CLAIMS

1. A method of providing a multi-International Mobile Subscriber Identity (multi-IMSI) solution for a subscriber having a mobile device in an operating mobile network, the mobile device being fitted with a Subscriber Identification Module (SIM) card having an IMSI and a baseband component, the mobile device comprising a corresponding baseband processor to enable the SIM card to communicate with a home network, run by a home network operator, related to the IMSI via the baseband processor, the method comprising:

fitting a SIM card overlay to the SIM card, the overlay acting as a proxy between the SIM card and the mobile device's baseband processor, the overlay comprising a primary ("pilot") sponsor IMSI that is related to a sponsor network, run by a sponsor network operator, with a temporary activation authentication key (Ki);

determining when the mobile device has roamed out of the home network and into a foreign network having an agreement with a sponsor network associated with the sponsor IMSI;

generating signaling messages, with the sponsor IMSI generating these messages, and sending these to a multi-IMSI roaming hub platform, the roaming hub platform being connected to each sponsor network;

translating these messages in real time and relaying them to the home network of the home network operator, so that to the home network it looks as if the IMSI of the home network operator is still roaming in the home network; and

running an activation process, which takes place when the overlay is first installed onto the SIM card, and the mobile device is powered up, the activation process comprising:

presenting the primary sponsor IMSI to an available mobile network with which the sponsor network operator has an established roaming agreement in place;

in response to an authentication request from the available mobile network, using the temporary activation Ki stored on the overlay; and

forwarding an authentication request, which now includes the temporary activation Ki, to the sponsor network, for onward transmission to the multi-IMSI roaming hub platform.

2. The method of claim 1, wherein the overlay may comprise at least one secondary sponsor IMSI.

3. The method of claim 1, wherein the step of presenting the primary sponsor IMSI to an available mobile network comprises the step of the overlay presenting the primary sponsor IMSI to the baseband processor of the mobile device, which in turn can then present the primary sponsor IMSI to an available mobile network.

4. The method of claim 3, wherein the roaming hub recognizes that the overlay is in an activation process, and forwards the received authentication request to an Home Location Register (HLR) associated with the multi-IMSI roaming hub platform.

5. The method of claim 4, wherein the HLR associated with the multi-IMSI roaming hub platform knows the temporary activation Ki assigned to the subscriber, with the method further comprising generating authentication data and routing the authentication data back to the sponsor network.

6. The method of claim 5, wherein the activation process comprises reading the IMSI on the underlying SIM card, and originating a command towards the multi-IMSI roaming hub platform to report this IMSI.

7. The method of claim 6, wherein the multi-IMSI roaming hub platform then pairs the primary sponsor IMSI with the IMSI on the underlying original SIM card.

8. The method of claim 1, wherein the method comprises a running process, depending on whether the mobile device is in its home country/network or in a foreign country/network.

9. The method of claim 8, wherein when in its home country/network, the overlay acts transparently, and thus exposes the IMSI contained on the SIM to the mobile device.

10. The method of claim 8, wherein when the mobile device leaves its home country/network, the overlay automatically takes over, and the primary sponsor IMSI is exposed to the mobile device instead of the original IMSI.

12. A system for providing a multi-International Mobile Subscriber Identity (multi-IMSI) solution for a subscriber having a mobile device in an operating mobile network, the mobile device being fitted with a Subscriber Identification Module (SIM) card having an IMSI and a baseband component, the mobile device comprising a corresponding baseband processor to enable the SIM card to communicate with a home network, run by a home network operator, related to the IMSI via the baseband processor, the system comprising:

a SIM card overlay that can be fitted to the SIM card, the overlay acting as a proxy between the SIM card and the mobile device's baseband processor, the overlay comprising a primary sponsor IMSI that is each related to a sponsor network, run by a sponsor network operator, with a temporary activation authentication key (Ki);

means for determining when the mobile device has roamed out of the home network and into a sponsor network associated with the sponsor IMSI;

means for generating and sending signaling messages; and

a multi-IMSI roaming hub platform for receiving the signaling messages, the roaming hub platform being connected to each sponsor network, the multi-IMSI roaming hub platform comprising a processor that is arranged to translate these messages in real time and relaying them to the home network of the home network operator, so that to the home network it looks as if the IMSI of the home network operator is still roaming in the home network,

wherein the roaming hub platform can recognize when the overlay is in an activation mode, and in this mode the roaming hub platform is arranged to forward a received authentication request to a Home Location Register (HLR) associated with the multi-IMSI roaming hub platform, wherein the HLR associated with the multi-IMSI roaming hub platform, which knows the temporary activation Ki assigned to the subscriber, generates authentication data and routes the authentication data back to the sponsor network.

12. The system of claim 11, wherein, in the activation mode, the overlay reads the IMSI on the underlying SIM card, and originates a command towards the multi-IMSI roaming hub platform to report this IMSI.

13. The system of claim 12, wherein the multi-IMSI roaming hub platform is arranged to pair the primary sponsor IMSI with the IMSI on the underlying original SIM card.

14. The system of claim 13, wherein the roaming hub platform can recognize when the overlay is in a running mode, and in this mode, and when the mobile device is in a foreign country/network, the processor of the roaming hub platform is arranged to provision additional IMSIs onto the overlay via over the air (OTA), as needed, to ensure that the most economical sponsor IMSI is being used in the country being visited by the mobile device.

15. The system of claim 11, wherein the overlay may comprise at least one secondary sponsor IMSI.