WHAT IS CLAIMED IS:

1. A method for determining a transmission configuration indication (TCI), performed by a terminal, comprising:

receiving M pieces of downlink control information (DCI) from a network device, wherein each of the M pieces of DCI comprises a TCI state, and the M pieces of DCI comprise reference DCI, where M is a positive integer;

determining a unified TCI state used for a communication transmission based on a target TCI state comprised in the reference DCI; and

transmitting a hybrid automatic repeat request-acknowledge (HARQ-ACK) codebook to the network device, wherein the HARQ-ACK codebook comprises HARQ-ACK information respectively corresponding to the M pieces of DCI.

2. The method according to claim 1, wherein TCI states comprised in all of the M pieces of DCI are same.

3. The method according to claim 2, wherein determining the unified TCI state used for the communication transmission based on the target TCI state comprised in the reference DCI comprises:

when HARQ-ACK information corresponding to at least one of the M pieces of DCI is ACK, determining any one of the at least one of the M pieces of DCI as the reference DCI; and

determining the unified TCI state used for the communication transmission based on the target TCI state comprised in the reference DCI.

4. The method according to claim 1, wherein TCI states comprised in N pieces of DCI transmitted in a last slot of transmission slots respectively corresponding to the M pieces of DCI are same, where N is a positive integer.

5. The method according to claim 4, wherein determining the unified TCI state used for the communication transmission based on the target TCI state comprised in the reference DCI comprises:

when HARQ-ACK information corresponding to at least one of the N pieces of DCI is ACK, determining any one of the at least one of the N pieces of DCI as the reference DCI; and

determining the unified TCI state used for the communication transmission based on the target TCI state comprised in the reference DCI.

6. The method according to claim 1, wherein TCI states comprised in L pieces of DCI with a

last transmission start symbol respectively corresponding to the M pieces of DCI are same, where L is a positive integer.

7. The method according to claim 6, wherein determining the unified TCI state used for the communication transmission based on the target TCI state comprised in the reference DCI comprises:

when HARQ-ACK information corresponding to at least one of the L pieces of DCI is ACK, determining any one of the at least one of the L pieces of DCI as the reference DCI; and

determining the unified TCI state used for the communication transmission based on the target TCI state comprised in the reference DCI.

8. The method according to claim 1, wherein TCI states comprised in J pieces of DCI with a last transmission end symbol respectively corresponding to the M pieces of DCI are same, where J is a positive integer.

9. The method according to claim 8, wherein determining the unified TCI state used for the communication transmission based on the target TCI state comprised in the reference DCI comprises:

when HARQ-ACK information corresponding to at least one of the J pieces of DCI is ACK, determining any one of the at least one of the J pieces of DCI as the reference DCI; and

determining the unified TCI state used for the communication transmission based on the target TCI state comprised in the reference DCI.

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

determining the reference DCI according to at least one of component carrier (CC) numbers, bandwidth part (BWP) numbers, transmission start times or transmission end times respectively corresponding to the M pieces of DCI.

11. The method according to claim 10, wherein determining the reference DCI according to at least one of the CC numbers, the BWP numbers, the transmission start times or the transmission end times respectively corresponding to the M pieces of DCI comprises one of:

determining DCI with a minimum CC number in the M pieces of DCI as the reference DCI;

determining DCI with a minimum bandwidth part (BWP) number in the M pieces of DCI as the reference DCI;

determining DCI with a last transmission start time in the M pieces of DCI as the reference DCI;

determining DCI with a last transmission end time in the M pieces of DCI as the reference DCI;

determining DCI with an earliest transmission start time in the M pieces of DCI as the reference DCI; or

determining DCI with an earliest transmission end time in the M pieces of DCI as the reference DCI.

12. The method according to claim 11, wherein determining the unified TCI state used for the communication transmission based on the target TCI state comprised in the reference DCI comprises:

when HARQ-ACK information corresponding to the reference DCI is ACK, determining the unified TCI state used for the communication transmission based on the target TCI state comprised in the reference DCI.

13. The method according to any one of claims 1 to 12, wherein determining the unified TCI state used for the communication transmission based on the target TCI state comprised in the reference DCI comprises:

determining the unified TCI state used for the communication transmission based on the target TCI state comprised in the reference DCI after a target time interval after transmitting the HARQ-ACK codebook, wherein HARQ-ACK information corresponding to the reference DCI comprised in the HARQ-ACK codebook is ACK.

14. The method according to any one of claims 1 to 12, wherein the TCI state comprises at least one of a unified TCI state, a joint TCI state, a separate uplink TCI state, or a separate downlink TCI state.

15. A terminal, comprising:

a processor; and

a transceiver connected to the processor;

wherein the processor is configured to load and execute executable instructions to implement the method for determining the transmission configuration indication according to any one of claims 1 to 14.