

CLAIMS

~~WHAT IS CLAIMED IS:~~

1. —A method of wireless communication for a user equipment (UE), comprising:
 - ~~_receiving a first activation of a first semi-persistent scheduling (SPS) configuration;~~
 - ~~_receiving a second activation of a second SPS configuration;~~
 - ~~determining at least a partial overlap of frequency domain resources or time domain resources of the first SPS configuration and the second SPS configuration;~~ determining a differentiation characteristic between the first SPS configuration and the second SPS configuration;
 - ~~determining that one of the first SPS configuration or the second SPS configuration is the SPS configuration for a received physical downlink shared channel (PDSCH) based on the differentiation characteristic; and~~
 - ~~transmitting an acknowledgment of the PDSCH based on the determined SPS configuration.~~
2. ~~The method of claim 1, wherein determining the differentiation characteristic comprises determining a difference in a PDSCH transmission parameter between the first SPS configuration and the second SPS configuration.~~
3. ~~The method of claim 2, wherein the difference in the PDSCH transmission parameter is a difference in frequency domain resources or time domain resources of the PDSCH.~~
4. ~~The method of claim 2, wherein determining the SPS configuration for the received PDSCH based on the differentiation characteristic comprises:~~
 - ~~— determining at least a partial overlap of frequency domain resources or time domain resources of the first SPS configuration and the second SPS configuration;~~
 - ~~_decoding the PDSCH with a first set of parameters corresponding to the first SPS configuration;~~
 - ~~_decoding the PDSCH with a second set of parameters corresponding to the second SPS configuration; and~~
 - ~~_assigning each decoding result to the first SPS configuration or the second SPS configuration based on the set of parameters used for the decoding; and transmitting an acknowledgment of the PDSCH based on the determined SPS configuration.~~

2. The method of claim 1, wherein determining the differentiation characteristic comprises determining a difference in a PDSCH transmission parameter between the first SPS configuration and the second SPS configuration.

5.——3. The method of claim 2, wherein the difference in the PDSCH transmission parameter comprises a difference in one or more of: a modulation and coding scheme (MCS), a demodulation reference signal port (DMRS), a scrambling identifier for DMRS sequence generation, transmission configuration indicator (TCI) state, quasi co location (QCL), or a combination thereof.

6.——4. The method of claim 2, wherein the difference in the PDSCH transmission parameter is a scrambling sequence initialization (c_init) associated with a codeword of each of the first SPS configuration and the second SPS configuration.

7.——5. The method of claim 1, wherein determining the SPS configuration for the received PDSCH based on the differentiation characteristic comprises:

——~~determining at least a partial overlap of frequency domain resources or time domain resources of the first SPS configuration and the second SPS configuration;~~

determining that a priority transmit receive point (TRP) associated with one of the first SPS configuration or the second SPS configuration has priority over the other of the first SPS configuration and the second SPS configuration; and

determining that the SPS configuration for the received PDSCH is the SPS configuration associated with the priority TRP.

8.——6. An apparatus for wireless communication, comprising:

a memory; and

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

receive a first activation of a first semi-persistent scheduling (SPS) configuration;

receive a second activation of a second SPS configuration;

determine at least a partial overlap of frequency domain resources or time domain resources of the first SPS configuration and the second SPS configuration; decode a received physical downlink shared channel (PDSCH) with a first set of parameters corresponding to the first SPS configuration; decode the PDSCH with a second set of parameters corresponding to the second SPS configuration; assign each decoding result to the first SPS configuration or the second SPS configuration based on the set of parameters used for the

decoding; determine a differentiation characteristic between the first SPS configuration and the second SPS configuration;

determine that one of the first SPS configuration or the second SPS configuration is the SPS configuration for a ~~received physical downlink shared channel (the PDSCH)~~ based on the differentiation characteristic; and

transmit an acknowledgment of the PDSCH based on the determined SPS configuration.

9.——7. The apparatus of claim 86, wherein the processor is configured to determine a difference in a PDSCH transmission parameter between the first SPS configuration and the second SPS configuration.

