

CLAIMS

1. A method for wireless communication, comprising:
identifying a frequency corresponding to a direct current (DC) tone within a set of resource blocks; and
transmitting, via radio resource control (RRC) signaling, an indication of the identified frequency corresponding to the DC tone within the set of resource blocks.
2. The method of claim 1, further comprising:
determining a frequency for each of one or more phase-noise tracking reference signals (PTRS) based at least in part on the DC tone, each determined frequency different from the frequency corresponding to the DC tone; and
transmitting the one or more PTRS using the set of resource blocks based at least in part on the determined frequency.
3. The method of claim 2, further comprising:
identifying that a resource block of the set of resource blocks overlaps with the DC tone, wherein the one or more PTRS are transmitted using one or more resource blocks of the set of resource blocks that are different from the resource block including the DC tone.
4. The method of claim 2, further comprising:
identifying that each resource block of the set of resource blocks includes at least some of the one or more PTRS, wherein the determining is based at least in part on identifying that each resource block includes at least some of the one or more PTRS.
5. The method of claim 2, further comprising:
identifying that a first resource block of the set of resource blocks overlaps with the DC tone, wherein the determining comprises assigning at least some of the one or more PTRS to one or more frequencies of the first resource block.
6. The method of claim 2, wherein the frequency corresponding to each of the one or

more PTRS is based at least in part on a number of component carriers, a system bandwidth, or both.

7. The method of claim 2, wherein a frequency density of the PTRS is based at least in part on a number of resource blocks in the set of resource blocks.

8. The method of claim 1, further comprising:
identifying a plurality of tones across the set of resource blocks different from the frequency corresponding to the DC tone, the plurality of tones corresponding to a plurality of symbols across the set of resource blocks and associated with at least one antenna port;
assigning a first subset of the plurality of tones for data;
assigning a second subset of the plurality of tones for PTRS;
scrambling a modulation symbol for each tone of the second subset; and
transmitting the first subset and the second subset using the scrambled modulation symbols.

9. The method of claim 8, wherein the transmitting comprises transmitting the second subset using the at least one antenna port based at least in part on a resource block assignment, the resource block assignment comprising a number of layers used for data in the set of resource blocks.

10. The method of claim 8, wherein the second subset corresponds to an antenna port of the at least one antenna port, the method further comprising:
refraining from transmitting PTRS using the antenna port; and
reassigning the second subset for data or a vacant tone.

11. The method of claim 8, wherein the second subset corresponds to an antenna port of the at least one antenna port and contains at most one tone per resource block of the set of resource blocks, the method further comprising:

assigning a third subset of the plurality of tones for a demodulation reference signal (DMRS), the third subset and the first subset overlapping partially, overlapping completely, or

being disjoint, and the third subset corresponding to a group of antenna ports of the at least one antenna port; and

transmitting the third subset using the group of antenna ports, wherein the third subset comprises each of the at most one tone per resource block of the set of resource blocks.

12. The method of claim 1, wherein the transmitting, via radio resource control (RRC) signaling, the indication of the identified frequency corresponding to the DC tone within the set of resource blocks, comprises:

by a user equipment, transmitting, via radio resource control (RRC) signaling to a base station, the indication of the identified frequency corresponding to the DC tone within the set of resource blocks.

13. An apparatus for wireless communication, comprising:
a processor, memory coupled with the processor; and
instructions stored in the memory and executable by the processor to cause the apparatus to:

identify a frequency corresponding to a direct current (DC) tone within a set of resource blocks; and

transmit, via radio resource control (RRC) signaling, an indication of the identified frequency corresponding to the DC tone within the set of resource blocks.

14. The apparatus of claim 13, wherein the instructions are further executable by the processor to cause the apparatus to:

determine a frequency for each of one or more phase-noise tracking reference signals (PTRS) based at least in part on the DC tone, each determined frequency different from the frequency corresponding to the DC tone; and

transmit the one or more PTRS using the set of resource blocks based at least in part on the determined frequency.

15. The apparatus of claim 14, wherein the instructions are further executable by the processor to cause the apparatus to:

identify that a resource block of the set of resource blocks overlaps with the DC tone, wherein the one or more PTRS are transmitted using one or more resource blocks of the set of resource blocks that are different from the resource block including the DC tone.

16. The apparatus of claim 14, wherein the instructions are further executable by the processor to cause the apparatus to:

identify that each resource block of the set of resource blocks includes at least some of the one or more PTRS, wherein the determining is based at least in part on identifying that each resource block includes at least some of the one or more PTRS.

17. The apparatus of claim 14, wherein the instructions are further executable by the processor to cause the apparatus to:

the instructions to identify that a first resource block of the set of resource blocks overlaps with the DC tone, wherein the determining are executable by the processor to cause the apparatus to assign at least some of the one or more PTRS to one or more frequencies of the first resource block.

18. The apparatus of claim 14, wherein the frequency corresponding to each of the one or more PTRS is based at least in part on a number of component carriers, a system bandwidth, or both.

19. The apparatus of claim 14, wherein a frequency density of the PTRS is based at least in part on a number of resource blocks in the set of resource blocks.

20. The apparatus of claim 13, wherein the instructions are further executable by the processor to cause the apparatus to:

identify a plurality of tones across the set of resource blocks different from the frequency corresponding to the DC tone, the plurality of tones corresponding to a plurality of symbols across the set of resource blocks and associated with at least one antenna port;

assign a first subset of the plurality of tones for data;

assign a second subset of the plurality of tones for PTRS;

scramble a modulation symbol for each tone of the second subset; and
transmit the first subset and the second subset using the scrambled modulation symbols.

21. The apparatus of claim 20, wherein the transmitting comprises transmitting the second subset using the at least one antenna port based at least in part on a resource block assignment, the resource block assignment comprising a number of layers used for data in the set of resource blocks.

22. The apparatus of claim 20, wherein the second subset corresponds to an antenna port of the at least one antenna port, and the instructions are further executable by the processor to cause the apparatus to:

refrain from transmitting PTRS using the antenna port; and
reassign the second subset for data or a vacant tone.

23. The apparatus of claim 20, wherein the second subset corresponds to an antenna port of the at least one antenna port and contains at most one tone per resource block of the set of resource blocks, and the instructions are further executable by the processor to cause the apparatus to:

assign a third subset of the plurality of tones for a demodulation reference signal (DMRS), the third subset and the first subset overlapping partially, overlapping completely, or being disjoint, and the third subset corresponding to a group of antenna ports of the at least one antenna port; and

transmit the third subset using the group of antenna ports, wherein the third subset comprises each of the at most one tone per resource block of the set of resource blocks.

24. An apparatus for wireless communication, comprising:
means for identifying a frequency corresponding to a direct current (DC) tone within a set of resource blocks; and

means for transmitting, via radio resource control (RRC) signaling, an indication of the identified frequency corresponding to the DC tone within the set of resource blocks.

25. A non-transitory computer-readable medium storing code for wireless communication, the code comprising instructions executable by a processor to:

identify a frequency corresponding to a direct current (DC) tone within a set of resource blocks; and

transmit, via radio resource control (RRC) signaling, an indication of the identified frequency corresponding to the DC tone within the set of resource blocks.