CLAIMS

1. A method of wireless communication, comprising:

detecting, by a user equipment (UE) operating according to a new radio (NR) radio access technology (RAT), an overlapping portion of at least one resource element of a downlink control channel candidate of a configured control resource set (CORESET) overlaps with at least one resource element of a downlink signal occasion of the NR RAT or a neighboring legacy RAT coexisting with the NR RAT;

ending, by the UE, a monitoring of the downlink control channel candidate within a search space of the configured CORESET in response to the detected overlapping portion;

detecting, by the UE, a collision between a scheduled demodulation reference signal (DMRS) within the overlapping portion and the downlink signal occasion; and

discarding, by the UE, at least a portion of the CORESET in response to the detected collision.

2. The method of claim 1, wherein the detecting the overlapping portion includes one of:

detecting at least one resource element of an NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion;

detecting at least one NR resource block that includes at least one resource element of the NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion; or

detecting one or more segments of a plurality of contiguous NR resource blocks that include at least one resource block defined by a precoder size parameter to have at least one resource element of the NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion.

3. The method of claim 2, wherein the detecting the at least one resource element of the NR scheduled DMRS includes:

detecting at least one resource element of the NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion; and

detecting the at least one resource element of the NR scheduled DMRS having a same set

of resource element indices in all symbols within a same search space set occasion.

4. The method of claim 2, wherein the detecting the NR resource block includes:

detecting the at least one NR resource block that includes the at least one resource element of the NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion; and

detecting the at least one NR resource block having a same set of resource block indices in all symbols within a same search space set occasion.

5. The method of claim 2, wherein the detecting the NR resource block includes:

detecting the one or more segments of the plurality of contiguous NR resource blocks that include the at least one resource block defined by the precoder size parameter to have the at least one resource element of the NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion; and

detecting the at least one NR resource block having the same set of resource block indices as the one or more segments of the plurality of contiguous NR resource blocks in all symbols within a same search space set occasion.

6. The method of claim 1, wherein the discarding the at least a portion of the CORESET includes one of:

discarding the overlapping portion; or

discarding a cluster having the overlapping portion.

7. The method of claim 6, wherein a maximum number of clusters of resource blocks with contiguous DMRS resource elements across resource blocks fails to exceed a preconfigured maximum limit of clusters of contiguous resource blocks after the discarding the overlapping portion.

8. The method of claim 1, wherein the downlink signal occasion includes one of:

a common reference signal of the legacy RAT; or

a synchronization signal block of the NR RAT.

9. The method of claim 1, wherein the configured CORESET has a maximum number of clusters of resource blocks with contiguous DMRS resource elements such that no resource element of the downlink signal occasion candidate of the CORESET overlaps with any resource element of the downlink signal occasion.

10. An apparatus configured for wireless communication, comprising:

means for detecting, by a user equipment (UE) operating according to a new radio (NR) radio access technology (RAT), an overlapping portion of at least one resource element of a downlink control channel candidate of a configured control resource set (CORESET) overlaps with at least one resource element of a downlink signal occasion of the NR RAT or a neighboring legacy RAT coexisting with the NR RAT;

means for ending, by the UE, a monitoring of the downlink control channel candidate within a search space of the configured CORESET in response to the detected overlapping portion;

means for detecting, by the UE, a collision between a scheduled demodulation reference signal (DMRS) within the overlapping portion and the downlink signal occasion; and

means for discarding, by the UE, at least a portion of the CORESET in response to the detected collision.

11. The apparatus of claim 10, wherein the means for detecting the overlapping portion includes one of:

means for detecting at least one resource element of an NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion;

means for detecting at least one NR resource block that includes at least one resource element of the NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion; or

means for detecting one or more segments of a plurality of contiguous NR resource blocks that include at least one resource block defined by a precoder size parameter to have at least one resource element of the NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion.