10.——The apparatus of claim 9, wherein the difference in the PDSCH transmission parameter is a difference in frequency domain resources or time domain resources of the PDSCH.

11.——The apparatus of claim 9, wherein the processor is configured to:

——~~determine at least a partial overlap of frequency domain resources or time domain resources of the first SPS configuration and the second SPS configuration;~~

~~decode the PDSCH with a first set of parameters corresponding to the first SPS configuration;~~

~~decode the PDSCH with a second set of parameters corresponding to the second SPS configuration; and~~

~~assign each decoding result to the first SPS configuration or the second SPS configuration based on the set of parameters used for the decoding.~~

12.——~~The apparatus of claim 98.~~ The apparatus of claim 7, wherein the difference in the PDSCH transmission parameter comprises a difference in one or more of: a modulation and coding scheme (MCS), a demodulation reference signal port (DMRS), a scrambling identifier for DMRS sequence generation, transmission configuration indicator (TCI) state, or quasi co location (QCL), or combination thereof.

13.——9. The apparatus of claim 97, wherein the difference in the PDSCH transmission parameter is a scrambling sequence initialization (c_init) associated with a codeword of each of the first SPS configuration and the second SPS configuration.

14.—~~10.~~ The apparatus of claim ~~86~~, wherein the processor is configured to:

~~—determine at least a partial overlap of frequency domain resources or time domain resources of the first SPS configuration and the second SPS configuration;~~

~~—determine that a priority transmit receive point (TRP) associated with one of the first SPS configuration or the second SPS configuration has priority over the other of the first SPS configuration and the second SPS configuration; and~~

~~determine that the SPS configuration for the received PDSCH is the SPS configuration associated with the priority TRP.~~

15.—~~A method of~~ 11. ~~An apparatus for~~ wireless communication for a user equipment (UE), comprising:

~~—means for receiving a first activation of a first semi-persistent scheduling (SPS) configuration;~~

~~—means for receiving a second activation of a second SPS configuration;~~

~~—means for determining at least a partial overlap of frequency domain resources or time domain resources of the first SPS configuration and the second SPS configuration; means for determining a differentiation characteristic between the first SPS configuration and the second SPS configuration;~~

~~determining, based on the differentiation characteristic, an SPS configuration for a downlink control information (DCI) indicating activation or release of the SPS configuration; and~~

~~activating or releasing~~ means for determining that one of the first SPS configuration or the second SPS configuration is the SPS configuration for a received physical downlink shared channel (PDSCH) based on the differentiation characteristic, wherein the means for determining the SPS configuration for the received PDSCH based on the differentiation characteristic is configured to: decode the PDSCH with a first set of parameters corresponding to the first SPS configuration; decode the PDSCH with a second set of parameters corresponding to the second SPS configuration; and assign each decoding result to the first SPS configuration or the second SPS configuration based on the set of parameters used for the decoding; and means for transmitting an acknowledgment of the PDSCH based on the determined SPS configuration ~~and the DCI.~~

16.—~~The method of claim 15, wherein the differentiation characteristic is a CORESET ID or search space ID where the DCI is received.~~

17.—~~The method of claim 15~~ 12. ~~The apparatus of claim 11, wherein the means for determining the~~ differentiation characteristic is ~~a configured scheduling radio network~~

~~temporary~~configured to determine a difference in a PDSCH transmission parameter between the first SPS configuration and the second SPS configuration.

13. The apparatus of claim 12, wherein the difference in the PDSCH transmission parameter comprises a difference in one or more of: a modulation and coding scheme (MCS), a demodulation reference signal port (DMRS), a scrambling identifier (CS-RNTI) used to scramble a cyclic redundancy check of the DCI, for DMRS sequence generation, transmission configuration indicator (TCI) state, or quasi co location (QCL), or a combination thereof.

~~18. The method of claim 15, wherein the differentiation characteristic is a hybrid automatic repeat request (HARQ) process ID indicated in the DCI.~~

~~19. The method of claim 15~~14. The apparatus of claim 12, wherein the difference in the PDSCH parameter is a scrambling sequence initialization (c_init) associated with a codeword of each of the first SPS configuration and the second SPS configuration.

