

CLAIMS

1. A method for wireless communication at a user equipment (UE), comprising:
 - transmitting, to a base station, a first message of a two-step random access channel procedure, the two-step random access channel procedure comprising the first message and a second message;
 - receiving, from the base station, the second message comprising feedback information for signaling that the two-step random access channel procedure has been completed, wherein the feedback information comprises a physical uplink control channel resource indicator, a physical downlink shared channel-to-hybrid automatic repeat request timing indicator, and a transmit power control command; and
 - transmitting, to the base station, a third message comprising an indication of whether the second message was received by the UE, the third message transmitted in accordance with the feedback information.
2. The method of claim 1, further comprising:
 - receiving, as part of the feedback information, information for a physical uplink control channel, wherein transmitting the third message comprises:
 - transmitting the third message on the physical uplink control channel based at least in part on the information for the physical uplink control channel.
3. The method of claim 2, wherein the information for the physical uplink control channel comprises at least one of a sounding reference signal request, or a channel state information request.
4. The method of claim 3, further comprising:
 - transmitting, within the third message, a channel state information report based at least in part on the channel state information request.
5. The method of claim 2, wherein the second message comprises a timing advance command, and wherein the third message is transmitted based at least in part on the timing advance command.

6. The method of claim 2, further comprising:
receiving, as part of the feedback information, an uplink grant for transmitting uplink data to the base station; and
transmitting, to the base station, the uplink data based at least in part on the uplink grant.

7. The method of claim 2, further comprising:
receiving, as part of the feedback information, a downlink grant for receiving downlink data from the base station; and
receiving the downlink data based at least in part on the downlink grant.

8. The method of claim 2, wherein the feedback information comprises at least one of an uplink grant or a downlink grant based at least in part on data to be communicated between the UE and the base station.

9. The method of claim 1, further comprising:
transmitting, to a second base station, a fourth message of a second two-step random access channel procedure, the second two-step random access channel procedure comprising the fourth message and a fifth message;
monitoring for the fifth message comprising feedback information for signaling that the second two-step random access channel procedure has been completed;
determining that the second two-step random access channel procedure is unsuccessful based at least in part on monitoring for the fifth message; and
refraining from transmitting a sixth message comprising an indication of whether the fifth message was received by the UE based at least in part on determining that the second two-step random access channel procedure is unsuccessful.

10. The method of claim 9, wherein monitoring for the fifth message comprises:
receiving the fifth message; and
failing to decode the fifth message.

11. The method of claim 9, wherein monitoring for the fifth message comprises:
failing to receive the fifth message.

12. The method of claim 1, further comprising:
receiving, as part of the feedback information, an uplink grant for transmitting uplink data to the base station, wherein transmitting the third message comprises:
transmitting the third message based at least in part on the uplink grant.

13. The method of claim 12, wherein the uplink grant comprises listen-before-talk information comprising an indication of at least one of a listen-before-talk priority or a medium sensing category.

14. The method of claim 12, further comprising:
receiving, as part of the feedback information, a downlink grant for receiving downlink data from the base station.

15. The method of claim 1, wherein receiving the second message comprises:
receiving the second message via a broadcast transmission from the base station or a unicast transmission from the base station.

16. The method of claim 1, wherein the feedback information is different from feedback information associated with a physical downlink control channel.

17. The method of claim 1, further comprising:
receiving, as part of the feedback information, a downlink grant for receiving downlink data from the base station;
receiving the downlink data based at least in part on the downlink grant, wherein transmitting the third message comprises:
transmitting the third message in response to the received downlink data, the third message comprising an indication of whether the downlink data was received.

18. The method of claim 17, further comprising:
monitoring one or more downlink transmissions for the downlink data until the second message is decoded.

19. The method of claim 17, further comprising:

determining a timing offset between the downlink grant and the downlink data, the timing offset comprising a timing gap value and a first slot offset value or comprising a second slot offset value that is greater than the first slot offset value.

20. The method of claim 17, wherein the downlink grant comprises at least one of listen-before-talk information or a channel state information request.

21. The method of claim 17, wherein the downlink data comprises at least a radio resource control configuration.

22. The method of claim 17, further comprising:
transmitting an acknowledgment or a negative acknowledgment for the downlink data, wherein the acknowledgment or the negative acknowledgment comprise the signaling that the two-step random access channel procedure has been completed.

23. The method of claim 17, further comprising:
receiving, as part of the feedback information, an uplink grant for transmitting uplink data to the base station.

24. A method for wireless communication at a base station, comprising:
receiving, from a user equipment (UE), a first message of a two-step random access channel procedure, the two-step random access channel procedure comprising the first message and a second message;

transmitting, to the UE, the second message comprising feedback information, wherein the feedback information comprises a physical uplink control channel resource indicator, a physical downlink shared channel-to-hybrid automatic repeat request timing indicator, and a transmit power control command; and

determining whether a third message has been received from the UE in accordance with the feedback information, wherein the third message signals that the two-step random access channel procedure has been completed.