12. The apparatus of claim 11, wherein the means for detecting the at least one

resource element of the NR scheduled DMRS includes:

means for detecting at least one resource element of the NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion; and

means for detecting the at least one resource element of the NR scheduled DMRS having a same set of resource element indices in all symbols within a same search space set occasion.

13. The apparatus of claim 11, wherein the means for detecting the NR resource block includes:

means for detecting the at least one NR resource block that includes the at least one resource element of the NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion; and

means for detecting the at least one NR resource block having a same set of resource block indices in all symbols within a same search space set occasion.

14. The apparatus of claim 11, wherein the means for detecting the NR resource block includes:

means for detecting the one or more segments of the plurality of contiguous NR resource blocks that include the at least one resource block defined by the precoder size parameter to have the at least one resource element of the NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion; and

means for detecting the at least one NR resource block having the same set of resource block indices as the one or more segments of the plurality of contiguous NR resource blocks in all symbols within a same search space set occasion.

15. The apparatus of claim 10, wherein the means for discarding the at least a portion of the CORESET includes one of:

means for discarding the overlapping portion; or

means for discarding a cluster having the overlapping portion.

16. The apparatus of claim 15, wherein a maximum number of clusters of resource blocks with contiguous DMRS resource elements across resource blocks fails to exceed a preconfigured maximum limit of clusters of contiguous resource blocks after the discarding the

overlapping portion.

17. The apparatus of claim 10, wherein the downlink signal occasion includes one of:

a common reference signal of the legacy RAT; or

a synchronization signal block of the NR RAT.

18. A non-transitory computer-readable medium having program code recorded thereon, the program code comprising:

program code executable by a computer for causing the computer to detect, by a user equipment (UE) operating according to a new radio (NR) radio access technology (RAT), an overlapping portion of at least one resource element of a downlink control channel candidate of a configured control resource set (CORESET) overlaps with at least one resource element of a downlink signal occasion of the NR RAT or a neighboring legacy RAT coexisting with the NR RAT;

program code executable by the computer for causing the computer to end, by the UE, a monitoring of the downlink control channel candidate within a search space of the configured CORESET in response to the detected overlapping portion;

program code executable by the computer for causing the computer to detect, by the UE, a collision between a scheduled demodulation reference signal (DMRS) within the overlapping portion and the downlink signal occasion; and

program code executable by the computer for causing the computer to discard, by the UE, at least a portion of the CORESET in response to the detected collision.

19. The non-transitory computer-readable medium of claim 18, wherein the program code executable by the computer for causing the computer to detect the overlapping portion includes one of:

program code executable by the computer for causing the computer to detect at least one resource element of an NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion;

program code executable by the computer for causing the computer to detect at least one NR resource block that includes at least one resource element of the NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion; or

program code executable by the computer for causing the computer to detect one or more segments of a plurality of contiguous NR resource blocks that include at least one resource block defined by a precoder size parameter to have at least one resource element of the NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion.

20. The non-transitory computer-readable medium of claim 19, wherein the program code executable by the computer for causing the computer to detect the at least one resource element of the NR scheduled DMRS includes:

program code executable by the computer for causing the computer to detect at least one resource element of the NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion; and

program code executable by the computer for causing the computer to detect the at least one resource element of the NR scheduled DMRS having a same set of resource element indices in all symbols within a same search space set occasion.

21. The non-transitory computer-readable medium of claim 19, wherein the program code executable by the computer for causing the computer to detect the NR resource block includes:

program code executable by the computer for causing the computer to detect the at least one NR resource block that includes the at least one resource element of the NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion; and

program code executable by the computer for causing the computer to detect the at least one NR resource block having a same set of resource block indices in all symbols within a same search space set occasion.

