What we claim is:

1. A method for transmitting a reference signal, comprising:

receiving, by a terminal, first information sent by a network device, wherein the first information is used for indicating that a transmission pattern for transmitting a downlink demodulation reference signal (DMRS) to be transmitted is one of a first transmission pattern and a second transmission pattern, wherein the first information is system information and the system information is at least one piece of system information necessary for the terminal to access a network; and

performing, by the terminal, transmission of the downlink DMRS to be transmitted with the network device on a transmission resource indicated by one of the first transmission pattern and the second transmission pattern; wherein receiving, by the terminal, the first information sent by the network device comprises:

receiving, by the terminal, the first information sent by the network device, wherein a first field in the first information is used for indicating that the transmission pattern for transmitting the downlink DMRS to be transmitted is one of the first transmission pattern and the second transmission pattern;

or,

receiving, by the terminal, the first information sent by the network device comprises:

receiving, by the terminal, the first information sent by the network device, wherein the first information indicates whether the transmission pattern for transmitting the downlink DMRS to be transmitted is one of the first transmission pattern and the second transmission pattern through whether carrying a second field or not.

2. The method according to claim 1, wherein a quantity of transmission resources used for transmitting the downlink DMRS to be transmitted in a transmission unit indicated by the first transmission pattern is greater than a quantity of transmission resources used for transmitting the downlink DMRS to be transmitted in a transmission unit indicated by the second transmission pattern.

3. A method for transmitting a reference signal, comprising:

sending, by a network device, first information to a terminal, wherein the first information is used for indicating that a transmission pattern for transmitting a downlink demodulation reference signal (DMRS) to be transmitted is one of a first transmission pattern and a second

transmission pattern, wherein the first information is system information and the system information is at least one piece of system information necessary for the terminal to access a network; and

sending, by the network device, the downlink DMRS to be transmitted to the terminal on a transmission resource indicated by one of the first transmission pattern and the second transmission pattern; wherein sending, by the network device, the first information to the terminal comprises:

sending, by the network device, the first information to the terminal, wherein a first field in the first information is used for indicating that the transmission pattern for transmitting the downlink DMRS to be transmitted is one of the first transmission pattern and the second transmission pattern;

or,

sending, by the network device, the first information to the terminal comprises:

sending, by the network device, the first information to the terminal, wherein the first information indicates whether the transmission pattern for transmitting the downlink DMRS to be transmitted is one of the first transmission pattern and the second transmission pattern through whether carrying a second field or not.

4. The method according to claim 3, wherein a quantity of transmission resources for transmitting the downlink DMRS to be transmitted in a transmission unit indicated by the first transmission pattern is greater than a quantity of transmission resources used for transmitting the DMRS to be transmitted in a transmission unit indicated by the second transmission pattern.

5. A terminal, comprising:

a receiving unit, used for receiving first information sent by a network device, wherein the first information is used for indicating that a transmission pattern for transmitting a downlink demodulation reference signal (DMRS) to be transmitted is one of a first transmission pattern and a second transmission pattern, wherein the first information is system information and the system information is at least one piece of system information necessary for the terminal to access a network; and

a transmission unit, used for performing transmission of the downlink DMRS to be transmitted with the network device on a transmission resource indicated by one of the first transmission pattern and the second transmission pattern; wherein the receiving unit is specifically used for:

receiving the first information sent by the network device, wherein a first field in the first information is used for indicating that the transmission pattern for transmitting the downlink DMRS to be transmitted is one of the first transmission pattern and the second transmission pattern;

or,

the receiving unit is specifically used for:

receiving the first information sent by the network device, wherein the first information indicates whether the transmission pattern for transmitting the downlink DMRS to be transmitted is one of the first transmission pattern and the second transmission pattern through whether carrying a second field or not.

6. The terminal according to claim 5, wherein a quantity of transmission resources for transmitting the downlink DMRS to be transmitted in a transmission unit indicated by the first transmission pattern is greater than a quantity of transmission resources used for transmitting the DMRS to be transmitted in a transmission unit indicated by the second transmission pattern.

7. A network device, comprising:

a sending unit, used for sending first information to a terminal, wherein the first information is used for indicating that a transmission pattern for transmitting a downlink demodulation reference signal (DMRS) to be transmitted is one of a first transmission pattern and a second transmission pattern, wherein the first information is system information and the system information is at least one piece of system information necessary for the terminal to access a network; and

a transmission unit, used for transmitting the downlink DMRS to be transmitted to the terminal on a transmission resource indicated by one of the first transmission pattern and the second transmission pattern; wherein the sending unit is specifically used for:

sending the first information to the terminal, wherein a first field in the first information is used for indicating that the transmission pattern for transmitting the downlink DMRS to be transmitted is one of the first transmission pattern and the second transmission pattern;

or,

the sending unit is specifically used for:

sending the first information to the terminal, wherein the first information indicates whether the transmission pattern for transmitting the downlink DMRS to be transmitted is one

of the first transmission pattern and the second transmission pattern through whether carrying a second field or not.

8. The network device according to claim 7, wherein a quantity of transmission resources for transmitting the downlink DMRS to be transmitted in a transmission unit indicated by the first transmission pattern is greater than a quantity of transmission resources used for transmitting the DMRS to be transmitted in a transmission unit indicated by the second transmission pattern.