**What is claimed is:**

1. A hybrid automatic repeat request (HARQ) information processing method, comprising:

determining, by a terminal, a mapping between HARQ information bits and following physical uplink control channel (PUCCH) information: a PUCCH resource index, or both the PUCCH resource index and a parameter value used for calculating a cyclic shift, or both the PUCCH resource index and an index of an orthogonal cover code, or all of the PUCCH resource index, the parameter value used for calculating a cyclic shift and the index of an orthogonal cover code, based on a predefinition of the mapping or a configuration of the mapping that is configured by a network device.

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

determining, by the terminal based on HARQ information bits to be reported and the mapping, following information for a PUCCH transmission: the PUCCH resource index, or both the PUCCH resource index and the parameter value used for calculating a cyclic shift, or both the PUCCH resource index and the index of an orthogonal cover code, or all of the PUCCH resource index, the parameter value used for calculating a cyclic shift and the index of an orthogonal cover code.

3. The HARQ information processing method according to claim 2, further comprising:

transmitting, by the terminal, the PUCCH based on the following information for the PUCCH transmission: the PUCCH resource index, or both the PUCCH resource index and the parameter value used for calculating a cyclic shift, or both the PUCCH resource index and the index of an orthogonal cover code, or all of the PUCCH resource index, the parameter value used for calculating a cyclic shift and the index of an orthogonal cover code, and based on a PUCCH resource or resource set configured by the network device.

4. The HARQ information processing method according to claim 3, wherein the PUCCH is used for reporting HARQ information bits of a physical downlink shared channel (PDSCH) carrying multicast and/or broadcast service, or HARQ information bits of PDSCH shared by multiple terminals;

and/or,

wherein the method further comprises:

receiving, by the terminal, a first higher layer signaling from the network device, wherein the first higher layer signaling comprises configuration information of the PUCCH resource or resource set.

5. The HARQ information processing method according to claim 1, wherein the determining, by the terminal, the mapping between the HARQ information bits and the following PUCCH information: the PUCCH resource index, or both the PUCCH resource index and the parameter value used for calculating a cyclic shift, or both the PUCCH resource index and the index of an orthogonal cover code, or all of the PUCCH resource index, the parameter value used for calculating a cyclic shift and the index of an orthogonal cover code, based on the configuration configured by the network device comprises:

receiving, by the terminal, a second higher layer signaling from the network device, wherein the second higher layer signaling comprises the mapping between the HARQ information bits and the following PUCCH information: the PUCCH resource index, or both the PUCCH resource index and the parameter value used for calculating a cyclic shift, or both the PUCCH resource index and the index of an orthogonal cover code, or all of the PUCCH resource index, the parameter value used for calculating a cyclic shift and the index of an orthogonal cover code.

6. The HARQ information processing method according to claim 2, further comprising:

determining, by the terminal based on a reception of at least one PDSCH for carrying multicast and/or broadcast service or associated with the multicast and/or broadcast service, the HARQ information bits to be reported.

7. A hybrid automatic repeat request (HARQ) information processing method, comprising:

determining, by a network device, a mapping between HARQ information bits and following physical uplink control channel (PUCCH) information: a PUCCH resource index, or both the PUCCH resource index and a parameter value used for calculating a cyclic shift, or both the PUCCH resource index and an index of an orthogonal cover code, or all of the PUCCH resource index, the parameter value used for calculating a cyclic shift and the index of an orthogonal cover code, based on a predefinition of the mapping or a configuration of the mapping that is configured by the network device for a terminal.

8. The HARQ information processing method according to claim 7, further comprising:

receiving, by the network device, a PUCCH from the terminal, and determining, by the network device, following PUCCH information of the PUCCH: the PUCCH resource index, or both the PUCCH resource index and the parameter value used for calculating a cyclic shift, or both the PUCCH resource index and the index of an orthogonal cover code, or all of the PUCCH resource index, the parameter value used for calculating a cyclic shift and the index of an orthogonal cover code;

determining, by the network device, HARQ information bits based on the mapping and the following PUCCH information of the PUCCH: the PUCCH resource index, or both the PUCCH resource index and the parameter value used for calculating a cyclic shift, or both the PUCCH resource index and the index of an orthogonal cover code, or all of the PUCCH resource index, the parameter value used for calculating a cyclic shift and the index of an orthogonal cover code.

9. The HARQ information processing method according to claim 8, wherein the PUCCH is used for reporting HARQ information bits of a physical downlink shared channel (PDSCH) carrying multicast and/or broadcast service, or HARQ information bits of PDSCH shared by multiple terminals;

or,

wherein the method further comprises:

configuring, by the network device for the terminal, a PUCCH resource or resource set for transmitting the PUCCH.

10. The HARQ information processing method according to claim 9, wherein the configuring, by the network device for the terminal, the PUCCH resource or resource set for transmitting the PUCCH comprises:

sending, by the network device, a first higher layer signaling to the terminal, wherein the first higher layer signaling comprises configuration information of the PUCCH resource or resource set.

