CLAIMS

1. A method for wireless communication at a user equipment (UE), comprising: receiving a configuration for semi-persistent scheduling (SPS) of uplink transmissions by the UE, the configuration pertaining to a group of UEs that includes the UE, wherein the configuration includes an indication associated with a monitoring occasion for a group feedback signal; transmitting a message from the UE to a base station in accordance with the configuration, wherein the message is transmitted using uplink repetition during a repetition window; receiving the group feedback signal from the base station on feedback resources specified by the configuration, wherein the feedback resource is a resource associated with a last transmission time interval (TTI) in the repetition window; and re-transmitting the message to the base station based at least in part on receipt of the group feedback signal.

2. The method of claim 1, further comprising: determining the monitoring occasion from the indication associated with the monitoring occasion and based at least in part on a time or frequency of transmission of the message; and monitoring for the group feedback signal from the base station during the monitoring occasion.

3. The method of claim 2, wherein the indication associated with the monitoring occasion is associated with a timing of the monitoring occasion.

4. The method of claim 1, wherein the group feedback signal pertains to UEs of the group of UEs that are configured to transmit using a same resource of a specific in accordance with the configuration, wherein the specific TTI is the last TTI of the repetition window.

5. The method of claim 1, wherein the group feedback signal pertains to UEs of the group of UEs that are configured to transmit during a specific TTI in accordance with the configuration, wherein the specific TTI is the last TTI of the repetition window.

6. The method of claim 1, wherein the group feedback signal pertains to UEs of the group of UEs that are configured to transmit during a specific TTI and to use a specific sub-band in accordance with the configuration, wherein the specific TTI is the last TTI of the repetition window.

7. The method of claim 1, wherein the group feedback signal pertains to UEs of the group of UEs that are configured to transmit during a specific portion of a TTI and to use a specific sub-band in accordance with the configuration, wherein the specific TTI is the last TTI of the repetition window.

8. The method of claim 1, wherein transmitting the message from the UE to the base station comprises: transmitting the message as an initial transmission.

9. The method of claim 1, wherein receiving the group feedback signal further comprises: receiving the group feedback signal over a resource associated with a frequency resource in the repetition window such that the group feedback signal pertains to the entire repetition window.

10. The method of claim 1, wherein the group feedback signal includes individual group feedback indicators for each transmission in the repetition window.

11. The method of claim 1, wherein re-transmitting the message to the base station further comprises: re-transmitting a transport block (TB) of the message as part of an associated hybrid automatic repeat request acknowledgement (HARQ) process.

12. The method of claim 1, wherein re-transmitting the message to the base station further comprises: re-transmitting the message using next available SPS resources after a specified gap in time, in accordance with the configuration.

13. The method of claim 12, wherein the specified gap in time is specified for the UE or for the group of UEs.

14. The method of claim 1, wherein re-transmitting the message to the base station further comprises: re-transmitting the message using re-transmission resources specified by the configuration.

15. The method of claim 1, wherein the group feedback signal is only received as a negative acknowledgement signal.

16. A method for wireless communication at a base station, comprising: transmitting, to a group of user equipment (UEs), a configuration for semi-persistent scheduling (SPS) of uplink transmissions by the UEs, wherein the configuration includes a timing indication associated with a monitoring occasion for a group feedback signal; failing to decode a message that one of the UEs attempted to transmit to the base station in accordance with the configuration, wherein the message was transmitted using uplink repetition during a repetition window; transmitting the group feedback signal to the group of UEs on resources specified by the configuration, the group feedback signal being based at least in part on the failure to decode the message, and wherein the resources include a resource associated with a last transmission time interval (TTI) in the repetition window; and receiving a re-transmitted message from the one of the UEs, re-transmission of the message being based at least in part on the group feedback signal.

17. The method of claim 16, wherein the monitoring occasion is further based at least in part on a time or frequency of transmission of the message by the one of the UEs.

18. The method of claim 16, wherein the group feedback signal pertains to UEs of the group of UEs that are configured to transmit using a same resource of a specific TTI in accordance with the configuration, wherein the specific TTI is the last TTI of the repetition window.

19. The method of claim 16, wherein the group feedback signal pertains to UEs of the group of UEs that are configured to transmit during a specific TTI in accordance with the configuration, wherein the specific TTI is the last TTI of the repetition window.

20. The method of claim 16, wherein the group feedback signal pertains to UEs of the group of UEs that are configured to transmit during a specific transmission time interval (TTI) and to use a specific sub-band in accordance with the configuration.

21. The method of claim 16, wherein the group feedback signal pertains to UEs of the group of UEs that are configured to transmit during a specific portion of a TTI and to use a specific sub-band in accordance with the configuration, wherein the specific TTI is the last TTI of the repetition window.

22. The method of claim 16, wherein transmitting the group feedback signal to the group of UEs on resources specified by the configuration comprises: identifying that uplink repetition is enabled for the UEs; and transmitting the group feedback signal over a resource associated with a frequency resource in the repetition window associated with the uplink repetition such that the group feedback signal pertains to the entire repetition window.

