

CLAIMS:

1. A User Equipment (UE) comprising:
 - a modem capable of connecting to a Long-Term Evolution (LTE) cellular network and capable of connecting to a Universal Mobile Telecommunications System (UMTS) cellular network for transmitting and receiving data, the modem, when connected to the UMTS cellular network, having an idle state, one or more intermediate states, and a dedicated channel state, wherein: (a) in the idle state the modem is not connected to the UMTS cellular network, (b) in the dedicated channel state the modem is connected to the UMTS cellular network via a dedicated communication channel, and (c) in each of the intermediate states the modem is not connected to the UMTS cellular network via the dedicated communication channel and a first time-period required to transition from the corresponding intermediate state to the dedicated channel state is shorter than a second time-period required to transition from the idle state to the dedicated channel state; and
 - a processing resource configured to:
 - maintain a state transitioning regime of the UE when the modem is connected to the UMTS cellular network, wherein the state transitioning regime includes (a) preventing at least one transition of the UE to an idle state for at least one time-period, and (b) periodically transitioning the UE to the idle state, thereby enabling the modem to switch from the UMTS cellular network to the LTE cellular network.
2. The UE of claim 1, wherein the state transitioning regime further includes periodically transitioning the UE to the dedicated channel state, thereby causing the cellular network to update discovery information associated with the UE.
3. The UE of claim 1, wherein a first power consumption of the UE in the idle state is lower than a second power consumption of the UE in the intermediate states, and wherein the second power consumption of the UE in the intermediate states is lower than a third power consumption of the UE in the dedicated channel state.
4. The UE of claim 1, wherein the intermediate states are one or more of: URA_PCH state, CELL_PCH state or CELL_FACH state.

5. The UE of claim 1, wherein the processing resource is configured to periodically transmit messages to the UMTS cellular network for the preventing.
6. The UE of claim 1, wherein the processing resource is further configured to transmit and receive data utilizing the modem in order to facilitate a data service.
7. The UE of claim 6, wherein the data service is a Push-To-Talk (PTT) over the UMTS cellular network or over the LTE cellular network.
8. The UE of claim 1, wherein the UE is a mobile phone device.
9. The UE of claim 8, further comprising a microphone and a speaker, enabling a user of the UE to conduct a conversation using the UE.
10. A method comprising:
- connecting a User Equipment (UE), comprising a modem, to a Universal Mobile Telecommunications System (UMTS) cellular network for transmitting and receiving data, wherein the modem is capable of connecting the UE to a Long-Term Evolution (LTE) cellular network and capable of connecting the UE to the UMTS cellular network; wherein when the modem is connected to the UMTS cellular network the modem having an idle state, one or more intermediate states, and a dedicated channel state, wherein: (a) in the idle state the modem is not connected to the UMTS cellular network, (b) in the dedicated channel state the modem is connected to the UMTS cellular network via a dedicated communication channel, and (c) in each of the intermediate states the modem is not connected to the UMTS cellular network via the dedicated communication channel and a first time-period required to transition from the corresponding intermediate state to the dedicated channel state is shorter than a second time-period required to transition from the idle state to the dedicated channel state; and
- maintaining, by a processing resource of the UE, a state transitioning regime of the UE when the modem is connected to the UMTS cellular network, wherein the state transitioning regime includes (a) preventing at least one transition of the UE to an idle state for at least one time-period, and (b) periodically transitioning the UE to the idle state,

thereby enabling the modem to switch from the UMTS cellular network to the LTE cellular network.

11. The method of claim 10, wherein the state transitioning regime further includes
5 periodically transitioning the UE to the dedicated channel state, thereby causing the cellular network to update discovery information associated with the UE.

12. The method of claim 10, wherein a first power consumption of the UE in the idle state is lower than a second power consumption of the UE in the intermediate states, and wherein the second power consumption of the UE in the intermediate states is lower than
10 a third power consumption of the UE in the dedicated channel state.

13. The method of claim 10, wherein the intermediate states are one or more of: URA_PCH state, CELL_PCH state or CELL_FACH state.

14. The method of claim 10, further comprising periodically transmitting, by the processing resource, messages to the UMTS cellular network for the preventing.

15. The method of claim 10, further comprising transmitting and receiving, by the processing resource, data utilizing the modem in order to facilitate a data service.

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16. The method of claim 15, wherein the data service is a Push-To-Talk (PTT) over the UMTS cellular network or over the LTE cellular network.

17. The method of claim 10, wherein the UE is a mobile phone device.

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18. The method of claim 17, wherein the UE further comprises a microphone and a speaker, enabling a user of the UE to conduct a conversation using the UE.

19. A non-transitory computer readable storage medium having computer readable
30 program code embodied therewith, the computer readable program code, executable by at least one processor of a User Equipment (UE) comprising a modem to perform a method comprising:

connecting the UE to a Universal Mobile Telecommunications System (UMTS) cellular network for transmitting and receiving data, wherein the modem is capable of connecting the UE to a Long-Term Evolution (LTE) cellular network and capable of connecting the UE to the UMTS cellular network; wherein when the modem is connected
5 to the UMTS cellular network the modem having an idle state, one or more intermediate states, and a dedicated channel state, wherein: (a) in the idle state the modem is not connected to the UMTS cellular network, (b) in the dedicated channel state the modem is connected to the UMTS cellular network via a dedicated communication channel, and (c) in each of the intermediate states the modem is not connected to the UMTS cellular
10 network via the dedicated communication channel and a first time-period required to transition from the corresponding intermediate state to the dedicated channel state is shorter than a second time-period required to transition from the idle state to the dedicated channel state; and

maintaining a state transitioning regime of the UE when the modem is connected
15 to the UMTS cellular network, wherein the state transitioning regime includes (a) preventing at least one transition of the UE to an idle state for at least one time-period, and (b) periodically transitioning the UE to the idle state, thereby enabling the modem to switch from the UMTS cellular network to the LTE cellular network.

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