

CLAIMS

What is claimed is:

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

obtaining a data scrambling parameter of a physical uplink shared channel (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;

wherein the data scrambling parameter is determined based on the PUSCH resource and/or the PRACH resource;

wherein the data scrambling parameter is determined based on at least one of the following information about the PRACH resource:

a random access channel occasion (RO);

a random access preamble; or

a random access radio network temporary identifier (RA-RNTI).

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

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

sending the random access message 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 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

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

4. The random access transmission method according to claim 1, wherein the data scrambling parameter is determined based on an index of the random access preamble.

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

6. The random access transmission method according to claim 5, wherein the system broadcast message comprises configuration information of a data scrambling parameter set.

7. The random access transmission method according to claim 6, 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;
index information of an SSB associated with the RO; and
index information of a random access preamble.

8. The random access transmission method according to claim 6, 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; or
an association relationship between a random access preamble and the data scrambling parameter.

9. A terminal, comprising: a processor, a memory, and a computer program that is stored in the memory and that runs on the processor, wherein the computer program is executed by the processor to implement:

obtaining a data scrambling parameter of a physical uplink shared channel (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;

wherein the data scrambling parameter is determined based on the PUSCH resource and/or the PRACH resource;

wherein the data scrambling parameter is determined based on at least one of the following information about the PRACH resource:

a random access channel occasion (RO);
a random access preamble; or
a random access radio network temporary identifier (RA-RNTI).

10. The terminal according to claim 9, wherein the computer program is further executed by the processor to implement:

determining a scrambling sequence of the PUSCH based on the data scrambling parameter; and
sending the random access message based on the scrambling sequence.

11. The terminal according to claim 9, 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; or

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

12. The terminal according to claim 9, wherein the data scrambling parameter is determined based on an index of the random access preamble.

13. The terminal according to claim 9, wherein the data scrambling parameter is configured by a network device through a system broadcast message.

14. The terminal according to claim 13, wherein the system broadcast message comprises configuration information of a data scrambling parameter set.

15. The terminal according to claim 14, 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;
- index information of an SSB associated with the RO; and
- index information of a random access preamble.

16. A non-transitory computer-readable storage medium, wherein the computer-readable storage medium stores a computer program, and when a processor executes the computer program, the following steps are implemented:

- obtaining a data scrambling parameter of a physical uplink shared channel (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;

wherein the data scrambling parameter is determined based on the PUSCH resource and/or the PRACH resource;

wherein the data scrambling parameter is determined based on at least one of the following information about the PRACH resource:

- a random access channel occasion (RO);
- a random access preamble; or
- a random access radio network temporary identifier (RA-RNTI).

17. The non-transitory computer-readable storage medium according to claim 16, wherein when a processor executes the computer program, the following steps are implemented:

- determining a scrambling sequence of the PUSCH based on the data scrambling parameter; and
- sending the random access message based on the scrambling sequence.

18. The non-transitory computer-readable storage medium according to claim 16, 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; or
- fourth index information of a secondary synchronization signal SSS transmitted in the SSB associated with the RO.

19. The non-transitory computer-readable storage medium according to claim 16, wherein the data scrambling parameter is determined based on an index of the random access preamble.

20. The non-transitory computer-readable storage medium according to claim 16, wherein the data scrambling parameter is configured by a network device through a system broadcast message.