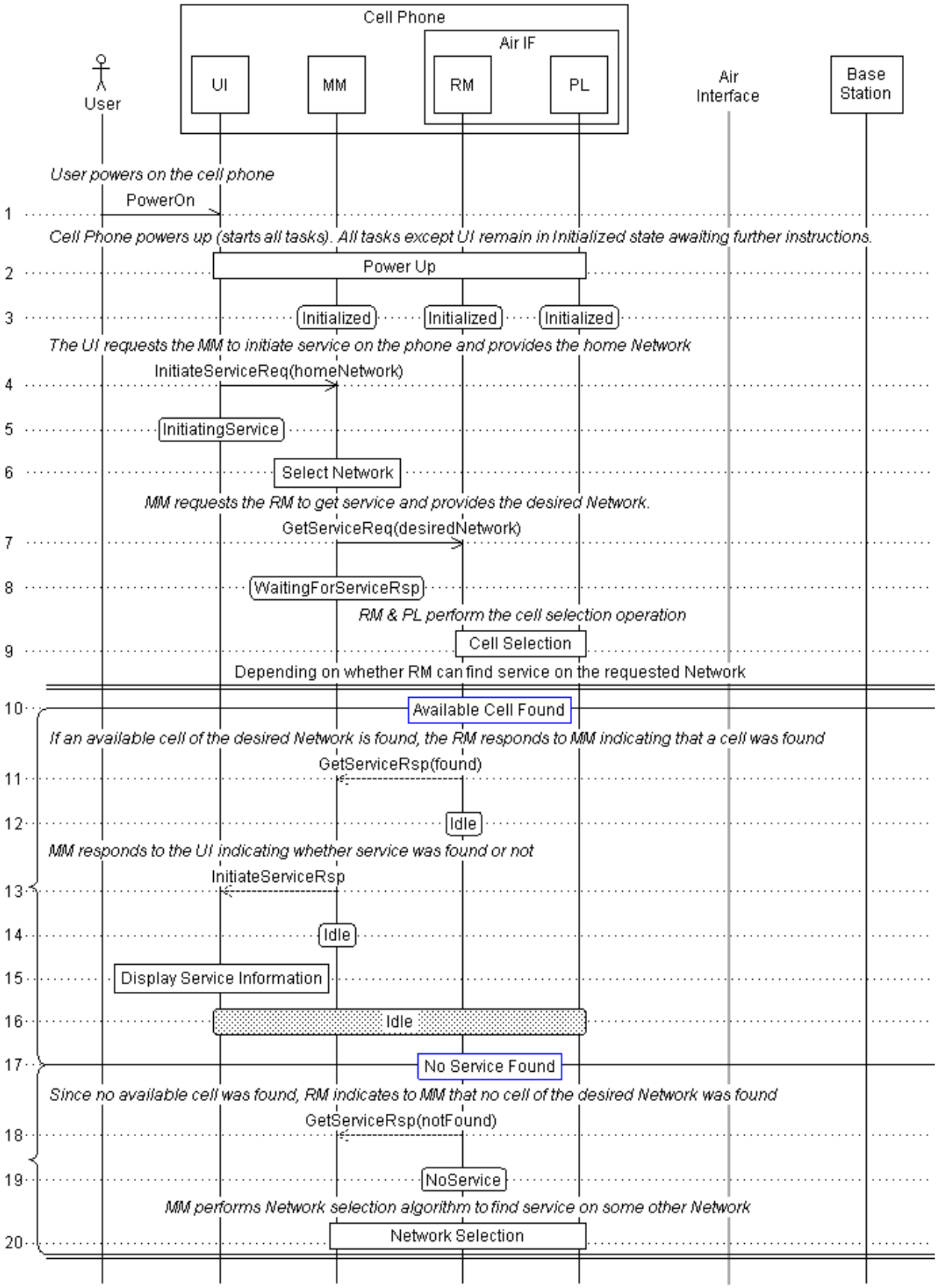
Acquire Service Basic (Powerup)