25. The method of claim 24, further comprising:
determining information for a physical uplink control channel;
transmitting, within the feedback information, the information for the physical uplink control channel; and

receiving the third message on the physical uplink control channel based at least in part on the information for the physical uplink control channel.

26. The method of claim 25, wherein the information for the physical uplink control channel comprises at least one of a sounding reference signal request, or a channel state information request.

27. The method of claim 25, further comprising:
identifying uplink data that the UE is to communicate;
transmitting an uplink grant for the uplink data as part of the feedback information; and
receiving, from the UE, the uplink data based at least in part on the uplink grant.

28. The method of claim 25, further comprising:
identifying downlink data for the UE;
transmitting, as part of the feedback information, a downlink grant for transmitting the downlink data; and
transmitting, to the UE, the downlink data based at least in part on the downlink grant.

29. The method of claim 25, wherein the feedback information comprises at least one of an uplink grant or a downlink grant based at least in part on data to be communicated between the UE and the base station.

30. The method of claim 24, further comprising:
transmitting, as part of the feedback information, an uplink grant for receiving uplink data from the UE; and
receiving the third message based at least in part on the uplink grant.

31. The method of claim 30, wherein the uplink grant comprises listen-before-talk information comprising an indication of at least one of a listen-before-talk priority or a medium sensing category.

32. The method of claim 24, further comprising:

transmitting, as part of the feedback information, a downlink grant for transmitting downlink data to the UE;

transmitting the downlink data based at least in part on the downlink grant;
and

receiving the third message in response to the transmitted downlink data, the third message comprising an indication of whether the downlink data was received.

33. The method of claim 32, further comprising:

transmitting an indication of a timing offset between the downlink grant and the downlink data, the timing offset comprising a timing gap value and a first slot offset value or comprising a second slot offset value that is greater than the first slot offset value, wherein the indication of the timing offset is transmitted via remaining minimum system information.

34. The method of claim 32, wherein the downlink grant comprises at least one of listen-before-talk information or a channel state information request.

35. The method of claim 32, wherein the downlink data comprises at least a radio resource control configuration.

36. The method of claim 32, further comprising:

receiving an acknowledgment or a negative acknowledgment for the downlink data; and

determining that the two-step random access channel procedure has been completed based at least in part on the acknowledgment or the negative acknowledgment.

37. The method of claim 24, further comprising:

determining that the third message has not been received from the UE; and retransmitting the second message based at least in part on the determination that the third message has not been received from the UE.

38. The method of claim 24, wherein transmitting the second message comprises:

transmitting the second message via a broadcast transmission or a unicast transmission to the UE.

39. The method of claim 24, wherein the feedback information is different from feedback information associated with a physical downlink control channel.

40. An apparatus for wireless communication at a user equipment (UE), comprising:

means for transmitting, to a base station, a first message of a two-step random access channel procedure, the two-step random access channel procedure comprising the first message and a second message;

means for receiving, from the base station, the second message comprising feedback information for signaling that the two-step random access channel procedure has been completed, wherein the feedback information comprises a physical uplink control channel resource indicator, a physical downlink shared channel-to-hybrid automatic repeat request timing indicator, and a transmit power control command; and

means for transmitting, to the base station, a third message comprising an indication of whether the second message was received by the UE, the third message transmitted in accordance with the feedback information.

41. The apparatus of claim 40, further comprising:

means for receiving, as part of the feedback information, information for a physical uplink control channel, wherein the means for transmitting the third message comprise:

means for transmitting the third message on the physical uplink control channel based at least in part on the information for the physical uplink control channel.

42. The apparatus of claim 41, wherein the information for the physical uplink control channel comprises at least a sounding reference signal request, or a channel state information request.

43. The apparatus of claim 42, further comprising:

means for transmitting, within the third message, a channel state information report based at least in part on the channel state information request.

44. The apparatus of claim 41, wherein the second message comprises a timing advance command, and wherein the third message is transmitted based at least in part on the timing advance command.

45. The apparatus of claim 41, further comprising:
 means for receiving, as part of the feedback information, an uplink grant for transmitting uplink data to the base station; and
 means for transmitting, to the base station, the uplink data based at least in part on the uplink grant.

46. The apparatus of claim 41, wherein the feedback information comprises at least one of an uplink grant or a downlink grant based at least in part on data to be communicated between the UE and the base station.

