

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-20. (canceled)

21. (new) A method for detecting coverage loss at a base station (BS), the method comprising:

starting a coverage loss detection (CLD) timer for a subscriber station (SS);

on a condition that the CLD timer for the SS expires:

allocating an uplink (UL) grant to the SS to enable identification of the status of the SS;

receiving an UL data burst from the SS via the allocated UL grant ;

resetting the CLD timer for the SS based on the received UL data burst from the SS; and

sending a unicast ranging acknowledgement (RNG-ACK) to the SS based on the received UL data burst from the SS, wherein the unicast RNG-ACK enables the SS to reset a periodic ranging timer of the SS.

22. (new) The method of claim 21, wherein the CLD timer for the SS is started upon an initial network entry of the SS.

23. (new) The method of claim 21, wherein the CLD timer for the SS is started upon a network reentry of the SS.

24. (new) The method of claim 21, wherein the UL data burst includes identification information of the SS.

25. (new) The method of claim 21, further comprising:
determining if an UL transmission parameter adjustment is required.

26. (new) The method of claim 21, further comprising:
on a condition that the CLD timer for the SS expires during a scanning interval of the SS:

deferring allocating an uplink (UL) grant to the SS to identify the status of the SS to a next available interleaving interval of the SS.

27. (new) The method of claim 26, further comprising:
detecting the next available interleaving interval of the SS.

28. (new) A base station (BS) configured to detect coverage loss, the BS comprising:

a coverage loss detection (CLD) timer capable of being started for a subscriber station (SS);

a transmitter configured to allocate an uplink (UL) grant to the SS to enable identification of the status of the SS;

a receiver configured to receive an UL data burst from the SS via the allocated UL grant;

a processor configured to reset the CLD timer for the SS based on the received UL data burst from the SS; and

the transmitter further configured to send a unicast ranging acknowledgement (RNG-ACK) to the SS based on the received UL data burst from the SS, wherein the unicast RNG-ACK enables the SS to reset a periodic ranging timer of the SS.

29. (new) The BS of claim 29, wherein the CLD timer for the SS is started upon an initial network entry of the MS.

30. (new) The BS of claim 29, wherein the CLD timer for the MS is started upon a network reentry of the MS.

31. (new) The BS of claim 29, wherein the UL data burst includes identification information of the SS.

32. (new) The BS of claim 29, wherein the processor is further configured to determine if an UL transmission parameter adjustment is required.

33. (new) The BS of claim 29, wherein the transmitter is further configured to defer allocating an uplink (UL) grant to the SS to identify the status of the SS to a next available interleaving interval of the SS on a condition that the CLD timer for the SS expires during a scanning interval of the SS.

34. (new) The BS of claim 29, wherein the receiver is further configured to detect the next available interleaving interval of the SS.