SUMMARY

[5] Non-limiting and exemplary embodiments facilitate providing communication apparatuses and methods for RO group resource for multi-PRACH transmissions.

[6] According to a first aspect of the present disclosure, there is provided a communication apparatus comprising: circuitry, which in operation, determines at least one first Random Access Channel (RACH) occasion (RO) group, wherein the at least one first RO group comprises a plurality of ROs that correspond to a plurality of PRACH transmissions in a multi-physical RACH (PRACH) transmission from the communication apparatus; and a transmitter, which in operation, transmits a preamble in each of the plurality of ROs of the at least one first RO group.

[7] According to a second aspect of the present disclosure, there is provided a base station, comprising: circuitry, which in operation, generates a signal comprising information of at least one first Random Access Channel (RACH) occasion (RO) group, wherein the at least one first RO group comprises a plurality of ROs that correspond to a plurality of multi-physical RACH (PRACH) transmissions in a multi-PRACH transmission from a communication apparatus; a transmitter, which in operation, transmits the signal to the communication apparatus; a receiver, which in operation, receives at least one multi-PRACH transmission from the communication apparatus, the at least one multi-PRACH transmission corresponding to the at least one first RO group; and the circuitry detects a preamble in each of the at least one multi-PRACH transmission.

[8] According to a third aspectof the present disclosure, there is provided a communication method comprising: determining at least one first Random Access Channel (RACH) occasion (RO) group, wherein the at least one first RO group comprises a plurality of ROs that correspond to a plurality of PRACH transmissions in a multi-PRACH transmission from a communication apparatus; and transmitting a preamble in each of the plurality of ROs of the at least one first

RO group. According to a fourth aspect of the present disclosure, there is provided a communication method comprising generating a signal comprising information of at least one first Random Access Channel (RACH) occasion (RO) group, wherein the at least one first RO group comprises a plurality of ROs that correspond to a plurality of multi-physical RACH (PRACH) transmissions in a multi-PRACH transmission from a communication apparatus; transmitting the signal to the communication apparatus; receiving at least one multi-PRACH transmission from the communication apparatus, the at least one multi-PRACH transmission corresponding to the at least one first RO group; and detecting a preamble in each of the at least one multi-PRACH transmission. According to the fifth aspect of the present disclosure, there is a provided an integrated circuit, comprising control circuitry, which in operation, determines at least one first Random Access Channel (RACH) occasion (RO) group, wherein the at least one first RO group comprises a plurality of ROs that correspond to a plurality of PRACH transmissions in a multi-physical RACH (PRACH) transmission from the communication apparatus; and transmission circuitry, which in operation, transmits a preamble in each of the plurality of ROs of the at least one first RO group. According to a sixth aspect of the present disclosure, there is a provided a integrated circuit, comprising control circuitry, which in operation, generates a signal comprising information of at least one first Random Access Channel (RACH) occasion (RO) group, wherein the at least one first RO group comprises a plurality of ROs that correspond to a plurality of multi-physical RACH (PRACH) transmissions in a multi-PRACH transmission from a communication apparatus; transmission circuitry, which in operation, transmits the signal to the communication apparatus; reception circuitry, which in operation, receives at least one multi-PRACH transmission from the communication apparatus, the at least one multi-PRACH transmission corresponding to the at least one first RO group; and the control circuitry detects a preamble in each of the at least one multi-PRACH transmission.

[9] It should be noted that general or specific embodiments may be implemented as a system, a method, an integrated circuit, a computer program, a storage medium, or any selective combination thereof.