

CLAIMS

What is claimed is:

1. A method for allocating control channel candidates, comprising:

determining K sets for transmitting a control channel, wherein each set in the K sets

5 comprises at least one physical resource block pair, and K is an integer greater than 0; and

allocating control channel candidates at each aggregation level to at least one set in the

K sets according to at least one of the following factors: aggregation levels supported by the control channel, the number of control channel candidates corresponding to each aggregation level, the K sets for transmitting the control channel, and types of the sets.

10 2. The method according to claim 1, wherein: the K sets for transmitting the control channel comprise one or both of a set of a localised transmission mode and a set of a distributed transmission mode, wherein the number of sets of the localised transmission mode is K_L , and the number of sets of the distributed transmission mode is K_D , $K_L + K_D = K$, and K_L and K_D are integers greater than or equal to 0; and

15 the aggregation levels supported by the control channel comprise one or more of the following levels:

aggregation levels supported by the localised transmission mode, aggregation levels supported by the distributed transmission mode, and common aggregation levels supported by both the localised transmission mode and the distributed transmission mode.

20 3. The method according to claim 2, wherein the allocating control channel candidates at each aggregation level to at least one set in the K sets comprises:

allocating the control channel candidates at each aggregation level to at least one set in the K sets according to the aggregation levels supported by the control channel, the number of control channel candidates corresponding to each aggregation level, the K sets for transmitting the control channel, and the types of the sets.

25 4. The method according to claim 3, wherein the allocating the control channel candidates at each aggregation level to at least one set in the K sets according to the

wherein the number R is indicated by $R = C_L - \sum_{j=1}^T c_i$,

and the preset rule comprises: allocating one control channel candidate to each set of the R sets according to a descending order of the number of physical resource block pairs included in each set.

5

14. An apparatus for allocating control channel candidates, comprising:

a determining unit, configured to determine K sets for transmitting a control channel, wherein each set in the K sets comprises at least one physical resource block pair, and K is an integer greater than 0; and

10 | an allocating unit, configured to allocate, according to ~~at least one of the~~ following factors: aggregation levels supported by the control channel, the number of control channel candidates corresponding to each aggregation level, the K sets for transmitting the control channel, and types of the sets, control channel candidates at each aggregation level to at least one set in the K sets determined by the determining unit.

15 | 15. The apparatus according to claim 14, wherein: the K sets for transmitting the control channel comprise one or both of a set of a localised transmission mode and a set of a distributed transmission mode, wherein the number of sets of the localised transmission mode is K_L , and the number of sets of the distributed transmission mode is K_D , $K_L + K_D = K$, and K_L and K_D are integers greater than or equal to 0; and

20 | the aggregation levels supported by the control channel comprise one or more of the following levels:

aggregation levels supported by the localised transmission mode, aggregation levels supported by the distributed transmission mode, and common aggregation levels supported by both the localised transmission mode and the distributed transmission mode.

25 | 16. The apparatus according to claim 15, wherein the allocating unit is configured to allocate the control channel candidates at each aggregation level to at least one set in the K sets according to the aggregation levels supported by the control channel, the number of control channel candidates corresponding to each aggregation level, the K sets for