15. The apparatus of claim 11, wherein the means for determining the SPS configuration for the received PDSCH based on the differentiation characteristic is a physical uplink control channel (PUCCH) resource indicator (PRI) indicated in the DCI or bit thereof configured to: determine that a priority transmit receive point (TRP) associated with one of the first SPS configuration or the second SPS configuration has priority over the other of the first SPS configuration and the second SPS configuration; and determine that the SPS configuration for the received PDSCH is the SPS configuration associated with the priority TRP.

~~20. The method of claim 15, wherein the differentiation characteristic is a downlink assignment index (DAI) indicated in the DCI or bit thereof.~~

~~21. The method of claim 15, wherein the differentiation characteristic is a transmission configuration indicator (TCI) state corresponding to a quasi co-location (QCL) group.~~

~~22. An apparatus for wireless communication~~16. A non-transitory computer-readable medium storing computer executable code, comprising:

a memory; and

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

code to: receive a first activation of a first semi-persistent scheduling (SPS) configuration;

_receive a second activation of a second SPS configuration;

determine at least a partial overlap of frequency domain resources or time domain resources of the first SPS configuration and the second SPS configuration determine a differentiation characteristic between the first SPS configuration and the second SPS configuration;

~~determine, based on the differentiation characteristic, an SPS configuration for a downlink control information (DCI) indicating activation or release of the SPS configuration;~~
~~and~~

~~activate or release~~determine that one of the first SPS configuration or the second SPS configuration is the SPS configuration for a received physical downlink shared channel (PDSCH) based on the differentiation characteristic, wherein the code to determine the SPS configuration for the received PDSCH based on the differentiation characteristic, comprises code to: decode the PDSCH with a first set of parameters corresponding to the first SPS configuration; decode the PDSCH with a second set of parameters corresponding to the second SPS configuration; and assign each decoding result to the first SPS configuration or the second SPS configuration based on the set of parameters used for the decoding; and transmit an acknowledgment of the PDSCH based on the determined SPS configuration~~and the DCI.~~

23. ~~The apparatus of claim 22~~17. The non-transitory computer-readable medium of claim 16, comprising code to determine a difference in a PDSCH transmission parameter between the first SPS configuration and the second SPS configuration.

18. ~~The non-transitory computer-readable medium of claim 17, wherein the differentiation characteristic is a CORESET ID or search space ID where the DCI is received.~~

24. ~~The apparatus of claim 22, wherein the differentiation characteristic is a configured scheduling radio network temporary difference in the PDSCH transmission parameter comprises a difference in one or more of: a modulation and coding scheme (MCS), a demodulation reference signal port (DMRS), a scrambling identifier (CS-RNTI) used to scramble the DCI.~~

25. ~~The apparatus of claim 22, wherein the differentiation characteristic is a hybrid automatic repeat request (HARQ) process ID indicated in the DCI.~~

26. ~~The apparatus of claim 22, wherein the differentiation characteristic is a physical uplink control channel (PUCCH) resource indicator (PRI) indicated in the DCI or bit thereof.~~

27. ~~The apparatus of claim 22, wherein the differentiation characteristic is a downlink assignment index (DAI) indicated in the DCI or bit thereof.~~

28. ~~The apparatus of claim 22, wherein the differentiation characteristic is a for DMRS sequence generation, transmission configuration indicator (TCI) state corresponding to a, or quasi co-location (QCL) group), or a combination thereof.~~

19. The non-transitory computer-readable medium of claim 17, wherein the difference in the PDSCH parameter is a scrambling sequence initialization (c_{init}) associated with a codeword of each of the first SPS configuration and the second SPS configuration.

20. The non-transitory computer-readable medium of claim 16, comprising code to: determine that a priority transmit receive point (TRP) associated with one of the first SPS configuration or the second SPS configuration has priority over the other of the first SPS configuration and the second SPS configuration; and determine that the SPS configuration for the received PDSCH is the SPS configuration associated with the priority TRP.