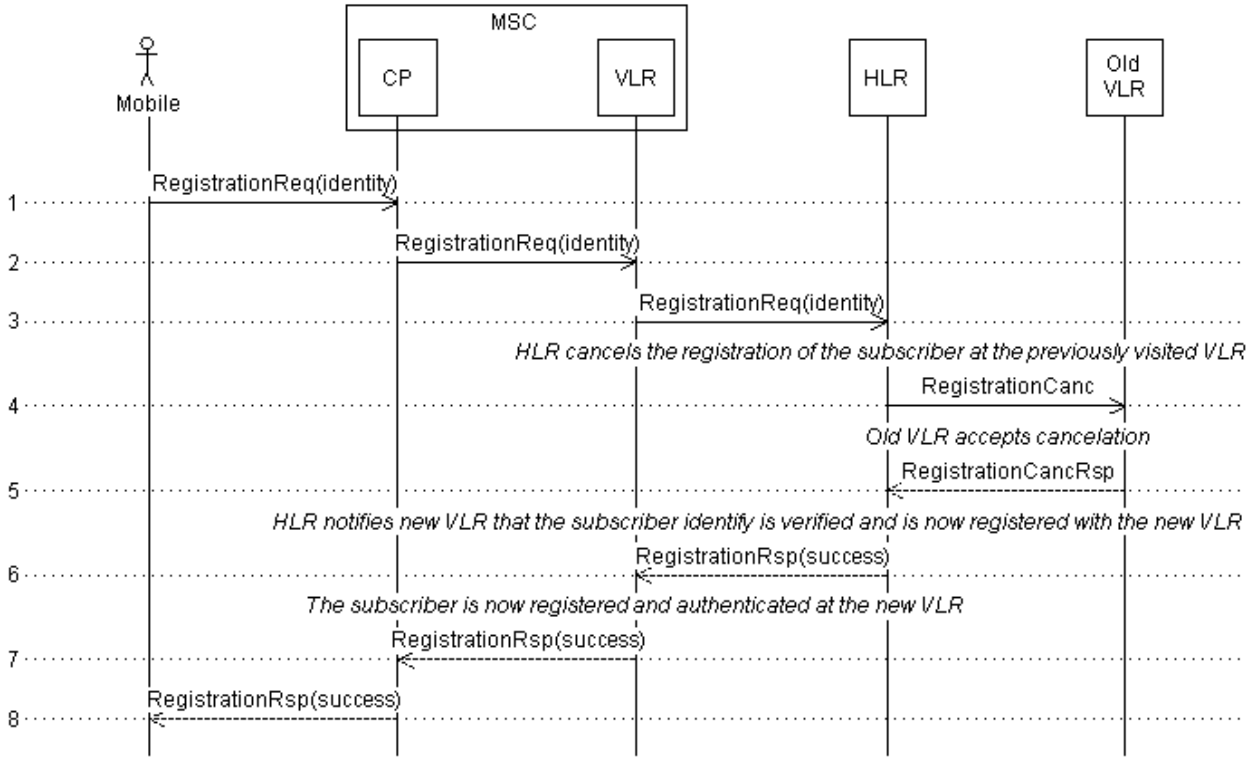
A basic scenario in which the cell phone attempts to acquire service after power up



1	User powers on the cell phone
2	Cell Phone powers up (starts all tasks). All tasks except UI remain in Initialized state awaiting further instructions.
4	The UI requests the MM to initiate service on the phone and provides the home Network
6	MM selects the network in which to attempt to acquire service
7	MM requests the RM to get service and provides the desired Network.
9	RM & PL perform the cell selection operation
11	If an available cell of the desired Network is found, the RM responds to MM indicating that a cell was found
12	RM will be in the Idle state camped on the available cell
13	MM responds to the UI indicating whether service was found or not
15	UI displays service information to the user
16	Cell Phone enters Idle state
18	Since no available cell was found, RM indicates to MM that no cell of the desired Network was found
19	RM will be in the no service state since no available cell was found
20	MM performs Network selection algorithm to find service on some other Network