11. The HARQ information processing method according to claim 7, wherein configuring, by the network device for the terminal, the mapping between the HARQ information bits and the following PUCCH information: the PUCCH resource index, or both the PUCCH resource index and the parameter value used for calculating a cyclic shift, or both the PUCCH resource index and the index of an orthogonal cover code, or all of the PUCCH resource index, the parameter value used for calculating a cyclic shift and the index of an orthogonal cover code, comprises:

sending, by the network device, a second high-level signaling to the terminal, wherein the second higher layer signaling comprises the mapping between the HARQ information bits and the following PUCCH information: the PUCCH resource index, or both the PUCCH resource index and the parameter value used for calculating a cyclic shift, or both the PUCCH resource index and the index of an orthogonal cover code, or all of the PUCCH resource index, the parameter value used for calculating a cyclic shift and the index of an orthogonal cover code.

12. A hybrid automatic repeat request (HARQ) information processing apparatus, applied to a terminal, and comprising:

a first determining unit, configured to determine a mapping between HARQ information bits and following physical uplink control channel (PUCCH) information: a PUCCH resource index, or both the PUCCH resource index and a parameter value used for calculating a cyclic shift, or both the PUCCH resource index and an index of an orthogonal cover code, or all of the PUCCH resource index, the parameter value used for calculating a cyclic shift and the index of an orthogonal cover code, based on a predefinition of the mapping or a configuration of the mapping that is configured by a network device.

13. The HARQ information processing apparatus according to claim 12, wherein the first determining unit is further configured to determine, based on HARQ information bits to be reported and the mapping, following information for a PUCCH transmission: the PUCCH resource index, or both the PUCCH resource index and the parameter value used for calculating a cyclic shift, or both the PUCCH resource index and the index of an orthogonal cover code, or all of the PUCCH resource index, the parameter value used for calculating a cyclic shift and the index of an orthogonal cover code.

14. The HARQ information processing apparatus according to claim 13, further comprising: a first communication unit, configured to transmit the to-be-transmitted PUCCH based on the following information for the PUCCH transmission: the PUCCH resource index, or both the PUCCH resource index and the parameter value used for calculating a cyclic shift, or both the PUCCH resource index and the index of an orthogonal cover code, or all of the PUCCH resource index, the parameter value used for calculating a cyclic shift and the index of an orthogonal cover code, and based on a PUCCH resource or resource set configured by the network device.

15. The HARQ information processing apparatus according to claim 14, wherein the PUCCH is used for reporting HARQ information bits of a physical downlink shared channel (PDSCH) carrying multicast and/or broadcast service or HARQ information bits of PDSCH shared by multiple terminals;

and/or,

wherein the first communication unit is further configured to receive a first higher layer signaling from the network device, wherein the first higher layer signaling comprises configuration information of the PUCCH resource or resource set.

16. The HARQ information processing apparatus according to claim 12, further comprising: a second communication unit, configured to receive a second higher layer signaling from the network device, wherein the second higher layer signaling comprises the mapping between the HARQ information bits and the following PUCCH information: the PUCCH resource index, or both the PUCCH resource index and the parameter value used for calculating a cyclic shift, or both the PUCCH resource index and the index of an orthogonal cover code, or all of the PUCCH resource index, the parameter value used for calculating a cyclic shift and the index of an orthogonal cover code.

17. The HARQ information processing apparatus according to claim 13, wherein the first determining unit is further configured to determine, based on a reception of at least one PDSCH for carrying multicast and/or broadcast service or associated with the multicast and/or broadcast service, the HARQ information bits to be reported.

18. A hybrid automatic repeat request (HARQ) information processing apparatus, applied to a network device, and comprising:

a second determining unit, configured to determine a mapping between HARQ information bits and following physical uplink control channel (PUCCH) information: a PUCCH resource index, or both the PUCCH resource index and a parameter value used for calculating a cyclic shift, or both the PUCCH resource index and an index of an orthogonal cover code, or all of the PUCCH resource index, the parameter value used for calculating a cyclic shift and the index of an orthogonal cover code, based on a predefinition of the mapping or a configuration of the mapping that is configured by the network device for a terminal.

19. The HARQ information processing apparatus according to claim 18, further comprising: a third communication unit, configured to receive a PUCCH from the terminal, and determining following PUCCH information of the PUCCH: the PUCCH resource index, or both the PUCCH resource index and the parameter value used for calculating a cyclic shift, or both the PUCCH resource index and the index of an orthogonal cover code, or all of the PUCCH resource index, the parameter value used for calculating a cyclic shift and the index of an orthogonal cover code;

wherein the second determining unit is further configured to determine HARQ information bits based on the mapping and the following PUCCH information of the PUCCH: the PUCCH resource index, or both the PUCCH resource index and the parameter value used for calculating a cyclic shift, or both the PUCCH resource index and the index of an orthogonal cover code, or all of the PUCCH resource index, the parameter value used for calculating a cyclic shift and the index of an orthogonal cover code.

20. The HARQ information processing apparatus according to claim 19, wherein the PUCCH is used for reporting HARQ information bits of a physical downlink shared channel (PDSCH) carrying multicast and/or broadcast service or HARQ information bits of PDSCH shared by multiple terminals;

or,

wherein the third communication unit is further configured to configure, for the terminal, a PUCCH resource or resource set for transmitting the PUCCH.