WHAT IS CLAIMED IS:

1. A method for handling a resource collision, performed by a user equipment (UE), comprises:

determining at least one time domain unit corresponding to an overlapping resource between a resource for repetitions of a first uplink message and a resource of a physical channel for a second uplink message, wherein the first uplink message is msg.3 and the second uplink message is msg.1 or msg.A; and

not sending the first uplink message and the second uplink message simultaneously on the at least one time domain unit.

2.The method according to claim 1, further comprising:

determining that an available time domain unit does not comprise the at least one time domain unit; determining the resource for repetitions of the first uplink message based on the available time domain unit, or calculating a number of the repetitions based on the available time domain unit;

wherein not sending the first uplink message and the second uplink message simultaneously on the at least one time domain unit comprises:

not sending the first uplink message on the at least one time domain unit.

3. The method according to claim 1, further comprising:

determining that an available time domain unit comprises the at least one time domain unit; determining the resource for repetitions of the first uplink message based on the available time domain unit, or calculating a number of the repetitions based on the available time domain unit;

wherein not sending the first uplink message and the second uplink message simultaneously on the at least one time domain unit comprises:

not sending the first uplink message on the at least one time domain unit.

4. The method according to claim 2 or 3, wherein determining the at least one time domain unit corresponding to the overlapping resource between the resource for repetitions of the first uplink message and the resource of the physical channel for the second uplink message comprises:

determining a first resource in a set of resources used for sending the second uplink message; and

determining a second resource in the set of resources, wherein a synchronization signal block (SSB) index mapped by the second resource is the same as a SSB index mapped by the first resource; and

determining at least one time domain unit corresponding to an overlapping resource between the second resource and the resource for repetitions of the first uplink message.

5. The method according to claim 4, further comprising:

receiving configuration information sent by a network device, wherein the configuration information indicates the set of resources used for sending the second uplink message.

6. The method according to claim 1, further comprising: determining an invalid random access channel (RACH) occasion (RO) in the resource of the physical channel, wherein the at least one time domain unit comprises the invalid RO;

wherein not sending the first uplink message and the second uplink message simultaneously on the at least one time domain unit comprises:

in response to not sending the second uplink message at the invalid RO, sending the first uplink message at the invalid RO.

7. The method according to claim 6, wherein determining the invalid RO in the resource of the physical channel comprises:

receiving an invalid resource mode from a network device, wherein the invalid resource mode indicates the invalid RO.

8. The method according to claim 6, wherein an invalid resource mode is determined by the network device based on the invalid RO,

a first RO resource is determined in a set of RO resources for sending the second uplink message, and a second RO resource in the set of RO resources is determined as the invalid RO, wherein a synchronization signal block (SSB) index mapped by the second RO resource is the same as a SSB index mapped by the first RO resource.

9. The method according to any one of claims 1 to 8, wherein the physical channel for the second uplink message comprises at least one of: a physical random access channel (PRACH), or a physical uplink shared channel (PUSCH).

10. A method for handling a resource collision, performed by a network device, comprises:

determining at least one time domain unit for a user equipment (UE) corresponding to an overlapping resource between a resource for repetitions of a first uplink message and a resource

of a physical channel for a second uplink message, wherein the first uplink message is msg.3 and the second uplink message is msg.1 or msg.A; and

in response to not sending the first uplink message and the second uplink message simultaneously on the at least one time domain unit by the UE, receiving one of the first uplink message or the second uplink message on the at least one time domain unit.

11.The method according to claim 10, further comprising:

determining that an available time domain unit for the UE does not comprise the at least one time domain unit; and

determining the resource for repetitions of the first uplink message based on the available time domain unit, or calculating a number of the repetitions based on the available time domain unit;

wherein receiving one of the first uplink message or the second uplink message on the at least one time domain unit comprises:

not receiving the first uplink message on the at least one time domain unit.

12.The method according to claim 10, further comprising:

determining that an available time domain unit comprises the at least one time domain unit; and

determining the resource for repetitions of the first uplink message based on the available time domain unit, or calculating a number of the repetitions based on the available time domain unit;

wherein receiving one of the first uplink message or the second uplink message on the at least one time domain unit comprises:

not receiving the first uplink message on the at least one time domain unit.

13. The method according to claim 10 or 11, wherein determining the at least one time domain unit for the UE corresponding to the overlapping resource between the resource for repetitions of the first uplink message and the resource of the physical channel for the second uplink message, comprises:

determining a first resource in a set of resources used by the UE for sending the second uplink message; and

determining a second resource in the set of resources, wherein a synchronization signal block (SSB) index mapped by the second resource is the same as a SSB index mapped by the first resource; and

determining at least one time domain unit corresponding to an overlapping resource between the second resource and the resource for repetitions of the first uplink message.

14. The method according to claim 13, further comprising: sending configuration information to the UE, wherein the configuration information indicates a set of resources used for sending the second uplink message.

15. The method according to claim 10, further comprising:

determining an invalid random access channel (RACH) occasion (RO) in the resource of the physical channel, wherein the at least one time domain unit comprises the invalid RO;

wherein receiving one of the first uplink message or the second uplink message on the at least one time domain unit comprises:

receiving the first uplink message at the invalid RO and not receiving the second uplink message at the invalid RO.

16. The method according to claim 15, further comprising:

sending an invalid resource mode to the UE, wherein the invalid resource mode indicates the invalid RO.

17. The method according to claim 15, further comprising:

determining a first RO resource in a set of RO resources used by the UE for sending the second uplink message; and

determining a second RO resource in the set of RO resources as an invalid RO, wherein a synchronization signal block (SSB) index mapped by the second RO resource is the same as a SSB index mapped by the first RO resource; and

determining an invalid resource mode based on the invalid RO.

18. The method according to any one of claims 9 to 17, wherein the physical channel for the second uplink message comprises at least one of: a physical random access channel (PRACH), or a physical uplink shared channel (PUSCH).

19. A user equipment, comprising:

a memory storing a computer program; and

a processor, configured to execute the computer program to implement the method according to any one of claims 1 to 9.

20. A network device, comprising:

a memory storing a computer program; and

a processor, configured to execute the computer program to implement the method according to any one of claims 10 to 18.