CLAIMS

What is claimed is:

1. An information transmission method, applied to a first node device and comprising:

coordinating target information with a second node device; and

determining, based on the target information, working information of a third node device, the third node device being an intelligent surface; wherein

the target information comprises at least one of first information, second information, feedback information for the first information, and feedback information for the second information;

the first information is working information of the third node device expected by the first node device;

the second information is working information of the third node device expected by the second node device;

the determined working information of the third node device comprises identification information of the third node device; and

the determined working information of the third node device further comprises at least one of the following:

on/off information of switch elements of reflecting or refracting units in the third node device;

a working mode of the third node device;

amplitude related information;

polarization related information; and

frequency related information.

2. The information transmission method according to claim 1, wherein after the determining working information of a third node device, the method further comprises:

sending the determined working information of the third node device to the third node device.

3. The information transmission method according to claim 1, wherein the working information is periodic working information or the working information is aperiodic working information.

4. The information transmission method according to claim 3, wherein the determined working information of the third node device further comprises phase related information; wherein when the working information is aperiodic working information, the working information further comprises at least one of the following:

time information corresponding to the identification information;

time information corresponding to the on/off information;

time information corresponding to the phase related information;

time information corresponding to the amplitude related information; and

time information corresponding to the polarization related information.

5. The information transmission method according to claim 3, wherein when the working information is periodic working information, the working information further comprises N groups of bits; N is a quantity of time units comprised within one cycle of the working information, and the N groups of bits are in one-to-one correspondence with the N time units; wherein

each group of bits is used to indicate at least one of the following information in a corresponding time unit:

a working mode;

on/off information of switch elements;

phase related information;

amplitude related information; and

polarization related information; and

N is an integer greater than or equal to 1, and a quantity of bits comprised in each group of bits is determined based on a quantity of pieces of the on/off information.

6. The information transmission method according to claim 5, wherein the working mode comprises a first working mode on at least one downlink time resource and a second working mode on an uplink time resource corresponding to the at least one downlink time resource; wherein

the second working mode is one of the first working mode.

7. The information transmission method according to claim 1, wherein the coordinating target information with a second node device comprises:

sending the first information to the second node device; and

receiving third information sent by the second node device, wherein the third information comprises at least one of the second information and the feedback information for the first information.

8. The information transmission method according to claim 7, wherein the determining, based on the target information, working information of a third node device comprises:

in a case that the third information comprises the feedback information for the first information and that the feedback information for the first information is ACK information, determining that the working information of the third node device is the first information.

9. The information transmission method according to claim 7, wherein in a case that the third information comprises only the feedback information for the first information and that the feedback information for the first information is negative acknowledgement NACK information,

after the receiving third information sent by the second node device, the method further comprises:

sending fourth information to the second node device; and

receiving feedback information for the fourth information sent by the second node device; wherein

the fourth information is working information of the third node device expected by the first node device, and the fourth information is different from the first information.

10. The information transmission method according to claim 9, wherein the determining, based on the target information, working information of a third node device comprises:

in a case that the feedback information for the fourth information is positive acknowledgement ACK information, determining that the working information of the third node device is the fourth information.

11. The information transmission method according to claim 7, wherein in a case that the third information comprises the second information and the feedback information for the first information and that the feedback information for the first information is NACK information, or in a case that the third information comprises only the second information,

after the receiving third information sent by the second node device, the method further comprises:

sending the feedback information for the second information to the second node device.

12. The information transmission method according to claim 11, wherein the determining, based on the target information, working information of a third node device comprises:

in a case that the feedback information for the second information is an ACK, determining that the working information of the third node device is the second information.

13. The information transmission method according to claim 1, wherein the coordinating target information with a second node device comprises:

receiving the second information sent by the second node device; and

sending fifth information to the second node device, the fifth information comprising at least one of fourth information and the feedback information for the second information; wherein

the fourth information is working information of the third node device expected by the first node device, and the fourth information is different from the first information.

14. The information transmission method according to claim 13, wherein in a case that the fifth information comprises only the feedback information for the second information and that the feedback information for the second information is a NACK,

or in a case that the fifth information comprises only the fourth information, or in a case that the fifth information comprises the fourth information and the feedback information for the second information and that the feedback information for the second information is NACK information,

after the sending fifth information to the second node device, the method further comprises:

receiving sixth information sent by the second node device, the sixth information comprising at least one of seventh information and feedback information for the fourth information; wherein

the seventh information is working information of the third node device expected by the second node device, and the seventh information is different from the second information.

15. The information transmission method according to claim 1, wherein the second node device is a node device belonging to a same operator as the first node device, or the second node device is a node device belonging to a different operator than the first node device; and

the third node device is a node device associated with the first node device and the second node device.

16. The information transmission method according to claim 15, wherein the second node device has a same site address and a same antenna direction as the first node device; or

the second node device has a different site address from the first node device; or

the second node device has a different antenna direction from the first node device.

17. An information transmission method, applied to a third node device and comprising:

obtaining working information of the third node device sent by a first node device and/or a second node device, wherein the working information is determined through coordination between the first node device and the second node device; and

performing a target operation based on the working information of the third node device, the third node device being an intelligent surface; wherein

the working information comprises identification information of the third node device; and

the working information further comprises at least one of the following:

on/off information of switch elements of reflecting or refracting units in the third node device;

a working mode of the third node device;

amplitude related information;

polarization related information; and

frequency related information.

18. The information transmission method according to claim 17, wherein the working information of the third node device is determined after the first node device and the second node device coordinate target information; wherein

the target information comprises at least one of first information, second information, feedback information for the first information, and feedback information for the second information;

the first information is working information of the third node device expected by the first node device; and

the second information is working information of the third node device expected by the second node device.

19. The information transmission method according to claim 17, wherein the performing a target operation based on the working information of the third node device comprises:

in a case that the working information of the third node device sent by the first node device is different from the working information of the third node device sent by the second node device, performing an operation corresponding to the working information of the third node device sent by the first node device; or

in a case that the working information of the third node device sent by the first node device is different from the working information of the third node device sent by the second node device, performing an operation corresponding to the working information of the third node device sent by the second node device; or

in a case that the working information of the third node device sent by the first node device is different from the working information of the third node device sent by the second node device, skipping performing an operation corresponding to the working information of the third node device sent by the first node device and skipping performing an operation corresponding to the working information of the third node device sent by the second node device.

20. A node device, comprising a memory, a processor, and a program stored in the memory and capable of running on the processor, wherein when the program is executed by the processor, the steps of the information transmission method according to any one of claims 1 to 19 are implemented.