22. The non-transitory computer-readable medium of claim 19, wherein the program code executable by the computer for causing the computer to detect the NR resource block includes:

program code executable by the computer for causing the computer to detect the one or more segments of the plurality of contiguous NR resource blocks that include the at least one resource block defined by the precoder size parameter to have the at least one resource element of the NR scheduled DMRS colliding with the at least one resource element of the downlink

signal occasion; and

program code executable by the computer for causing the computer to detect the at least one NR resource block having the same set of resource block indices as the one or more segments of the plurality of contiguous NR resource blocks in all symbols within a same search space set occasion.

23. The non-transitory computer-readable medium of claim 18, wherein the program code executable by the computer for causing the computer to discard the at least a portion of the CORESET includes one of:

program code executable by the computer for causing the computer to discard the overlapping portion; or

program code executable by the computer for causing the computer to discard a cluster having the overlapping portion.

24. The non-transitory computer-readable medium of claim 23, wherein a maximum number of clusters of resource blocks with contiguous DMRS resource elements across resource blocks fails to exceed a preconfigured maximum limit of clusters of contiguous resource blocks after the discarding the overlapping portion.

25. The non-transitory computer-readable medium of claim 18, wherein the downlink signal occasion includes one of:

a common reference signal of the legacy RAT; or

a synchronization signal block of the NR RAT.

26. An apparatus configured for wireless communication, the apparatus comprising:

at least one processor; and

a memory coupled to the at least one processor,

wherein the at least one processor is configured to:

detect, by a user equipment (UE) operating according to a new radio (NR) radio access technology (RAT), an overlapping portion of at least one resource element of a downlink control channel candidate of a configured control resource set (CORESET) overlaps with at least one resource element of a downlink signal occasion of the NR RAT or a neighboring legacy

RAT coexisting with the NR RAT;

end, by the UE, a monitoring of the downlink control channel candidate within a search space of the configured CORESET in response to the detected overlapping portion;

detect, by the UE, a collision between a scheduled demodulation reference signal (DMRS) within the overlapping portion and the downlink signal occasion; and

discard, by the UE, at least a portion of the CORESET in response to the detected collision.

27. The apparatus of claim 26, wherein the wherein the at least one processor is configured to detect the overlapping portion by one of:

detecting at least one resource element of an NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion;

detecting at least one NR resource block that includes at least one resource element of the NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion; or

detecting one or more segments of a plurality of contiguous NR resource blocks that include at least one resource block defined by a precoder size parameter to have at least one resource element of the NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion.

28. The apparatus of claim 27, wherein the wherein the at least one processor is configured to detect the at least one resource element of the NR scheduled DMRS by:

detecting at least one resource element of the NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion; and

detecting the at least one resource element of the NR scheduled DMRS having a same set of resource element indices in all symbols within a same search space set occasion.

29. The apparatus of claim 27, wherein the wherein the at least one processor is configured to detect the NR resource block by:

detecting the at least one NR resource block that includes the at least one resource element of the NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion; and

detecting the at least one NR resource block having a same set of resource block indices in all symbols within a same search space set occasion.

30. The apparatus of claim 27, wherein the wherein the at least one processor is configured to detect the NR resource block by:

detecting the one or more segments of the plurality of contiguous NR resource blocks that include the at least one resource block defined by the precoder size parameter to have the at least one resource element of the NR scheduled DMRS colliding with the at least one resource element of the downlink signal occasion; and

detecting the at least one NR resource block having the same set of resource block indices as the one or more segments of the plurality of contiguous NR resource blocks in all symbols within a same search space set occasion.

31. The apparatus of claim 27, wherein the wherein the at least one processor is configured to discard the at least a portion of the CORESET by one of:

discarding the overlapping portion; or

discarding a cluster having the overlapping portion.

32. The apparatus of claim 31, wherein a maximum number of clusters of resource blocks with contiguous DMRS resource elements across resource blocks fails to exceed a preconfigured maximum limit of clusters of contiguous resource blocks after the discarding the overlapping portion.

33. The apparatus of claim 26, wherein the downlink signal occasion includes one of:

a common reference signal of the legacy RAT; or

a synchronization signal block of the NR RAT.