CLAIMS

1. A communication apparatus, comprising:

a transmitter, which in operation, performs a multiple physical random access channel (PRACH) transmission in a plurality of PRACH occasions (ROs); and

a receiver, which in operation, receives downlink control information (DCI) by using a random access radio network temporary identifier (RA-RNTI),

wherein the RA-RNTI is determined based on a last RO of the plurality of ROs.

2. The communication apparatus of claim 1, wherein the DCI includes a cyclic redundancy check (CRC) scrambled by the RA-RNTI.

3. The communication apparatus of claim 1, wherein the RA-RNTI is determined based on an index of a first OFDM symbol of the last RO, an index of a first slot of the last RO in a system frame, and an index of the last RO in frequency domain.

4. The communication apparatus of claims 1, wherein the DCI is received within a random-access response (RAR) window.

5. The communication apparatus of claim 4, wherein the RAR window starts after a last OFDM symbol of the last RO.

6. The communication apparatus of claim 5, wherein the RAR window ends at an OFDM symbol determined based on a length determined by a higher layer signaling and the last RO.

7. The communication apparatus of claim 1, the plurality of ROs is different among a plurality of communication apparatuses.

8. The communication apparatus of claim 1, the plurality of PRACH occasions (ROs) is different in time domain and is same in frequency domain.

9. The communication apparatus of claim 6, wherein a number of ROs included in the plurality of ROs is different from a number of ROs included in another plurality of ROs.

10. A communication method, comprising:

performing a multiple physical random access channel (PRACH) transmission in a plurality of PRACH occasions (ROs); and

receiving downlink control information (DCI) by using a random access radio network temporary identifier (RA-RNTI),

wherein the RA-RNTI is determined based on a last RO of the plurality of ROs.

11. A base station, comprising:

a receiver, which in operation, performs a multiple physical random access channel (PRACH) reception in a plurality of PRACH occasions (ROs); and

a transmitter, which in operation, transmits downlink control information (DCI) by using a random access radio network temporary identifier (RA-RNTI),

wherein the RA-RNTI is determined based on a last RO of the plurality of ROs.

12. The base station of claim 11, wherein the DCI includes a cyclic redundancy check (CRC) scrambled by the RA-RNTI.

13. The base station of claim 11, wherein the RA-RNTI is determined based on an index of a first OFDM symbol of the last RO, an index of a first slot of the last RO in a system frame, and an index of the last RO in frequency domain.

14. The base station of claims 11, wherein the DCI is received within a random-access response (RAR) window.

15. The base station of claim 14, wherein the RAR window starts after a last OFDM symbol of the last RO.

16. The base station of claim 15, wherein the RAR window ends at an OFDM symbol determined based on a length determined by a higher layer signaling and the last RO.

17. The base station of claim 11, the plurality of ROs is different among a plurality of communication apparatuses.

18. The base station of claim 11, the plurality of PRACH occasions (ROs) is different in time domain and is same in frequency domain.

19. The base station of claim 16, wherein a number of ROs included in the plurality of ROs is different from a number of ROs included in another plurality of ROs.

20. A communication method, comprising:

performing a multiple physical random access channel (PRACH) reception in a plurality of PRACH occasions (ROs); and

transmitting downlink control information (DCI) by using a random access radio network temporary identifier (RA-RNTI),

wherein the RA-RNTI is determined based on a last RO of the plurality of ROs.

21. An integrated circuit, comprising:

transmission circuitry, which in operation, controls performing a multiple physical random access channel (PRACH) transmission in a plurality of PRACH occasions (ROs); and

reception circuitry, which in operation, controls receiving downlink control information (DCI) by using a random access radio network temporary identifier (RA-RNTI),

wherein the RA-RNTI is determined based on a last RO of the plurality of ROs.

22. An integrated circuit, comprising:

reception circuitry, which in operation, controls performing a multiple physical random access channel (PRACH) reception in a plurality of PRACH occasions (ROs); and

transmission circuitry, which in operation, controls transmitting downlink control information (DCI) by using a random access radio network temporary identifier (RA-RNTI),

wherein the RA-RNTI is determined based on a last RO of the plurality of ROs.