47. The apparatus of claim 40, further comprising:
 means for transmitting, to a second base station, a fourth message of a second two-step random access channel procedure, the second two-step random access channel procedure comprising the fourth message and a fifth message;
 means for monitoring for the fifth message comprising feedback information for signaling that the second two-step random access channel procedure has been completed;
 means for determining that the second two-step random access channel procedure is unsuccessful based at least in part on monitoring for the fifth message; and
 means for refraining from transmitting a sixth message comprising an indication of whether the fifth message was received by the UE based at least in part on determining that the second two-step random access channel procedure is unsuccessful.

48. The apparatus of claim 40, wherein the feedback information is different from feedback information associated with a physical downlink control channel.

49. The apparatus of claim 40, further comprising:
 means for receiving, as part of the feedback information, an uplink grant for transmitting uplink data to the base station, wherein the means for transmitting the third message comprise:
 means for transmitting the third message based at least in part on the uplink grant.

50. The apparatus of claim 49, wherein the uplink grant comprises listen-before-talk information comprising an indication of at least one of a listen-before-talk priority or a medium sensing category.

51. The apparatus of claim 49, further comprising:
means for receiving, as part of the feedback information, a downlink grant for receiving downlink data from the base station.

52. The apparatus of claim 40, wherein the means for receiving the second message comprise:
means for receiving the second message via a broadcast transmission from the base station or a unicast transmission from the base station.

53. An apparatus for wireless communication at a base station, comprising:
means for receiving, from a user equipment (UE), a first message of a two-step random access channel procedure, the two-step random access channel procedure comprising the first message and a second message;
means for transmitting, to the UE, the second message comprising feedback information, wherein the feedback information comprises a physical uplink control channel resource indicator, a physical downlink shared channel-to-hybrid automatic repeat request timing indicator, and a transmit power control command; and
means for determining whether a third message has been received from the UE in accordance with the feedback information, wherein the third message signals that the two-step random access channel procedure has been completed.

54. The apparatus of claim 53, wherein the instructions are further executable by the processor to cause the apparatus to:
means for determining information for a physical uplink control channel;
means for transmitting, within the feedback information, the information for the physical uplink control channel; and
means for receiving the third message on the physical uplink control channel based at least in part on the information for the physical uplink control channel.

55. The apparatus of claim 54, wherein the information for the physical uplink control channel comprises at least one of a sounding reference signal request, or a channel state information request.

56. The apparatus of claim 54, wherein the instructions are further executable by the processor to cause the apparatus to:

- means for identifying uplink data that the UE is to communicate;
- means for transmitting an uplink grant for the uplink data as part of the feedback information; and
- means for receiving, from the UE, the uplink data based at least in part on the uplink grant.

57. The apparatus of claim 54, wherein the instructions are further executable by the processor to cause the apparatus to:

- means for identifying downlink data for the UE;
- means for transmitting, as part of the feedback information, a downlink grant for transmitting the downlink data; and
- means for transmitting, to the UE, the downlink data based at least in part on the downlink grant.

58. The apparatus of claim 54, wherein the feedback information comprises at least one of an uplink grant or a downlink grant based at least in part on data to be communicated between the UE and the base station.

59. The apparatus of claim 53, further comprising:

- means for transmitting, as part of the feedback information, an uplink grant for receiving uplink data from the UE; and
- means for receiving the third message based at least in part on the uplink grant.

60. The apparatus of claim 59, wherein the uplink grant comprises listen-before-talk information comprising an indication of at least one of a listen-before-talk priority or a medium sensing category.

61. The apparatus of claim 53, wherein the feedback information is different from feedback information associated with a physical downlink control channel.

62. An apparatus for wireless communication at a user equipment (UE), comprising:

a processor,

memory coupled with the processor; and

instructions stored in the memory and executable by the processor to cause the apparatus to:

transmit, to a base station, a first message of a two-step random access channel procedure, the two-step random access channel procedure comprising the first message and a second message;

receive, from the base station, the second message comprising feedback information for signaling that the two-step random access channel procedure has been completed, wherein the feedback information comprises a physical uplink control channel resource indicator, a physical downlink shared channel-to-hybrid automatic repeat request timing indicator, and a transmit power control command; and

transmit, to the base station, a third message comprising an indication of whether the second message was received by the UE, the third message transmitted in accordance with the feedback information.

63. An apparatus for wireless communication at a base station, comprising: a processor,

memory coupled with the processor; and

instructions stored in the memory and executable by the processor to cause the apparatus to:

receive, from a user equipment (UE), a first message of a two-step random access channel procedure, the two-step random access channel procedure comprising the first message and a second message;

transmit, to the UE, the second message comprising feedback information, wherein the feedback information comprises a physical uplink control channel resource indicator, a physical downlink shared channel-to-hybrid automatic repeat request timing indicator, and a transmit power control command; and

determine whether a third message has been received from the UE in accordance with the feedback information, wherein the third message signals that the two-step random access channel procedure has been completed.