23. The method of claim 16, wherein the group feedback signal includes individual group feedback indicators for each transmission in the repetition window.

24. The method of claim 16, wherein receiving the re-transmitted message from the one of the UEs further comprises: receiving the re-transmitted message via next available SPS resources after a specified gap in time, in accordance with the configuration.

25. The method of claim 24, further comprising: indicating the specified gap in time as a UE-specific gap in time or as a group-specific gap in time.

26. The method of claim 16, wherein receiving the re-transmitted message from the one of the UEs further comprises: receiving the re-transmitted message via re-transmission resources specified by the configuration.

27. The method of claim 16, wherein transmitting the group feedback signal to the group of UEs comprises: transmitting the group feedback signal to the group of UEs only if the group feedback signal is a negative acknowledgement signal.

28. The method of claim 16, wherein transmitting the group feedback signal to the group of UEs comprises: transmitting the group feedback signal on resources that overlap with other transmissions to other UEs.

29. The method of claim 28, further comprising: rate-matching the transmissions to other UEs around resources used for transmission of the group feedback signal.

30. The method of claim 29, wherein the group feedback signal transmission resources are covered by zero-power channel state information reference signal (ZP-CSI-RS) resources.

31. The method of claim 29, further comprising: configuring the other UEs with resources for the group feedback signal so that the other UEs are enabled to rate-match around the resources for the group feedback signal.

32. The method of claim 28, further comprising: puncturing the transmissions to other UEs that are utilizing transmission resources of the group feedback signal.

33. A method for wireless communication at a base station, comprising: transmitting a multicast broadcast transmission to a group of user equipment (UEs) that are group-configured to transmit a feedback signal according to a group configuration; receiving the feedback signal from at least one of the UEs, the feedback signal indicating that the UE did not decode the multicast broadcast transmission; and re-transmitting the multicast broadcast transmission to at least a subset of the group of UEs based at least in part on receipt of the feedback signal, wherein the subset of the UEs are configured to transmit the feedback signal during a last transmission time interval (TTI) in a repetition window in accordance with the group configuration.

34. The method of claim 33, wherein the base station re-transmits the multicast broadcast transmission to UEs of the group of UEs that are configured to transmit the feedback signal using a same resource of the last TTI.

35. The method of claim 33, wherein the base station re-transmits the multicast broadcast transmission to UEs of the group of UEs that are configured to use a specific sub-band in accordance with the group configuration.

36. The method of claim 33, wherein the base station re-transmits the multicast broadcast transmission to UEs of the group of UEs that are configured to transmit the feedback signal during a specific portion of the last TTI and to use a specific sub-band in accordance with the group configuration.

37. The method of claim 33, wherein receiving the feedback signal comprises: receiving the feedback signal from more than one UE on a given physical uplink control channel or a group of physical uplink control channels.

38. The method of claim 33, wherein the feedback signal is only received as a negative acknowledgement signal.

39. An apparatus for wireless communication at a user equipment (UE), comprising: a processor; memory in electronic communication with the processor; and instructions stored in the memory and executable by the processor to cause the apparatus to: receive a configuration for semi-persistent scheduling (SPS) of uplink transmissions by the UE, the configuration pertaining to a group of UEs that includes the UE, wherein the configuration includes an indication associated with a monitoring occasion for a group feedback signal; transmit a message from the UE to a base station in accordance with the configuration, wherein the message is transmitted using uplink repetition during a repetition window; receive the group feedback signal from the base station on feedback resources specified by the configuration, wherein the feedback resource is a resource associated with a last transmission time interval (TTI) in the repetition window; and re-transmit the message to the base station based at least in part on receipt of the group feedback signal.

40. The apparatus of claim 39, wherein the instructions are further executable by the processor to cause the apparatus to: determine the monitoring occasion from the indication associated with the monitoring occasion and based at least in part on a time or frequency of transmission of the message; and monitor for the group feedback signal from the base station during the monitoring occasion.

41. The apparatus of claim 39, wherein transmitting the message from the UE to the base station comprise transmitting the message as an initial transmission.

42. The apparatus of claim 39, wherein the instructions to receive the group feedback signal are executable by the processor to cause the apparatus to: receive the group feedback signal over a resource associated with a frequency resource in the repetition window such that the group feedback signal pertains to the entire repetition window.

43. The apparatus of claim 39, wherein the group feedback signal includes individual group feedback indicators for each transmission in the repetition window.

44. An apparatus for wireless communication at a base station, comprising: a processor; memory in electronic communication with the processor; and instructions stored in the memory and executable by the processor to cause the apparatus to: transmit, to a group of user equipment (UEs), a configuration for semi-persistent (SPS) scheduling of uplink transmissions by the UEs, wherein the configuration includes a timing indication associated with a monitoring occasion for a group feedback signal; fail to decode a message that one of the UEs attempted to transmit to the base station in accordance with the configuration, wherein the message was transmitted using uplink repetition during a repetition window; transmit the group feedback signal to the group of UEs on resources specified by the configuration, the group feedback signal being based at least in part on the failure to decode the message, and wherein the resources include a resource associated with a last transmission time interval (TTI) in the repetition window; and receive a re-transmitted message from the one of the UEs, re-transmission of the message being based at least in part on the group feedback signal.

