

CLAIMS

What is claimed is:

1. A channel monitoring method, applied to a terminal and comprising:

5 obtaining a physical downlink control channel PDCCH search space configured by a network device, wherein the PDCCH search space indicates at least one monitoring occasion for monitoring a PDCCH; and

performing PDCCH monitoring in the at least one monitoring occasion;

wherein the performing PDCCH monitoring in the at least one monitoring occasion comprises:

10 performing PDCCH monitoring in a valid monitoring occasion of the at least one monitoring occasion, wherein the valid monitoring occasion is a monitoring occasion in which the terminal performs PDCCH monitoring;

wherein the valid monitoring occasion meets at least one of the following criteria:

15 an orthogonal frequency division multiplexing OFDM symbol in which the valid monitoring occasion is located is a symbol other than a symbol for synchronization signal block SSB measurement or channel state information-reference signal CSI-RS measurement; and

20 an OFDM symbol in which the valid monitoring occasion is located is a symbol adjacent to a symbol for SSB measurement or adjacent to a symbol for CSI-RS measurement.

2. The channel monitoring method according to claim 1, wherein the valid monitoring occasion further meets the following criterion:

25 an orthogonal frequency division multiplexing OFDM symbol in which the valid monitoring occasion is located is a symbol other than an uplink symbol and flexible symbol indicated by downlink control information DCI.

3. The channel monitoring method according to claim 1 or 2, wherein the valid monitoring occasion is indicated by the network device;

or the valid monitoring occasion is one monitoring occasion starting at a monitoring start time or multiple consecutive monitoring occasions starting at a monitoring start time.

4. The channel monitoring method according to claim 1, wherein the performing
5 PDCCH monitoring in the at least one monitoring occasion comprises:

performing PDCCH monitoring in time locations of N PDCCH candidates in the at least one monitoring occasion indicated by the network device, wherein N is a positive integer.

5. The channel monitoring method according to claim 1, wherein the performing
10 PDCCH monitoring in the at least one monitoring occasion comprises:

receiving a PDCCH by applying a same quasi co-location QCL assumption on the at least one monitoring occasion;

wherein the QCL assumption is determined in at least one of the following manners:

15 using a QCL assumption of control resource set CORESET0;

using a QCL assumption with a same activated transmission configuration indication TCI state as CORESET0;

using an SSB or CSI-RS selected in a latest random access procedure;

20 using an activated TCI state corresponding to a CORESET with the smallest or largest index in CORESETs that are configured on an activated bandwidth part, BWP;

using an activated TCI state corresponding to a CORESET indicated by a network in CORESETs that are configured on an activated BWP; and

25 using an activated TCI state corresponding to a CORESET that corresponds to a target search space in search spaces that are currently being monitored, the target search space being a search space with a shortest or longest monitoring slot periodicity in all search spaces that are currently being monitored, wherein

the CORESETs that are configured on the activated BWP are CORESETs other than a CORESET in which the PDCCH is transmitted.

6. The channel monitoring method according to claim 1, wherein information
30 transmitted in the PDCCH is used to indicate at least one of the following:

whether the terminal needs to perform PDCCH monitoring during a target discontinuous reception DRX cycle, wherein duration of the target DRX cycle is duration of consecutive Q DRX cycles after current time, wherein Q is a positive integer;

that the terminal triggers reporting of channel state information CSI; and

5 that the terminal triggers transmitting of a sounding reference signal SRS.

7. A channel monitoring method, applied to a network device and comprising:

configuring a physical downlink control channel PDCCH search space, wherein the PDCCH search space indicates at least one monitoring occasion for monitoring a PDCCH;

10 wherein after the configuring a physical downlink control channel PDCCH search space, the method further comprises:

indicating, to a terminal, a valid monitoring occasion, wherein the valid monitoring occasion is a monitoring occasion in which the terminal performs PDCCH monitoring;

15 wherein the valid monitoring occasion meets at least one of the following criteria:
an orthogonal frequency division multiplexing OFDM symbol in which the valid monitoring occasion is located is a symbol other than a symbol for synchronization signal block SSB measurement or channel state information-reference signal CSI-RS measurement; and

20 an OFDM symbol in which the valid monitoring occasion is located is a symbol adjacent to a symbol for SSB measurement or adjacent to a symbol for CSI-RS measurement.

8. The channel monitoring method according to claim 7, wherein after the configuring a physical downlink control channel PDCCH search space, the method
25 further comprises:

indicating, to a terminal, the number of PDCCH candidates corresponding to each monitoring aggregation level.

9. The channel monitoring method according to claim 7, wherein after the configuring a physical downlink control channel PDCCH search space, the method
30 further comprises:

indicating, to a terminal, time locations of N PDCCH candidates for PDCCH monitoring in the at least one monitoring occasion, wherein N is a positive integer.

