CLAIMS

1. A method for wireless communication, comprising: receiving a combined signal that includes signals of a first radio access technology (RAT) and signals of a second RAT that are frequency domain multiplexed in a same subframe;

identifying a first transmit (Tx) direct current (DC) location corresponding to the signals of the first RAT;

identifying a second Tx DC location corresponding to the signals of the second RAT;

selecting one of the first Tx DC location or the second Tx DC location as a common receive (Rx) DC location;

performing a common Rx fast Fourier transform (FFT) on the combined signal based on the common Rx DC location;

decoding the signals of the first RAT and the signals of the second RAT based on an output of the common Rx FFT, wherein the decoding comprises separating the output of the common Rx FFT into resource blocks (RBs) associated with the first RAT and RBs associated with the second RAT;

and processing either the RBs associated with the first RAT or the RBs associated with the second RAT by applying a respective complex phase compensation value to each tone in either the RBs associated with the first RAT or the RBs associated with the second RAT.

2. The method of claim 1, wherein: the first Tx DC location and the second Tx DC location vary by a half tone shift.

3. The method of claim 1, wherein: the first RAT uses a half tone shift to uplink (UL) communications.

4. The method of claim 3, wherein selecting one of the first Tx DC location or the second Tx DC location further comprises: selecting the first Tx DC location as the common Rx DC location.

5. The method of claim 4, further comprising: applying a half tone rotation to the combined signal prior to performing the common Rx FFT.

6. The method of claim 5, wherein: processing either the RBs associated with the first RAT or the RBs associated with the second RAT further comprises: processing the RBs associated with the second RAT by applying the respective complex phase compensation value to each tone in the RBs associated with the second RAT.

7. The method of claim 3, wherein selecting one of the first Tx DC location or the second Tx DC location further comprises: selecting the second Tx DC location as the common Rx DC location.

8. The method of claim 7, wherein: processing either the RBs associated with the first RAT or the RBs associated with the second RAT further comprises: processing the RBs associated with the first RAT by applying the respective complex phase compensation value to each tone in the RBs associated with the first RAT.

9. The method of claim 1, wherein processing either the RBs associated with the first RAT or the RBs associated with the second RAT further comprises: multiplying each tone in either the RBs associated with the first RAT or the RBs associated with the second RAT, by the respective complex phase compensation value.

10. The method of claim 9, wherein: the respective complex phase compensation values are each based on a symbol index, a cyclic prefix (CP) type, or a combination thereof.

11. The method of claim 9, further comprising: determining the respective complex phase compensation values via a look-up table (LUT) or through computation.

12. A method for wireless communication, comprising: encoding signals of a first radio access technology (RAT) and signals of a second RAT into first resource blocks (RBs) and second RBs, respectively, wherein the encoding comprises processing either the RBs associated with the first

RAT or the RBs associated with the second RAT by applying a respective complex phase compensation value to each tone input;

identifying a first transmit (Tx) direct current (DC) location corresponding to the signals of the first RAT;

identifying a second Tx DC location corresponding to the signals of the second RAT;

selecting one of the first Tx DC location or the second Tx DC location as a common Tx DC location;

performing a common Tx inverse fast Fourier transform (iFFT) on the first RBs and the second RBs based on the common Tx DC location;

and transmitting a combined signal that includes the signals of the first RAT and the signals of the second RAT that are frequency domain multiplexed in a same subframe, based on an output of the common Tx iFFT.

13. The method of claim 12, wherein: the first Tx DC location and the second Tx DC location vary by a half tone shift.

14. The method of claim 12, wherein the first RAT uses a half tone shift to uplink (UL) communications and wherein selecting one of the first Tx DC location or the second Tx DC location further comprises: selecting the first Tx DC location as the common Tx DC location.

15. The method of claim 14, wherein processing either the RBs associated with the first RAT or the RBs associated with the second RAT further comprises: processing the RBs associated with the second RAT by applying the respective complex phase compensation value to each tone input.

16. The method of claim 15, further comprising: applying a half tone rotation to the combined signal after performing the common Tx iFFT and before transmitting the combined signal.