45. The apparatus of claim 44, wherein the monitoring occasion is based at least in part on a time or frequency of transmission of the message by the one of the UEs.

46. An apparatus for wireless communication at a base station, comprising: a processor; memory in electronic communication with the processor; and instructions stored in the memory and executable by the processor to cause the apparatus to: transmit a multicast broadcast transmission to a group of user equipment (UEs) that are group-configured to transmit a feedback signal according to a group configuration; receive the feedback signal from at least one of the UEs, the feedback signal indicating that the UE did not decode the multicast broadcast transmission; and re-transmit the multicast broadcast transmission to at least a subset of the group of UEs based at least in part on receipt of the feedback signal, wherein the subset of the UEs are configured to transmit the feedback signal during a last transmission time interval (TTI) in a repetition window in accordance with the group configuration.

47. An apparatus for wireless communication at a user equipment (UE), comprising: means for receiving a configuration for semi-persistent scheduling (SPS) of uplink transmissions by the

UE, the configuration pertaining to a group of UEs that includes the UE, wherein the configuration includes an indication associated with a monitoring occasion for a group feedback signal; means for transmitting a message from the UE to a base station in accordance with the configuration, wherein the message is transmitted using uplink repetition during a repetition window; means for receiving the group feedback signal from the base station on feedback resources specified by the configuration, wherein the feedback resource is a resource associated with a last transmission time interval (TTI) in the repetition window; and means for re-transmitting the message to the base station based at least in part on receipt of the group feedback signal.

48. An apparatus for wireless communication at a base station, comprising: means for transmitting, to a group of user equipment (UEs), a configuration for semi-persistent scheduling (SPS) of uplink transmissions by the UEs, wherein the configuration includes a timing indication associated with a monitoring occasion for a group feedback signal; means for failing to decode a message that one of the UEs attempted to transmit to the base station in accordance with the configuration, wherein the message was transmitted using uplink repetition during a repetition window; means for transmitting the group feedback signal to the group of UEs on resources specified by the configuration, the group feedback signal being based at least in part on the failure to decode the message, and wherein the resources include a resource associated with a last transmission time interval (TTI) in the repetition window; and means for receiving a re-transmitted message from the one of the UEs, re-transmission of the message being based at least in part on the group feedback signal.

49. An apparatus for wireless communication at a base station, comprising: means for transmitting a multicast broadcast transmission to a group of user equipment (UEs) that are group-configured to transmit a feedback signal according to a group configuration; means for receiving the feedback signal from at least one of the UEs, the feedback signal indicating that the UE did not decode the multicast broadcast transmission; and means for re-transmitting the multicast broadcast transmission to at least a subset of the group of UEs based at least in part on receipt of the feedback signal, wherein the subset of the UEs are configured to transmit the feedback signal during a last transmission time interval (TTI) in a repetition window in accordance with the group configuration.

50. A non-transitory computer-readable medium storing code for wireless communication at a user equipment (UE), the code comprising instructions executable by a processor to: receive a configuration for semi-persistent scheduling (SPS) of uplink transmissions by the UE, the configuration pertaining to a group of UEs that includes the UE, wherein the configuration includes an indication associated with a monitoring occasion for a group feedback signal; transmit a message from the UE to a base station in accordance with the configuration, wherein the message is transmitted using uplink repetition during a repetition window; receive the group feedback signal from the base station on feedback resources specified by the configuration, wherein the feedback resource is a resource associated with a last transmission time interval (TTI) in the repetition window; and re-transmit the message to the base station based at least in part on receipt of the group feedback signal.

51. A non-transitory computer-readable medium storing code for wireless communication at a base station, the code comprising instructions executable by a processor to: transmit, to a group

of user equipment (UEs), a configuration for semi-persistent scheduling (SPS) of uplink transmissions by the UEs, wherein the configuration includes a timing indication associated with a monitoring occasion for a group feedback signal; fail to decode a message that one of the UEs attempted to transmit to the base station in accordance with the configuration, wherein the message was transmitted using uplink repetition during a repetition window; transmit the group feedback signal to the group of UEs on resources specified by the configuration, the group feedback signal being based at least in part on the failure to decode the message, and wherein the resources include a resource associated with a last transmission time interval (TTI) in the repetition window; and receive a re-transmitted message from the one of the UEs, re-transmission of the message being based at least in part on the group feedback signal.

52. A non-transitory computer-readable medium storing code for wireless communication at a base station, the code comprising instructions executable by a processor to: transmit a multicast broadcast transmission to a group of user equipment (UEs) that are group-configured to transmit a feedback signal according to a group configuration; receive the feedback signal from at least one of the UEs, the feedback signal indicating that the UE did not decode the multicast broadcast transmission; and re-transmit the multicast broadcast transmission to at least a subset of the group of UEs based at least in part on receipt of the feedback signal, wherein the subset of the UEs are configured to transmit the feedback signal during a last transmission time interval (TTI) in a repetition window in accordance with the group configuration.