CLAIMS

1. A method of wireless communication at a user equipment (UE), comprising:

determining a blackout period associated with a beam failure (BF) event; and

communicating a blackout indication to a base station, the blackout indication including the blackout period,

wherein said determining of the blackout period comprises identifying at least one antenna panel that is impacted by the BF event and predicting the blackout period for at least one beam pair link (BPL) associated with the at least one antenna panel.

2. The method of claim 1, wherein said determining of the blackout period comprises identifying a configuration of UE receiving and transmitting components.

3. The method of claim 1, further comprising:

receiving a confirmation message from the base station in response to the blackout indication.

4. The method of claim 3, further comprising:

ceasing monitoring the BPL upon receiving the confirmation message from the base station.

5. The method of claim 4, wherein said ceasing of monitoring the BPL further comprises ceasing monitoring the BPL for an already scheduled downlink transmission during the blackout period.

6. The method of claim 1, wherein said communicating of the blackout indication comprises transmitting the blackout indication on a carrier frequency different from a current carrier frequency on the BPL or on another BPL.

7. The method of claim 1, wherein said communicating of the blackout indication comprises

transmitting a schedule request (SR) to request an uplink transmission;

receiving a downlink signaling message in response to the SR; and

transmitting the blackout indication based on the received downlink signaling message.

8. The method of claim 1, wherein said communicating of the blackout indication comprises transmitting a detailed blackout report in an uplink message without first transmitting a SR.

9. The method of claim 1, wherein the blackout indication comprises one or more of:

a first time stamp indicating a start of the blackout period;

a second time stamp indicating an end of the blackout period;

an indication of an identifier of the BPL;

an identifier of a first antenna panel associated with the BPL with a deactivation time stamp; and

an identifier of a second antenna panel associated with the BPL with an activation time stamp.

10. The method of claim 1, wherein the blackout indication further comprises an indicator of whether or not the entire UE is impacted, and the indicator is set if the one antenna panel is a last antenna panel in service for the UE.

11. The method of claim 9, wherein the blackout period is implicitly indicated if the activation time stamp is greater than the deactivation time stamp.

12. The method of claim 9, wherein the identifier of the BPL is associated with a transmission configuration indicator (TCI) state, an ID of an antenna panel, an ID of an SRS resource, a RS resource, and/or an assigned target RS resource or wherein the identifier of the BPL is associated with a configuration of a RS.

13. The method of claim 12, wherein the configuration of the RS indicates spatial relationship information linking the SRS resource with the RS resource or an antenna panel ID.

14. A method of wireless communication at a base station in communication with a user equipment (UE), comprising:

receiving a blackout indication from the UE, reporting a beam failure event impacting at least one beam pair link (BPL); and

determining a blackout period from the received blackout indication,

wherein the blackout indication comprises at least one or more of:

a time stamp indicating a start of the blackout period;

a time stamp indicating an end of the blackout period;

an indication of an identifier of the BPL;

an identifier of an antenna panel associated with the BPL with a deactivation time stamp; and

an identifier of a second antenna panel associated with the BPL with an activation time stamp; and

wherein said determining of the blackout period comprises identifying at least one antenna panel that is impacted by the identified BF event and identifying the blackout period for at least one beam pair link (BPL) associated with the at least one antenna panel, based on the activation time stamp and the deactivation time stamp.

15. The method of claim 14, wherein the blackout period is implicitly indicated if the activation time stamp is after deactivation time stamp.

16. The method of claim 14, further comprising

transmitting a confirmation message to the UE to request that the base station refrains from transmitting during the blackout period on the at least one impacted BPL.

17. The method of claim 14, further comprising

ceasing monitoring the BPL upon receiving the blackout indication.

18. The method of claim 14, further comprising

scheduling uplink and downlink transmissions based at least in part on the determined blackout period.

19. The method of claim 14, wherein said receiving of the blackout indication comprises:

receiving a schedule request (SR) to request an uplink transmission;

transmitting a downlink signaling message in response to the SR; and

receiving an uplink report of the blackout period based on the received downlink signaling message.

20. The method of claim 14, wherein said receiving of the blackout indication further comprises receiving a detailed blackout report in an uplink message without first transmitting a SR.

21. The method of claim 14, wherein an indicator for the entire UE is set if the one antenna panel is a last antenna panel in service for the UE.

22. The method of claim 14, wherein the identifier of the BPL is associated with a transmission configuration indicator (TCI) state, an ID of an antenna panel, an ID of an SRS resource, a RS resource, and/or an assigned target RS resource or wherein the identifier of the BPL is associated with a configuration of a RS.

23. The method of claim 22, wherein the configuration of the RS indicates spatial relationship information linking the SRS resource with the RS resource or an antenna panel ID.

24. An apparatus for wireless communication by a user equipment (UE), comprising:

a transceiver;

a memory; and

at least one processor coupled to the memory and configured to:

determine a blackout period associated with a beam failure (BF) event; and

communicate a blackout indication to a base station, the blackout indication including the blackout period,

wherein said determining of the blackout period comprises identifying at least one antenna panel that is impacted by the BF event and predicting the blackout period for at least one beam pair link (BPL) associated with the at least one antenna panel.

25. The apparatus of claim 24, wherein said determining of the blackout period comprises identifying a configuration of UE receiving and transmitting components.

26. The apparatus of claim 24, wherein the at least one processor is further configured to receive a confirmation message from the base station in response to the blackout indication.

27. The apparatus of claim 26, wherein the at least one processor is further configured to cease monitoring the BPL upon receiving the confirmation message from the base station.

28. The apparatus of claim 27, wherein said ceasing of monitoring the BPL further comprises ceasing monitoring the BPL for an already scheduled downlink transmission during the blackout period.

29. The apparatus of claim 24, wherein said communicating of the blackout indication comprises transmitting the blackout indication on a carrier frequency different from a current carrier frequency on the BPL or on another BPL.

30. The apparatus of claim 24, wherein said communicating of the blackout indication comprises

transmitting a schedule request (SR) to request an uplink transmission;

receiving a downlink signaling message in response to the SR; and

transmitting the blackout indication based on the received downlink signaling message.

31. The apparatus of claim 24, wherein said communicating of the blackout indication comprises transmitting a detailed blackout report in an uplink message without first transmitting a SR.

32. The apparatus of claim 24, wherein the blackout indication comprises one or more of:

a first time stamp indicating a start of the blackout period;

a second time stamp indicating an end of the blackout period;

an indication of an identifier of the BPL;

an identifier of a first antenna panel associated with the BPL with a deactivation time stamp; and

an identifier of a second antenna panel associated with the BPL with an activation time stamp.

33. An apparatus for wireless communication by a user equipment (UE), comprising:

means for determining a blackout period associated with a beam failure (BF) event; and

means for communicating a blackout indication to a base station, the blackout indication including the blackout period,

wherein said means for determining of the blackout period comprises means for identifying at least one antenna panel that is impacted by the BF event and predicting the blackout period for at least one beam pair link (BPL) associated with the at least one antenna panel.

34. The apparatus of claim 33, wherein the means for determining the blackout period comprises means for identifying a configuration of UE receiving and transmitting components.

35. The apparatus of claim 33, wherein said means for communicating the blackout indication comprises

means for transmitting a schedule request (SR) to request an uplink transmission;

means for receiving a downlink signaling message in response to the SR; and

means for transmitting the blackout indication based on the received downlink signaling message.