

【CLAIMS】

1. A method of receiving a downlink control channel at a user equipment (UE) in a wireless communication system, the method comprising:

receiving, from a base station, first information related to a resource element group (REG) bundle size, and second information related to an interleaver size for interleaving REG bundles; and

receiving, based on the first information related to the REG bundle size and the second information related to the interleaver size, the downlink control channel over a control resource set (CORESET) that comprises a plurality of REGs that are bundled into one or more REG bundles according to the REG bundle size,

wherein the one or more REG bundles are interleaved within the CORESET according to the interleaver size,

wherein a duration of the CORESET is configured to be 1, 2, or 3 Orthogonal Frequency Division Multiplexed (OFDM) symbols,

wherein the REG bundle size is related to the duration of the CORESET,

wherein the second information related to the interleaver size relates to one of a number of rows or a number of columns of an interleaving matrix, and

wherein the other of the number of rows or the number of columns of the interleaving matrix is determined based on (i) the one of the number of rows or the number of columns of the interleaving matrix and (ii) a number of REG bundles included in the CORESET.

2. The method according to claim 1, wherein the second information relates to the number of columns of the interleaving matrix, and

wherein the number of rows of the interleaving matrix is determined based on the number of columns of the interleaving matrix and a number of REG bundles included in the CORESET.

3. The method according to claim 2, wherein, based on the number of rows of the interleaving matrix not being an integer, an integer having a minimum value among integers greater than the number of rows of the interleaving matrix is determined as the number of rows of the interleaving matrix.

4. The method according to claim 1, wherein the plurality of REGs configure at least one control channel element (CCE), and

wherein, based on a number of REGs included in each of the at least one CCE corresponding to a product of a value of the second information related to the interleaver size and a value of the first information related to the REG bundle size, the one or more REG bundles are mapped to physical resources at a regular interval.

5. The method according to claim 1, wherein the plurality of REGs configure at least one control channel element (CCE), and

wherein, based on a value of the second information related to the interleaver size being equal to a number of REG bundles included in each of the at least one CCE, the one or more REG bundles are mapped to physical resources at a regular interval.

6. The method according to claim 1, wherein the received first information related to the REG bundle size is related to a number of symbols of the CORESET.

7. A user equipment (UE) configured to receive a downlink control channel in a wireless communication system, the UE comprising:

a radio frequency (RF) module;

at least one processor; and

at least one computer memory operably connectable to the at least one processor and storing instructions that, when executed, cause the at least one processor to perform operations comprising:

receiving, through the RF module and from a base station, (i) first information related to a resource element group (REG) bundle size, and (ii) second information related to an interleaver size for interleaving REG bundles; and

receiving, through the RF module and based on the first information related to the REG bundle size and the second information related to the interleaver size, the downlink control channel over a control resource set (CORESET) that comprises a plurality of REGs that are bundled into one or more REG bundles according to the REG bundle size, wherein the one or more REG bundles are interleaved within the CORESET according to the interleaver size,

wherein a duration of the CORESET is configured to be 1, 2, or 3 Orthogonal Frequency Division Multiplexed (OFDM) symbols,

wherein the REG bundle size is related to the duration of the CORESET,

wherein the second information related to the interleaver size relates to one of a number of rows or a number of columns of an interleaving matrix, and

wherein the other of the number of rows or the number of columns of the interleaving matrix is determined based on (i) the one of the number of rows or the number of columns of the interleaving matrix and (ii) a number of REG bundles included in the CORESET.

8. The UE according to claim 7, wherein the second information relates to the number of columns of the interleaving matrix, and

wherein the number of rows of the interleaving matrix is determined based on the number of columns of the interleaving matrix and a number of REG bundles included in the CORESET.

9. The UE according to claim 8, wherein, based on the number of rows of the interleaving matrix not being an integer, an integer having a minimum value among integers greater than the number of rows of the interleaving matrix is determined as the number of rows of the interleaving matrix.

10. The UE according to claim 7, wherein the plurality of REGs configure at least one control channel element (CCE), and

wherein, based on the number of REGs included in each of the at least one CCE corresponding to a product of a value of the second information related to the interleaver size and a value of the first information related to the REG bundle size, the one or more REG bundles are mapped to physical resources at a regular interval.

11. The UE according to claim 7, wherein the plurality of REGs configure at least one control channel element (CCE); and

wherein, based on a value of the second information related to the interleaver size being equal to a number of REG bundles included in each of the at least one CCE, the one or more REG bundles are mapped to physical resources at a regular interval.

12. The UE according to claim 7, wherein the received first information related to the REG bundle size is related to a number of symbols of the CORESET.

13. The method according to claim 1, wherein the second information is related to the number of rows of the interleaving matrix, and

wherein the number of columns of the interleaving matrix is determined based on the number of rows of the interleaving matrix and a number of REG bundles included in the CORESET.

14. The method according to claim 13, wherein, based on the number of columns of the interleaving matrix not being an integer, an integer having a minimum value among integers greater than the number of columns of the interleaving matrix is determined as the number of columns of the interleaving matrix.

15. The method according to claim 1, wherein the plurality of REGs configure at least one control channel element (CCE), and

wherein 6 REGs configure each of the at least one CCE.

16. The UE according to claim 7, wherein the second information relates to the number of rows of the interleaving matrix, and

wherein the number of columns of the interleaving matrix is determined based on the number of rows of the interleaving matrix and a number of REG bundles included in the CORESET.

17. The UE according to claim 7, wherein the plurality of REGs configure at least one control channel element (CCE), and

wherein 6 REGs configure each of the at least one CCE.