CLAIMS

1. A method of signal transmission, comprising:

detecting, by a terminal device, a plurality of Synchronization Signals (SSs) sent by a network device in an SS period; and

detecting, by the terminal device according to the detected plurality of SSs, a broadcast channel sent by the network device and corresponding to the plurality of SSs,

wherein the broadcast channel includes a plurality of broadcast channels containing the same information, and

the method further comprises: sending, by the terminal device, broadcast channel indication information to the network device, the broadcast channel indication information being used to indicate a first broadcast channel in the plurality of broadcast channels, the first broadcast channel being determined according to Reference Signal Received Power, RSRP, and the broadcast channel indication information being sent through a random access channel.

2. The method of claim 1, wherein a same sequence is adopted for the plurality of SSs.

3. The method of claim 1 or claim 2, wherein the plurality of SSs differ from each other in at least one of the following transmission parameters: a frequency-domain resource, a time-domain resource, a subcarrier spacing or a data transmission time length.

4. The method according to any one of claims 1-3, wherein detecting, by the terminal device, the plurality of SSs sent by the network device in the SS period comprises:

detecting, by the terminal device, the plurality of SSs according to a transmission parameter predetermined by the network device and the terminal device or according to a transmission parameter determined on the basis of information contained in part of SSs in the plurality of SSs.

5. The method of any one of claims 1-4, wherein detecting, by the terminal device,

the broadcast channel sent by the network device and corresponding to the plurality of SSs according to the detected plurality of SSs comprises:

determining, by the terminal device, at least one of the following transmission parameters for the broadcast channel according to information contained in the detected plurality of SSs: the frequency-domain resource, the time-domain resource, an information scrambling manner, the subcarrier spacing or the data transmission time length; and

detecting, by the terminal device, the broadcast channel according to the determined transmission parameter.

6. The method of any one of claims 1-4, wherein detecting, by the terminal device, the plurality of SSs sent by the network device in the SS period comprises:

adopting, by the terminal device, different beam forming receiving weights to detect the plurality of SSs; and

detecting, by the terminal device according to the detected plurality of SSs, the broadcast channel sent by the network device and corresponding to the plurality of SSs or detecting the other signal, other than the broadcast channel, sent by the network device comprises:

determining, by the terminal device, a first beam forming receiving weight of the terminal device according to the beam forming receiving weights adopted for a first SS in the detected plurality of SSs, and

adopting, by the terminal device, the first beam forming receiving weight to detect the other signal or detect the broadcast channel.

7. The method of claim 6, wherein the first SS is an SS with maximum receiving quality in the plurality of SSs detected by the terminal device.

8. The method of claim 6 or claim 7, further comprising:

determining, by the terminal device according to the first beam forming receiving weight, a first beam forming transmitting weight configured for the terminal device to send signals to the network device.

9. The method of claim 1, wherein the plurality of broadcast channels differ from

each other in at least one of the following transmission parameters: a Hybrid Automatic Repeat reQueset (HARQ) redundancy version, the frequency-domain resource, the time-domain resource, the information scrambling manner, the subcarrier spacing or the data transmission time length.

10. The method of claim 1, wherein the first broadcast channel is a broadcast channel with maximum receiving quality in the plurality of broadcast channels detected by the terminal device.

11. The method of any one of claims 1-10, wherein physical resources adopted for the plurality of SSs forms a predefined mapping relationship with physical resources adopted for the broadcast channel.

12. The method of any one of claims 1-11, wherein the broadcast channel is a Physical Broadcast Channel (PBCH) used to transmit a Management Information Byte (MIB).

13. A terminal device, comprising:

a first detection module, configured to detect a plurality of Synchronization Signals (SSs) sent by a network device in an SS period;

a second detection module, configured to, according to the detected plurality of SSs, detect a broadcast channel sent by the network device and corresponding to the plurality of SSs, wherein the broadcast channel includes a plurality of broadcast channels containing the same information; and

a sending module, configured to send broadcast channel indication information to the network device, the broadcast channel indication information being used to indicate a first broadcast channel in the plurality of broadcast channels, the first broadcast channel being determined according to Reference Signal Received Power, RSRP, and the broadcast channel indication information being sent through a random access channel.

14. The terminal device of claim 13, wherein a same sequence is adopted for the plurality of SSs.

15. The terminal device of claim 13 or 14, wherein the plurality of SSs differ from each other in at least one of the following transmission parameters: a frequency-domain resource, a time-domain resource, a subcarrier spacing or a data transmission time length.

16. The terminal device of any one of claims 13-15, wherein the first detection module is configured to detect the plurality of SSs according to a transmission parameter predetermined by the network device and the terminal device or according to a transmission parameter determined on the basis of information contained in part of SSs in the plurality of SSs.

17. The terminal device of any one of claims 13-16, wherein the second detection module is configured to:

determine at least one of the following transmission parameters for the broadcast channel according to information contained in the detected plurality of SSs: the frequency-domain resource, the time-domain resource, an information scrambling manner, the subcarrier spacing or the data transmission time length, and

detect the broadcast channel according to the determined transmission parameter.

18. The terminal device of any one of claims 13-16, wherein the first detection module is configured to adopt different beam forming receiving weights to detect the plurality of SSs; and

the second detection module is configured to determine a first beam forming receiving weight of the terminal device according to the beam forming receiving weight adopted for a first SS in the detected plurality of SSs and adopt the first beam forming receiving weight to detect the other signal or detect the broadcast channel.

19. The terminal device of claim 18, wherein the first SS is an SS with maximum receiving quality in the plurality of SSs detected by the terminal device.

20. The terminal device of claim 18 or 19, further comprising a determination module,

configured to determine, according to the first beam forming receiving weight, a first beam forming transmitting weight configured for the terminal device to send signals to the network device.

21. The terminal device of claim 13, wherein the plurality of broadcast channels differ from each other in at least one of the following transmission parameters: a Hybrid Automatic Repeat reQueset (HARQ) redundancy version, the frequency-domain resource, the time-domain resource, the information scrambling manner, the subcarrier spacing or the data transmission time length.

22. The terminal device of claim 13, wherein the first broadcast channel is a broadcast channel with maximum receiving quality in the plurality of broadcast channels detected by the terminal device.

23. The terminal device of any one of claims 13-22, wherein physical resources adopted for the plurality of SSs forms a predefined mapping relationship with physical resources adopted for the broadcast channel.

24. The terminal device of any one of claims 13-23, wherein the broadcast channel is a Physical Broadcast Channel (PBCH) used to transmit a Management Information Byte (MIB).