10. A terminal, comprising:

an obtaining module, configured to obtain a physical downlink control channel
5 PDCCH search space configured by a network device, wherein the PDCCH search space indicates at least one monitoring occasion for monitoring a PDCCH; and

a monitoring module, configured to perform PDCCH monitoring in a valid monitoring occasion of the at least one monitoring occasion, wherein the valid monitoring occasion is a monitoring occasion in which the terminal performs PDCCH
10 monitoring;

wherein the valid monitoring occasion meets at least one of the following criteria:

an orthogonal frequency division multiplexing OFDM symbol in which the valid monitoring occasion is located is a symbol other than a symbol for synchronization signal block SSB measurement or channel state information-reference signal CSI-RS
15 measurement; and

an OFDM symbol in which the valid monitoring occasion is located is a symbol adjacent to a symbol for SSB measurement or adjacent to a symbol for CSI-RS measurement.

11. The terminal according to claim 10, wherein the valid monitoring occasion
20 further meets the following criterion:

an OFDM symbol in which the valid monitoring occasion is located is a symbol other than an uplink symbol and flexible symbol indicated by downlink control information DCI.

12. The terminal according to claim 10 or 11, wherein the valid monitoring
25 occasion is indicated by the network device;

or the valid monitoring occasion is one monitoring occasion starting at a monitoring start time or multiple consecutive monitoring occasions starting at a monitoring start time.

13. The terminal according to claim 10, wherein the monitoring module is
30 configured to perform PDCCH monitoring in time locations of N PDCCH candidates

in the at least one monitoring occasion indicated by the network device, wherein N is a positive integer.

14. The terminal according to claim 10, wherein the monitoring module is configured to receive a PDCCH by applying a same quasi co-location QCL assumption on the at least one monitoring occasion;

and the terminal further comprises:

a first determining module, configured to determine the QCL assumption in at least one of the following manners:

using a QCL assumption of control resource set CORESET0;

using a QCL assumption with a same activated transmission configuration indication TCI state as CORESET0;

using an SSB or CSI-RS selected in a latest random access procedure;

using an activated TCI state corresponding to a CORESET with the smallest or largest index in CORESETs that are configured on an activated bandwidth part, BWP;

using an activated TCI state corresponding to a CORESET indicated by a network in CORESETs that are configured on an activated BWP; and

using an activated TCI state corresponding to a CORESET that corresponds to a target search space in search spaces that are currently being monitored, the target search space being a search space with a shortest or longest monitoring slot periodicity in all search spaces that are currently being monitored, wherein

the CORESETs that are configured on the activated BWP are CORESETs other than a CORESET in which the PDCCH is transmitted.

15. The terminal according to claim 10, wherein information transmitted in the PDCCH is used to indicate at least one of the following:

whether the terminal needs to perform PDCCH monitoring during a target discontinuous reception DRX cycle, wherein the duration of the target DRX cycle is duration of consecutive Q DRX cycles after current time, wherein Q is a positive integer;

that the terminal triggers reporting of channel state information CSI; and

that the terminal triggers transmitting of a sounding reference signal SRS.

16. A network device, comprising:

a configuration module, configured to configure a physical downlink control channel PDCCH search space, wherein the PDCCH search space indicates at least one monitoring occasion for monitoring a PDCCH;

5 a first indication module, configured to: after the configuration module has configured the physical downlink control channel PDCCH search space, indicate, to a terminal, a valid monitoring occasion, wherein the valid monitoring occasion is a monitoring occasion in which the terminal performs PDCCH monitoring;

wherein the valid monitoring occasion meets at least one of the following criteria:

10 an orthogonal frequency division multiplexing OFDM symbol in which the valid monitoring occasion is located is a symbol other than a symbol for synchronization signal block SSB measurement or channel state information-reference signal CSI-RS measurement; and

15 an OFDM symbol in which the valid monitoring occasion is located is a symbol adjacent to a symbol for SSB measurement or adjacent to a symbol for CSI-RS measurement.

17. The network device according to claim 16, further comprising:

20 a second indication module, configured to: after the configuration module has configured the physical downlink control channel PDCCH search space, indicate, to a terminal, the number of PDCCH candidates corresponding to each monitoring aggregation level.

18. The network device according to claim 16, further comprising:

25 a third indication module, configured to: after the configuration module has configured the physical downlink control channel PDCCH search space, indicate, to a terminal, time locations of N PDCCH candidates for PDCCH monitoring in the at least one monitoring occasion, wherein N is a positive integer.

19. A computer-readable storage medium, wherein a computer program is stored in the computer-readable storage medium, and when the computer program is executed by a processor, the steps of the channel monitoring method according to any one of claims 1 to 6 are implemented, or the steps of the channel monitoring method according to any one of claims 7 to 9 are implemented.

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