17. The method of claim 14, wherein selecting one of the first Tx DC location or the second Tx

DC location further comprises: selecting the second Tx DC location as the common Tx DC location.

18. The method of claim 17, wherein processing either the RBs associated with the first RAT or the RBs associated with the second RAT further comprises: processing the RBs associated with the first RAT by applying the respective complex phase compensation value to each tone input.

19. The method of claim 12, wherein processing either the RBs associated with the first RAT or the RBs associated with the second RAT comprises: multiplying each tone in either the RBs associated with the first RAT or the RBs associated with the second RAT, by the respective complex phase compensation value, wherein the respective complex phase compensation values are each based on a symbol index, a cyclic prefix (CP) type, or a combination thereof.

20. A method for wireless communication, comprising: receiving a combined signal that includes signals of a first radio access technology (RAT) and signals of a second RAT that are frequency domain multiplexed in a same subframe;

identifying a first transmit (Tx) direct current (DC) location corresponding to the signals of the first RAT;

performing a first Rx fast Fourier transform (FFT) on the combined signal based on a first Rx DC location;

identifying a second Tx DC location corresponding to the signals of the second RAT;

performing a second Rx FFT on a duplicate of the combined signal based on a second Rx DC location;

and decoding the signals of the first RAT and the signals of the second RAT based on an output of the first Rx FFT and an output of the second Rx FFT.

21. The method of claim 20, wherein: decoding the signals of the first RAT and the signals of the second RAT comprises: discarding resource blocks (RBs) associated with the second RAT while decoding the signals of the first RAT;

and the method further comprises: discarding RBs associated with the first RAT while decoding the signals of the second RAT.

22. The method of claim 20, wherein: the combined signal is a result of multi-user multiple-input multiple-output (MU-MIMO) communications.

23. The method of claim 22, further comprising: applying a half tone rotation to the combined signal prior to performing the first Rx FFT.

24. The method of claim 23, wherein: decoding the signals of the first RAT and the signals of the second RAT comprises: separating the output of the first Rx FFT into resource blocks (RBs) associated with the first RAT and RBs associated with the second RAT;

and the method further comprises: processing the RBs associated with the second RAT by applying a respective complex phase compensation value to each tone output.

25. The method of claim 22, wherein: decoding the signals of the first RAT and the signals of the second RAT comprises: separating the output of the second Rx FFT into resource blocks (RBs) associated with the first RAT and RBs associated with the second RAT;

and the method further comprises: processing the RBs associated with the first RAT by applying a respective complex phase compensation value to each tone output.

26. A method for wireless communication, comprising: encoding signals of a first radio access technology (RAT) and signals of a second RAT into first resource blocks (RBs) and second RBs, respectively;

identifying a first transmit (Tx) direct current (DC) location corresponding to the signals of the first RAT;

performing a first Tx inverse fast Fourier transform (iFFT) on the first RBs based on the first TX DC location;

identifying a second Tx DC location corresponding to the signals of the second RAT;

performing a second Tx iFFT on the second RBs based on the second Tx DC location;

and transmitting a combined signal that includes the signals of the first RAT and the signals of the second RAT that are frequency domain multiplexed in a same subframe, based on an output of the first Tx iFFT and the second Tx iFFT.

27. The method of claim 26, wherein performing the first Tx iFFT and performing the second Tx iFFT further comprises: performing the first Tx iFFT and the second Tx iFFT by a first Tx chain and a second Tx chain, respectively, when the UE is uplink (UL) multiple-input multiple-output (MIMO) capable.

28. The method of claim 26, wherein performing the first Tx iFFT and performing the second Tx iFFT further comprises: performing the first Tx iFFT and the second Tx iFFT by a first Tx chain and a second Tx chain, respectively, when the UE is uplink (UL) multiple-input multiple-output (MIMO) capable or intraband non-contiguous carrier aggregation (CA) capable, and the first Tx chain and the second Tx chain are independent of each other and each have separate power amplifiers (PAs).