

## CLAIMS

1. A random access transmission method, applied to a terminal side, comprising:  
obtaining a demodulation reference signal (DMRS) sequence generation parameter of a physical uplink shared channel (PUSCH); and

5 sending a random access message according to the DMRS sequence generation parameter;  
wherein the random access message corresponds to the PUSCH and a physical random access channel (PRACH);

wherein the DMRS sequence generation parameter comprises: a scrambling initialization parameter.

10 2. The random access transmission method according to claim 1, wherein the DMRS sequence generation parameter further comprises: ~~a scrambling initialization parameter and/or a~~ scrambling identifier parameter.

3. The random access transmission method according to claim 1 or 2, wherein the step of sending a random access message according to the DMRS sequence generation parameter  
15 comprises:

determining a DMRS sequence of the PUSCH according to the DMRS sequence generation parameter; and

sending the random access message according to the DMRS sequence.

20 4. The random access transmission method according to claim 1 or 2, wherein the DMRS sequence generation parameter is determined according to a PUSCH resource and/or a PRACH resource.

5. The random access transmission method according to claim 4, wherein the DMRS sequence generation parameter is determined according to at least one of the following information of the PRACH resource:

25 a random access channel occasion (RO);

a random access preamble; and

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

wherein the DMRS sequence generation parameter is determined according to index information of the random access preamble.

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

7. The random access transmission method according to claim 6, wherein the system

broadcast message comprises: configuration information of a DMRS sequence generation set.

8. The random access transmission method according to claim 7, wherein the DMRS sequence generation parameter is a parameter associated with the following associated parameters in the DMRS sequence generation parameter set:

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

9. The random access transmission method according to claim 7, wherein the system broadcast message further comprises at least one of the following information:

- 10       an association relationship between the RO and the DMRS sequence generation parameter;  
         and  
         an association relationship between the random access preamble and the DMRS sequence generation parameter.

15       10. The random access transmission method according to claim 1, wherein the step of sending a random access message according to the DMRS sequence generation parameter comprises:

         mapping between the DMRS sequence generation parameter and a corresponding random access resource according to a mapping order, and sending the random access message; wherein the mapping order comprises at least one of: a code domain mapping order, a frequency domain mapping order, and a time domain mapping order.

20       11. A terminal, comprising a processor, a memory, and a program stored in the memory and running on the processor, wherein when the program is executed by the processor, the following steps are performed:

         obtaining a demodulation reference signal (DMRS) sequence generation parameter of a physical uplink shared channel (PUSCH); and

25       sending a random access message according to the DMRS sequence generation parameter; wherein the random access message corresponds to the PUSCH and a physical random access channel (PRACH);

wherein the DMRS sequence generation parameter comprises: a scrambling initialization parameter.

30       12. The terminal according to claim 11, wherein the DMRS sequence generation parameter further comprises: ~~a scrambling initialization parameter and/or~~ a scrambling identifier parameter.

13. The terminal according to claim 11 or 12, wherein the step of sending a random access message according to the DMRS sequence generation parameter comprises:

         determining a DMRS sequence of the PUSCH according to the DMRS sequence generation

parameter; and

sending the random access message according to the DMRS sequence.

14. The terminal according to claim 11 or 12, wherein the DMRS sequence generation parameter is determined according to a PUSCH resource and/or a PRACH resource.

5 15. The terminal according to claim 14, wherein the DMRS sequence generation parameter is determined according to at least one of the following information of the PRACH resource:

a random access channel occasion (RO);

a random access preamble; and

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

10 wherein the DMRS sequence generation parameter is determined according to index information of the random access preamble.

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

15 17. The terminal according to claim 16, wherein the system broadcast message comprises: configuration information of a DMRS sequence generation set.

18. The terminal according to claim 16, wherein the DMRS sequence generation parameter is a parameter associated with the following associated parameters in the DMRS sequence generation parameter set:

an RO corresponding to a random access process;

20 index information of the SSB associated with the RO; and

index information of the random access preamble.

19. The terminal according to claim 11, wherein the step of sending a random access message according to the DMRS sequence generation parameter comprises:

25 mapping between the DMRS sequence generation parameter and a corresponding random access resource according to a mapping order, and sending the random access message; wherein the mapping order comprises at least one of: a code domain mapping order, a frequency domain mapping order, and a time domain mapping order.

30 20. A computer-readable storage medium, wherein the computer-readable storage medium stores a computer program, and when the computer program is executed by a processor, following steps are performed:

obtaining a demodulation reference signal (DMRS) sequence generation parameter of a physical uplink shared channel (PUSCH); and

sending a random access message according to the DMRS sequence generation parameter; wherein the random access message corresponds to the PUSCH and a physical random access

channel (PRACH):

wherein the DMRS sequence generation parameter comprises: a scrambling initialization parameter.