

CLAIMS

What is claimed is:

1. A random access transmission method, applied to a terminal side, wherein the random access transmission method comprises:

5 obtaining a data scrambling parameter of a physical uplink shared channel PUSCH; wherein the data scrambling parameter is configured to scramble the PUSCH; and

sending a random access message msgA on a random access resource based on the data scrambling parameter, wherein the random access resource corresponds to a PUSCH resource and a physical random access channel PRACH resource;

10 wherein the data scrambling parameter is determined based on a PRACH resource.

2. The random access transmission method according to claim 1, wherein the step of sending a random access message msgA on a random access resource based on the data scrambling parameter comprises:

determining a scrambling sequence of the PUSCH based on the data scrambling parameter; and

15 sending the random access message msgA on a random access resource based on the scrambling sequence.

3. The random access transmission method according to claim 1, wherein the data scrambling parameter is determined based on at least one of the following information about the PRACH resource:

a random access preamble;

20 a random access radio network temporary identifier RA-RNTI; and

a random access channel occasion RO.

4. The random access transmission method according to claim 3, wherein the data scrambling parameter is determined based on at least one of the following information associated with the RO:

first index information of a synchronization signal block SSB associated with the RO;

25 second index information of a time-frequency domain resource corresponding to the RO;

third index information of a primary synchronization signal PSS transmitted in the SSB associated with the RO; and

fourth index information of a secondary synchronization signal SSS transmitted in the SSB associated with the RO.

30 5. The random access transmission method according to claim 3, wherein the data scrambling parameter is determined based on an index of the random access preamble.

6. The random access transmission method according to claim 1 or 2, wherein the data scrambling parameter is configured by a network device through a system broadcast message.

35 7. The random access transmission method according to claim 6, wherein the system broadcast message comprises configuration information of a data scrambling parameter set.

8. The random access transmission method according to claim 7, wherein the data scrambling parameter is one of the following association parameters associated with the data scrambling parameter set:

an RO corresponding to a random access process;

5 index information of an SSB associated with the RO; and
index information of a random access preamble.

9. The random access transmission method according to claim 8, wherein the system broadcast message further comprises at least one of the following information:

an association relationship between an RO and the data scrambling parameter; and

10 an association relationship between a random access preamble and the data scrambling parameter.

10. The random access transmission method according to claim 1, wherein the step of sending a random access message based on the data scrambling parameter comprises:

mapping the data scrambling parameter to a corresponding random access resource based on a mapping sequence, and sending the random access message, wherein the mapping sequence comprises
15 at least one of a code domain mapping sequence, a frequency domain mapping sequence, and a time domain mapping sequence.

11. A terminal, comprising:

an obtaining module, configured to obtain a data scrambling parameter of a physical uplink shared channel PUSCH; wherein the data scrambling parameter is configured to scramble the PUSCH;
20 and

a sending module, configured to send a random access message msgA on a random access resource based on the data scrambling parameter, wherein the random access resource corresponds to a PUSCH resource and a physical random access channel PRACH resource;

wherein the data scrambling parameter is determined based on a PRACH resource.

25 12. The terminal according to claim 11, wherein the sending module comprises:

a determining submodule, configured to determine a scrambling sequence of the PUSCH based on the data scrambling parameter; and

a first sending submodule, configured to send the random access message based on the scrambling sequence.

30 13. The terminal according to claim 11, wherein the data scrambling parameter is determined based on at least one of the following information about the PRACH resource:

a random access preamble;

a random access radio network temporary identifier RA-RNTI; and

a random access channel occasion RO.

35 14. The terminal according to claim 13, wherein the data scrambling parameter is determined based on at least one of the following information associated with the RO:

first index information of a synchronization signal block SSB associated with the RO;
second index information of a time-frequency domain resource corresponding to the RO;
third index information of a primary synchronization signal PSS transmitted in the SSB associated
with the RO; and

5 fourth index information of a secondary synchronization signal SSS transmitted in the SSB
associated with the RO.

15. The terminal according to claim 13, wherein the data scrambling parameter is determined based
on an index of the random access preamble.

16. The terminal according to claim 11 or 12, wherein the data scrambling parameter is configured
10 by a network device through a system broadcast message.

17. The terminal according to claim 16, wherein the system broadcast message comprises
configuration information of a data scrambling parameter set.