

CLAIMS

What is claimed:

1. A method for use in a wireless communications network for one or more Machine-to-Machine (M2M) devices in idle mode comprising:  
receiving a paging message comprising a field indicating paging with network re-entry or or paging with delayed network entry or paging without network re-entry.
2. The method of claim 1, wherein the one or more M2M devices comprise a group and the paging is a group page.
3. The method of claim 1, wherein paging does not require a paged one or more M2M devices to perform network entry to receive DL data.
4. The method of claim 1, wherein paging informs the one or more M2M devices that there is DL data to be received.
5. The method of claim 1, further comprising receiving DL data without performing network entry/re-entry, wherein receipt of the DL data does not need to be acknowledged immediately.
6. The method of claim 1, further comprising performing network re-entry at a later time for UL data transmissions or pre-defined network re-entry trigger triggers.
7. The method of claim 1, wherein the paging is a group page.

8. The method of claim 1, further comprising once performing a delayed network re-entry, wherein acknowledging the receipt of DL data in previous paging listening intervals.

9. The method of claim 1, wherein the paging is an individual paging mode page.

10. The method of claim 1, wherein the paging is a group paging mode page.

11. The method of claim 1, wherein network re-entry is performed by a pre-defined network re-entry trigger.

12. The method of claim 1, further comprising transmitting an acknowledgment indicating the receipt of DL data.

13. The method of claim 1, wherein DL data is transmitted with specific identifiers in the medium access control (MAC) layer.

14. The method of claim 13, wherein DL multicast data uses specific multicast identifiers.

15. The method of claim 13, wherein DL unicast data uses specific unicast identifiers.

16. The method of claim 1, wherein a MAC layer identifier is maintained for each M2M device in an idle mode.

17. The method of claim 1, wherein the MAC layer identifier is updated as part of a location update procedure.

18. The method of claim 1, wherein the MAC layer identifier is assigned to an idle mode M2M device.

19. A method for use in a wireless communications network, the method comprising:

receiving a page for downlink (DL) data for one or more Machine-to-Machine (M2M) devices, wherein the page indicates there are DL data to be received but does not require the one or more M2M devices to perform network entry;

receiving DL data without performing network reentry, wherein the receipt of the DL data is not needed to be acknowledged immediately; and

performing network re-entry at a later time for UL data transmissions or other pre-defined network reentry triggers;

Acknowledging the receipt of DL data of previous paging listening interval once re-entering the network.