CLAIMS

1. A sensing method, comprising:

generating, by a terminal device, indication information in a media access control layer, wherein the indication information is to instruct the terminal device to sense a resource pool having resources with at least one type of transmission time interval (TTI) in a physical layer; and

transmitting, by the terminal device, the indication information to the physical layer.

2. The sensing method of claim 1, further comprising:

before generating, by the terminal device, the indication information in the media access control layer,

acquiring, by the terminal device, correspondence relationship information in the media access control layer, wherein the correspondence relationship information comprises correspondences between logical channels for transmitting data to be transmitted and the at least one type of TTI supported by the logical channels,

wherein generating, by the terminal device, the indication information in the media access control layer comprises:

generating, by the terminal device, the indication information in the media access control layer according to the correspondence relationship information.

3. The sensing method of claim 1 or 2, further comprising:

sensing, by the terminal device, the resource pool having resources with the at least one type of TTI to acquire a transmission resource set of available transmission resources in the physical layer;

generating, by the terminal device, a sensing result report in the physical layer according to the transmission resource set; and

transmitting, by the terminal device, the sensing result report to the media access control layer, wherein the sensing result report comprises the transmission resource set.

4. The sensing method of claim 3, further comprising:

receiving, by the terminal device, the sensing result report in the media access control layer, wherein the sensing result report comprises the transmission resource set;

selecting, by the terminal device, a first resource from the transmission resource set in the media access control layer; and

transmitting, by the terminal device, data to be transmitted on the first resource.

5. The sensing method of claim 3, wherein generating, by the terminal device, the sensing result report in the physical layer according to the transmission resource set comprises:

selecting, by the terminal device, at least one resource from the transmission resource set in the physical layer; and

generating, by the terminal device, the sensing result report in the physical layer, wherein the sensing result report comprises the at least one resource.

6. The sensing method of claim 5, further comprising:

before selecting, by the terminal device, the at least one resource from the transmission resource set in the physical layer,

acquiring, by the terminal device, information about channel quality corresponding to each resource in the transmission resource set in the physical layer,

wherein selecting, by the terminal device, the at least one resource from the transmission resource set in the physical layer comprises:

selecting, by the terminal device, based on the information about the channel quality corresponding to each resource in the transmission resource set, the at least one resource from the transmission resource set in a descending order of channel quality in the physical layer.

7. The sensing method of claim 5, wherein selecting, by the terminal device, the at least one resource from the transmission resource set in the physical layer comprises:

in a case that the transmission resource set comprises resources with a plurality of types of TTIs, selecting, by the terminal device, a resource with a first type of TTI from the resources with the plurality of types of TTIs in the physical layer;

and

determining, by the terminal device, the resource with the first type of TTI as the at least one resource in the physical layer.

8. The sensing method of claim 7, further comprising:

before selecting, by the terminal device, the resource with the first type of TTI from the resources with the plurality of types of TTIs in the physical layer,

acquiring, by the terminal device, information about channel quality corresponding to each resource with a respective type of TTI in the plurality of types of TTIs in the physical layer,

wherein selecting the resource with the first type of TTI from the resources with the plurality of types of TTIs comprises:

selecting, by the terminal device, based on the information about the channel quality corresponding to each resource with the respective type of TTI in the plurality of types of TTIs, the resource with the first type of TTI from the resources with the plurality of types of TTIs in the physical layer.

9. The sensing method of any one of claims 5-8, further comprising:

receiving, by the terminal device, the sensing result report in the media access control layer, wherein the sensing result report comprises the at least one resource;

selecting, by the terminal device, a first resource from the at least one resource in the media access control layer; and

transmitting, by the terminal device, data to be transmitted on the first resource.

10. The sensing method of claim 9, wherein selecting, by the terminal device, the first resource from the at least one resource in the media access control layer comprises:

randomly selecting, by the terminal device, the first resource from the at least one resource in the media access control layer; or,

selecting, by the terminal device, the first resource from the at least one resource in a descending order of channel quality in the media access control layer.

11. The sensing method of any one of claims 3-10, wherein

resources in the sensing result report are ranked in a descending or ascending

order of channel quality.

12. The sensing method of any one of claims 3-10, wherein

the sensing result report further comprises information about channel quality corresponding to each resource in the sensing result report, wherein the information about the channel quality corresponding to each resource comprises at least one piece of the following information: a receive signal strength indicator (RSSI), reference signal receiving power (RSRP), or reference signal receiving quality (RSRQ); or,

the sensing result report further comprises information about channel quality corresponding to each resource with a respective type of TTI in the sensing result report.

13. The sensing method of any one of claims 1-12, wherein

the at least one type of TTI comprises at least one of a first type of TTI or a second type of TTI, wherein a length of the first type of TTI is greater than a length of the second type of TTI.

14. A terminal device, comprising:

a processor, configured to generate indication information in a media access control layer, wherein the indication information is to instruct the terminal device to sense a resource pool having resources with at least one type of transmission time interval (TTI) in a physical layer; and

a transceiver, configured to transmit the indication information to the physical layer.

15. The terminal device of claim 14, wherein the processor is specifically configured to:

before generating the indication information in the media access control layer, acquire correspondence relationship information, wherein the correspondence relationship information comprises correspondences between logical channels for transmitting data to be transmitted and the at least one type of TTI supported by the logical channels; and

generate the indication information in the media access control layer according

to the correspondence relationship information.

16. The terminal device of claim 14 or 15, wherein the processor is further configured to:

sense the resource pool having resources with the at least one type of TTI to acquire a transmission resource set of available transmission resources in the physical layer; and

generate a sensing result report in the physical layer according to the transmission resource set; and

the transceiver is further configured to:

transmit the sensing result report to the media access control layer, wherein the sensing result report comprises the transmission resource set.

17. The terminal device of claim 16, wherein the transceiver is further configured to:

receive the sensing result report in the media access control layer, wherein the sensing result report comprises the transmission resource set;

select a first resource from the transmission resource set in the media access control layer; and

transmit data to be transmitted on the first resource.

18. The terminal device of claim 16, wherein the processor is specifically configured to:

select at least one resource from the transmission resource set in the physical layer; and

generate the sensing result report in the physical layer, wherein the sensing result report comprises the at least one resource.

19. The terminal device of claim 18, wherein the processor is further specifically configured to:

acquire information about channel quality corresponding to each resource in the transmission resource set in the physical layer; and

select, based on the information about the channel quality corresponding to each resource in the transmission resource set, the at least one resource from the

transmission resource set in a descending order of channel quality in the physical layer.

20. The terminal device of any one of claims 18-19, wherein the transceiver is further configured to:

receive the sensing result report in the media access control layer, wherein the sensing result report comprises the at least one resource;

select a first resource from the at least one resource in the media access control layer; and

transmit the data to be transmitted on the first resource.