

CLAIMS

1. A method for initiating multiple-Subscriber Identity Module (multi-SIM) functionality between a first mobile device and a second mobile device, wherein multi-SIM functionality associates the first mobile device and the second mobile device with a shared contact address, the method comprising:

by the first mobile device:

providing, to a cellular communication network, an identifier of the first mobile device and an identifier of the second mobile device;

requesting initiation by the cellular communication network of multi-SIM functionality for the first mobile device and the second mobile device;

receiving, from the cellular communication network, an indication that the multi-SIM functionality has been initiated for the first mobile device and the second mobile device;

providing, to the second mobile device, in response to receiving the indication that the multi-SIM functionality has been initiated, an instruction to download an embedded SIM (eSIM) to be provisioned to the second mobile device, wherein the eSIM is configured to support the multi-SIM functionality.

2. The method of claim 1, wherein the requesting initiation by the cellular communication network of multi-SIM functionality for the first mobile device and the second mobile device comprises requesting that the eSIM to be provisioned to the second mobile device be mapped to a Mobile Directory Number (MDN) to which a SIM of the first mobile device is also mapped.

3. The method of claim 1, further comprising:

receiving, by the first mobile device, an indication of a received telephone communication request, after the receiving the indication that the multi-SIM functionality has been initiated, wherein the second mobile device also receives the indication of the received telephone communication request.

4. The method of claim 1, wherein the identifier of the second mobile device is an embedded Integrated Circuit Card Identifier (eICCID) associated with the eSIM to be provisioned to the second mobile device.

5. The method of claim 4, further comprising:

requesting, by the first mobile device, that the cellular communication network bind the eICCID associated with the eSIM to be provisioned to the second mobile device to a Card Serial Number (CSN) of the second mobile device.

6. The method of claim 5, further comprising:

receiving, by the first mobile device, a confirmation that the eICCID associated with the eSIM to be provisioned to the second mobile device is bound to the CSN of the second mobile device.

7. A primary mobile device comprising:

a Universal Integrated Circuit Card (UICC) storing a Subscriber Identity Module (SIM);
at least one processor; and

a memory storing software instructions executable by the at least one processor to cause the mobile device to:

provide, to a cellular communication network, an identifier of the primary mobile device and a second identifier of a secondary mobile device;

request initiation by the cellular communication network of multi-SIM functionality for the primary mobile device and the secondary mobile device, wherein multi-SIM functionality allows to associate the primary mobile device and the secondary mobile device with a shared contact address;

receive, from the cellular communication network, an indication that the multi-SIM functionality has been initiated for the primary mobile device and the secondary mobile device;

provide, to the secondary mobile device, in response to receiving the indication that the multi-SIM functionality has been initiated, an instruction to download an embedded SIM

(eSIM) to be provisioned to the secondary mobile device, wherein the eSIM is configured to support the multi-SIM functionality.

8. The primary mobile device of claim 7, wherein the requesting initiation by the cellular communication network of multi-SIM functionality comprises requesting that the SIM to be provisioned to the secondary mobile device be mapped to a Mobile Directory Number (MDN) to which the SIM of the first mobile device is also mapped.

9. The primary mobile device of claim 7, wherein the software instructions are further executable by the at least one processor to cause the primary mobile device to:

receive an indication of a received telephone communication request, after receiving the indication that the multi-SIM functionality has been initiated, wherein the secondary mobile device also receives the indication of the received telephone communication request.

10. The primary mobile device of claim 7, wherein the second identifier is an embedded Integrated Circuit Card Identifier (eICCID) associated with the eSIM to be provisioned to the secondary mobile device.

11. The primary mobile device of claim 10, wherein the software instructions are further executable by the at least one processor to cause the primary mobile device to:

request that the cellular communication network bind the eICCID associated with the eSIM to be provisioned to the secondary mobile device to a Card Serial Number (CSN) of the secondary mobile device.

12. The primary mobile device of claim 11, further comprising:

receive a confirmation that the eICCID associated with the eSIM to be provisioned to the secondary mobile device is bound to the CSN of the secondary mobile device.

13. A secondary cellular communication device comprising:

a Universal Integrated Circuit Card (UICC) configured to store an embedded Subscriber Identity Module (eSIM);

at least one processor; and

a memory storing software instructions executable by the at least one processor to cause the secondary cellular communication device to:

- receive, from a primary cellular communication device, a first indication that an eSIM has been bound to an identifier of the secondary cellular communication device;
- receive, from the primary cellular communication device, a second indication that multi-SIM functionality has been initiated for the eSIM and a SIM of the primary cellular communication device, wherein multi-SIM functionality allows to associate the primary cellular communication device and the secondary cellular communication device with a shared contact address;
- download the eSIM to the UICC in response to receiving the second indication;

and

- utilize the eSIM to conduct a cellular communication on the cellular communication network.

14. The secondary cellular communication device of claim 13, wherein an International Mobile Subscriber Identity (IMSI) of the eSIM and an IMSI of the SIM of the primary cellular communication device are mapped to a single Mobile Directory Number (MDN).

15. The secondary cellular communication device of claim 13, wherein the first indication and the second indication are received from the cellular communication network via the primary cellular communication device.

16. The secondary cellular communication device of claim 13, wherein the UICC is an embedded UICC (eUICC).

17. The secondary cellular communication device of claim 13, wherein the software instructions are further executable by the at least one processor to cause the secondary cellular communication device to:

request provisioning of the eSIM by communicating with an eSIM server via cellular communications using a second eSIM stored on the UICC, the second eSIM having limited cellular communication capabilities.

18. The secondary cellular communication device of claim 13, wherein the software instructions are further executable by the at least one processor to cause the secondary cellular communication device to:

request provisioning of the eSIM by communicating with an eSIM server via a wireless local area network (WLAN).

19. The method of claim 1, wherein the indication that the multi-SIM functionality has been initiated comprises a network address from which the eSIM may be downloaded.