

CLAIMS

1. A method for signal detection, comprising:

receiving, by a terminal, system configuration information of a second TP, from a first Transmission Point (TP), wherein the system configuration information comprises time synchronization information and sub-carrier spacing information of the second TP, and the time synchronization information of the second TP comprises indication information for indicating whether the second TP is synchronous with the first TP; and

performing, by the terminal, downlink signal detection of the second TP according to downlink timing of the first TP, when the indication information indicating that the second TP is synchronous with the first TP,

wherein the first TP is a carrier on an Long Term Evolution (LTE) frequency band, and the second TP is a carrier on a 5th-Generation (5G) New Radio (NR) frequency band.

2. The method of claim 1, wherein the system configuration information further comprises at least one of the following information:

working frequency point information of the second TP, system bandwidth information of the second TP, prefix information of a signal of the second TP, configuration information on structure of sub-frames of the second TP, configuration information on uplink and downlink time slots of the second TP, configuration information on a synchronization signal of the second TP, configuration information on a reference signal of the second TP, Identifier (ID) information of the second TP or antenna configuration information of the second TP.

3. The method of claim 1, wherein the time synchronization information of the second TP further comprises a time synchronization offset of the second TP relative to the first TP.

4. The method of claim 2, wherein the configuration information on the synchronization signal of the second TP comprises at least one of resource position

information of the synchronization signal or sequence information carried in the synchronization signal.

5. The method of claim 4, wherein the method further comprises:

determining, by the terminal, at least one of time-frequency resource position or sequence information on the synchronization signal of the second TP according to at least one of the resource position information of the synchronization signal or the sequence information carried in the synchronization signal;

detecting, by the terminal, the synchronization signal of the second TP according to at least one of the time-frequency resource position or sequence information to obtain synchronization reference of the second TP; and

performing, by the terminal, the downlink signal detection of the second TP according to the synchronization reference of the second TP.

6. The method of claim 2, wherein the configuration information on the reference signal of the second TP comprises at least one of the following information:

configuration information on time-frequency resources of the reference signal, sequence information of the reference signal, configuration information on transmitting power of the reference signal or port configuration information of the reference signal;

wherein the system configuration information of the second TP comprises the configuration information on the reference signal of the second TP, and the method further comprises:

determining, by the terminal, a configuration for the reference signal of the second TP according to the configuration information on the reference signal of the second TP; and

performing, by the terminal, downlink Radio Resource Management (RRM) measurement of the second TP according to the configuration for the reference signal of the second TP.

7. The method of claim 1, wherein the system configuration information of the second TP comprises the sub-carrier spacing information of the second TP, and the method further comprises:

determining, by the terminal, a number of sub-carriers within a target bandwidth of the second TP according to the sub-carrier spacing information; and

performing, by the terminal, the downlink signal detection of the second TP according to the number of sub-carriers within the target bandwidth.

8. The method of claim 2, wherein the configuration information on structure of sub-frames of the second TP comprises at least one of: a number of Orthogonal Frequency Division Multiplexing (OFDM) symbols in a sub-frame, a number of Guard Periods (GPs) in the sub-frame, positions of the GPs in the sub-frame, or a number of different types of OFDM symbols in the sub-frame.

9. The method of claim 2 or 8, wherein the system configuration information comprises the configuration information on structure of sub-frames of the second TP, and the method further comprises:

determining, by the terminal, a sub-frame structure of the second TP according to the configuration information on structure of sub-frames of the second TP; and

performing, by the terminal, the downlink signal detection of the second TP according to the sub-frame structure.

10. A device for signal detection, comprising:

a receiving module, configured to receive system configuration information of a second TP from a first Transmission Point (TP), wherein the system configuration information comprises time synchronization information and sub-carrier spacing information of the second TP, and the time synchronization information of the second TP comprises indication information for indicating whether the second TP is synchronous with the first TP; and

a processing module, configured to perform downlink signal detection of the second TP according to downlink timing of the first TP, when the indication information indicating that the second TP is synchronous with the first TP,

wherein the first TP is a carrier on an Long Term Evolution (LTE) frequency band, and the second TP is a carrier on a 5th-Generation (5G) New Radio (NR) frequency band.

11. The device of claim 10, wherein the system configuration information further comprises at least one of the following information:

working frequency point information of the second TP, system bandwidth information of the second TP, prefix information of a signal of the second TP, configuration information on structure of sub-frames of the second TP, configuration information on uplink and downlink time slots of the second TP, configuration information on a synchronization signal of the second TP, configuration information on a reference signal of the second TP, Identifier (ID) information of the second TP or antenna configuration information of the second TP.

12. The device of claim 10, wherein the time synchronization information of the second TP further comprises a time synchronization offset of the second TP relative to the first TP.

13. The device of claim 11, wherein the configuration information on the synchronization signal of the second TP comprises at least one of resource position information of the synchronization signal or sequence information carried in the synchronization signal.

14. The device of claim 13, wherein the processing module is specifically configured to:

determine at least one of time-frequency resource position or sequence information on the synchronization signal of the second TP according to at least one of the resource position information of the synchronization signal or the sequence information carried in the synchronization signal;

detect the synchronization signal of the second TP according to at least one of the time-frequency resource position or sequence information to obtain synchronization reference of the second TP; and

perform the downlink signal detection of the second TP according to the synchronization reference of the second TP.

15. The device of claim 11, wherein the configuration information on the reference signal of the second TP comprises at least one of the following information:

configuration information on time-frequency resources of the reference signal, sequence information of the reference signal, configuration information on transmitting power of the reference signal or port configuration information of the reference signal;

wherein the system configuration information of the second TP comprises the configuration information on the reference signal of the second TP, and the processing module is specifically configured to:

determine a configuration for the reference signal of the second TP according to the configuration information on the reference signal of the second TP; and

perform downlink Radio Resource Management (RRM) measurement of the second TP according to the configuration for the reference signal of the second TP.

16. The device of claim 10, wherein the system configuration information of the second TP comprises the sub-carrier spacing information of the second TP, and the processing module is further specifically configured to:

determine a number of sub-carriers within a target bandwidth of the second TP according to the sub-carrier spacing information; and

perform the downlink signal detection of the second TP according to the number of sub-carriers within the target bandwidth.

17. The device of claim 11, wherein the configuration information on structure of sub-frames of the second TP comprises at least one of: a number of Orthogonal Frequency Division Multiplexing (OFDM) symbols in a sub-frame, a number of Guard Periods (GPs) in the sub-frame, positions of the GPs in the sub-frame, or a number of different types of OFDM symbols in the sub-frame.

18. The device of claim 11 or 17, wherein the system configuration information comprises the configuration information on structure of sub-frames of the second TP, and the processing module is configured to:

determine a sub-frame structure of the second TP according to the configuration information on structure of sub-frames of the second TP; and

perform the downlink signal detection of the second TP according to the sub-frame structure.