CLAIMS

1. A method of wireless communication, comprising:

receiving, at a user equipment (UE), a reservation request (RRQ) transmitted by a next generation Node B (gNB); and

transmitting, by the UE in response to the RRQ, a reservation response signal (RRS),

wherein the RRS carries a precoded sounding reference signal (SRS) modulated by an indication of interference estimated by UE.

2. The method of claim 1, wherein the indication of interference corresponds to an inverse of a covariance matrix ($Rnn^{-1/2}$).

3. The method of claim 2, wherein the gNB is a serving gNB that serves the UE, and wherein the $Rnn^{-1/2}$ communicates effective signal to interference noise ratio (SINR) post minimum mean square error (MMSE) for wireless communication between the UE and the serving gNB.

4. The method of claim 2, wherein the gNB is a neighbor gNB that does not serve the UE, and wherein the $Rnn^{-1/2}$ communicates a rise in interference level, to wireless communication between the UE and a serving gNB, that is attributable to transmission by the neighbor gNB.

5. The method of claim 4, wherein the $Rnn^{-1/2}$ includes an equivalence, per spatial dimension, of the rise in interference level, thereby enabling the neighbor gNB to determine transmission rank and transmission power per layer in a manner that avoids exceeding a predetermined interference level threshold.

6. The method of claim 1, wherein the RRQ includes a precoded channel state information-reference signal (CSI-RS) that conveys rank used in a data portion of wireless communication between the UE to a serving gNB, and that facilitates calculation of a coarse interference covariance matrix (Rnn) by the UE.

7. The method of claim 1, wherein the RRQ further includes a network allocation vector (NAV) and a control reference signal (RS) that enables decoding of the NAV.

8. The method of claim 7, wherein the RRS is multiplexed, in a transmission opportunity (TxOp) identified by the NAV, with other RRSs transmitted by other UEs.

9. The method of claim 1, wherein the RRS further includes a network allocation vector (NAV) and a control reference signal (RS) that enables decoding of the NAV.

10. The method of claim 1, further comprising:

receiving, by the UE before receiving the RRQ, a synchronization signal transmitted by the gNB;

using, by the UE, the synchronization signal to decode the RRQ; and

transmitting, by the UE, another synchronization signal before transmitting the RRS.

11. The method of claim 1, wherein the UE is synchronized with the gNB, the method further comprising:

determining, by the UE, whether the RRQ is received in a control region;

in response to the determination being that the RRQ is received in the control region, transmitting the RRS, by the UE, in the control region; and

in response to the determination being that the RRQ is not received in the control region, transmitting the RRS, by the UE, in a data region.

12. A method of wireless communication, comprising:

transmitting, by a next generation Node B (gNB) to a user equipment (UE), a reservation request (RRQ);

detecting, by the gNB, a reservation response signal (RRS) transmitted by the UE in response to the RRQ, wherein the RRS includes a precoded sounding reference signal (SRS) modulated by an indication of interference estimated by UE; and

employing the indication of interference to select, for wireless communication between the UE and the gNB, at least one of:

a precoder;

a rank; or

a modulation and coding scheme (MCS).

13. The method of claim 12, wherein the indication of interference corresponds to an inverse of a covariance matrix ($Rnn^{-1/2}$).

14. The method of claim 12, wherein the RRQ includes a precoded channel state information-reference signal (CSI-RS) that conveys rank used in a data portion of wireless communication between the UE and the gNB, and that facilitates calculation of a coarse interference covariance matrix (Rnn) by the UE.

15. The method of claim 12, wherein the gNB detects the RRS at -6 decibels (dB) signal to noise ratio (SNR).

16. The method of claim 12, wherein the gNB employs the indication of interference to select the precoder for wireless communication between the UE and the gNB.

17. The method of claim 12, wherein the gNB employs the indication of interference to select the rank for wireless communication between the UE and the gNB.

18. The method of claim 12, wherein the gNB employs the indication of interference to select the MCS for wireless communication between the UE and the gNB.

19. The method of claim 12, wherein the RRQ further includes a network allocation vector (NAV) and a control reference signal (RS) that enables decoding of the NAV.

20. The method of claim 12, wherein detecting, by the gNB, the RRS transmitted by the UE includes detecting the RRS that is multiplexed, in a transmission opportunity (TxOp) identified by the NAV, with other RRSs transmitted by other UEs.