Simple Registration

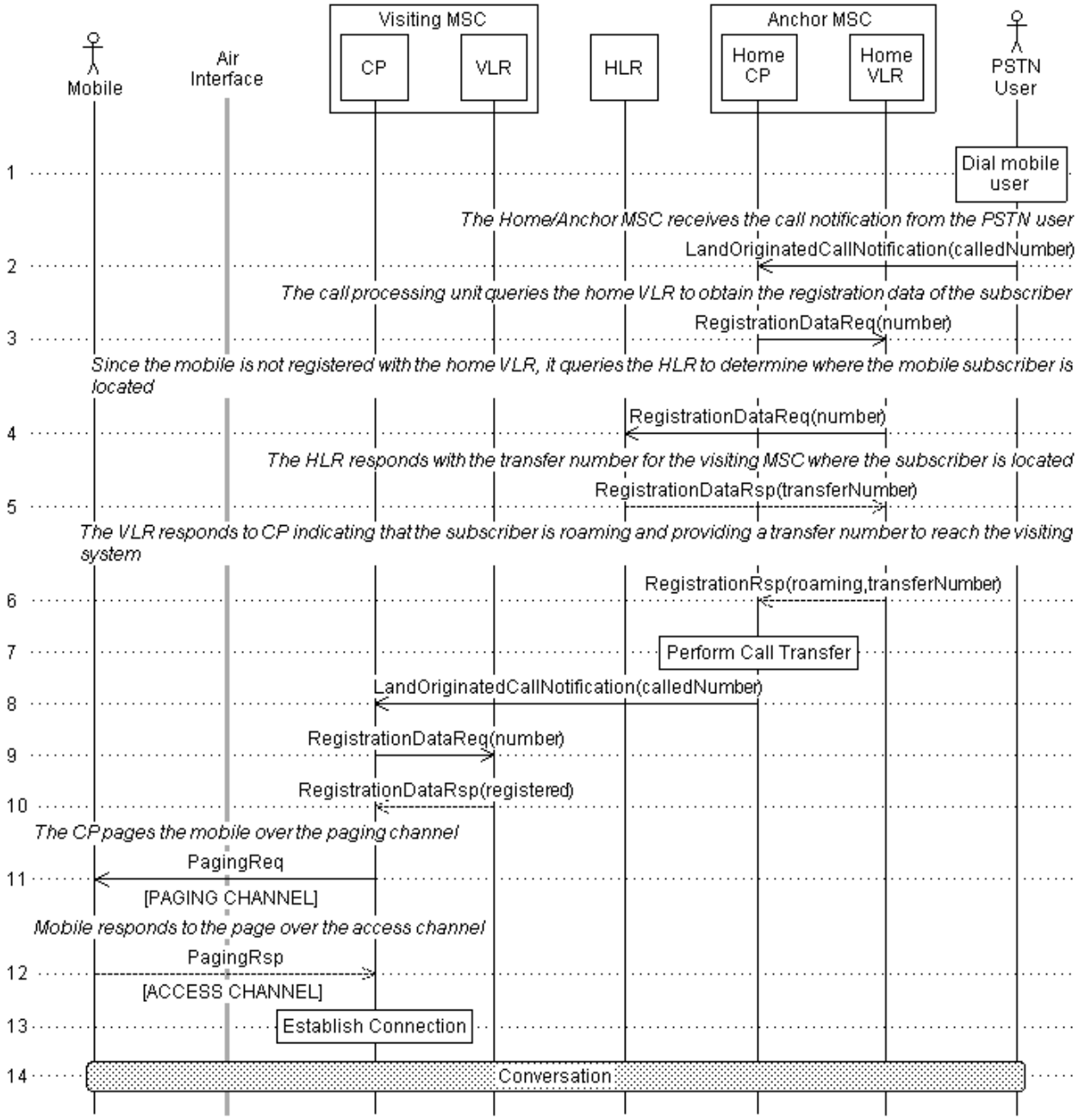
A simple example showing the registration of a mobile with a new MSC/base station



1	Mobile performs a registration with the base station
2	Registration request passed on to local VLR
3	New VLR notifies the HLR that the subscriber has just registered with the MSC
4	HLR cancels the registration of the subscriber at the previously visited VLR
5	Old VLR accepts cancelation
6	HLR notifies new VLR that the subscriber identify is verified and is now registered with the new VLR

Mobile Terminated Call to Roaming Subscriber

A mobile terminated call to a roaming subscriber that is registered in a visiting system. Assumes the mobile is already registered in the visiting MSC and the HLR has been notified.



2	The Home/Anchor MSC receives the call notification from the PSTN user
3	The call processing unit queries the home VLR to obtain the registration data of the subscriber
4	Since the mobile is not registered with the home VLR, it queries the HLR to determine where the mobile subscriber is located
5	The HLR responds with the transfer number for the visiting MSC where the subscriber is located

6	The VLR responds to CP indicating that the subscriber is roaming and providing a transfer number to reach the visiting system
7	The home call processing unit of the anchor MSC performs a call transfer to the visiting MSC
8	The HomeCP transfers the call to the visiting MSC using the transfer number provided by the HLR
10	The VLR indicates the subscriber is registered in the system
11	The CP pages the mobile over the paging channel
12	Mobile responds to the page over the access channel