21. The method of claim 12, further comprising:

transmitting, by the gNB, different RRQs to reserve one or more communication media for uplink and downlink traffic.

22. The method of claim 12, further comprising:

transmitting, by the gNB before transmitting the RRQ, a synchronization signal;

receiving, by the gNB before detecting the RRS, another synchronization signal transmitted by the UE; and

using, by the gNB, the other synchronization signal to decode the RRS.

23. The method of claim 12, wherein the gNB is synchronized with another gNB, the method further comprising:

observing, by the gNB, another RRQ and another RRS exchanged between the other eNB and another UE served by the other UE in a control region;

determining, by the gNB, that the other gNB does not have enough data to fill a transmission opportunity (TxOp) identified by the other RRQ and the other RRS; and

contending for transmission, by the gNB, in a remainder of the TxOp.

24. The method of claim 23, wherein the gNB and the other gNB are of a same operator, and the contending occurs according to a soft reuse procedure that employs a mechanism involving exchange of RRQ and RRS.

25. The method of claim 23, wherein the gNB and the other gNB are of different operators, and the contending occurs according to a prioritized random access procedure with one or more gNBs of other operators.

26. A method of wireless communication, comprising:

transmitting, by a next generation Node B (gNB) to a user equipment (UE), a reservation request (RRQ);

detecting, by the gNB, a reservation response signal (RRS) transmitted by the UE in response to the RRQ, wherein the RRS includes a precoded sounding reference signal (SRS) modulated by an indication of interference estimated by the UE, wherein the indication of interference communicates a rise in interference level, to wireless communications between the UE and a serving gNB thereof, that is attributable to one or more wireless transmissions by the gNB; and

transmitting, by the gNB in response to the RRS, the wireless transmissions in a manner that avoids causing interference to the wireless communications that exceeds a predetermined interference level threshold.

27. The method of claim 26, wherein the indication of interference corresponds to an inverse of a covariance matrix ($Rnn^{-1/2}$).

28. The method of claim 27, wherein the $Rnn^{-1/2}$ includes an equivalence, per spatial dimension, of the rise in interference level, and the gNB determines a transmission rank and transmission power per layer in a manner that avoids exceeding the predetermined interference level threshold.

29. The method of claim 26, wherein the RRQ includes a precoded channel state information-reference signal (CSI-RS) that conveys tones over which the UE should calculate a coarse interference covariance matrix (Rnn).

30. The method of claim 26, wherein the gNB detects the RRS at -6 decibels (dB) signal to noise ratio (SNR).

31. The method of claim 26, wherein the RRQ further includes a network allocation vector (NAV) and a control reference signal (RS) that enables decoding of the NAV.

32. The method of claim 31, wherein detecting, by the gNB, the RRS transmitted by the UE includes detecting the RRS that is multiplexed, in a transmission opportunity (TxOp) identified by the NAV, with other RRSs transmitted by other UEs.

33. The method of claim 26, further comprising:

detecting, by the gNB, a reservation request (RRQ) transmitted by a serving gNB of the UE, to reserve a communication medium for uplink transmission by the UE to the serving gNB; and

transmitting, by the gNB in response to the RRQ, the wireless transmissions in a manner that reduces interference to the uplink transmission by the UE.

34. The method of claim 33, wherein the transmitting, by the gNB in response to the RRS, further reduces interference to the uplink transmission by the UE.

35. The method of claim 26, further comprising:

transmitting, by the gNB before transmitting the RRQ, a synchronization signal;

receiving, by the gNB before detecting the RRS, another synchronization signal transmitted by the UE; and

using, by the gNB, the other synchronization signal to decode the RRS.

36. The method of claim 26, wherein the gNB is synchronized with another gNB, the method further comprising:

observing, by the gNB in a control region, another RRQ and another RRS exchanged between the other eNB and another UE served by the other UE;

determining, by the gNB, that the other gNB does not have enough data to fill a transmission opportunity (TxOp) identified by the other RRQ and the other RRS; and

contending for transmission, by the gNB, in a remainder of the TxOp.

37. The method of claim 36, wherein the gNB and the other gNB are of a same operator, and the contending occurs according to a soft reuse procedure that employs a mechanism involving exchange of RRQ and RRS.

38. The method of claim 36, wherein the gNB and the other gNB are of different operators, and the contending occurs according to a prioritized random access procedure with one or more gNBs of other operators.