CLAIMS

1. A time information obtaining method, performed by a terminal, comprising:

receiving a first message transmitted by a network device, wherein the first message comprises multiple pieces of time information, and the multiple pieces of time information correspond to different respective clock sources providing different types of time information; and

obtaining, from the first message, time information corresponding to a clock source required by the terminal.

2. The method according to claim 1, wherein the multiple pieces of time information comprise:

multiple pieces of time information associated with the terminal; or

time information corresponding to multiple clock sources.

3. The method according to claim 2, wherein the multiple pieces of time information associated with the terminal comprise:

multiple pieces of time information subscribed to by subscription information of the terminal; or

multiple pieces of time information requested by a request message transmitted by the terminal.

4. The method according to claim 3, wherein the request message comprises at least one of the following:

clock source identifiers, time type identifiers, and time precision identifiers, wherein

in a case that the request message comprises the clock source identifiers, clock sources corresponding to the multiple pieces of time information are clock sources identified by the clock source identifiers; and/or

in a case that the request message comprises the time type identifiers, time types of the multiple pieces of time information are time types identified by the time type identifiers; and/or

in a case that the request message comprises the time precision identifiers, time precisions of the multiple pieces of time information are time precisions identified by the time precision identifiers.

5. The method according to any one of claims 1 to 4, wherein a clock source corresponding to each piece of time information is prescribed by a protocol; or

a clock source corresponding to each piece of time information is determined by subscription by the terminal with a network device.

6. The method according to any one of claims 1 to 4, wherein the first message further comprises clock source identifiers of the clock sources corresponding to the multiple pieces of time information; or

clock source identifiers of the clock sources corresponding to the multiple pieces of time information are implicitly indicated by a protocol; or

clock source identifiers of the clock sources corresponding to the multiple pieces of time information are implicitly indicated by subscription by the terminal with a network device.

7. The method according to any one of claims 1 to 4, wherein the first message comprises:

a broadcast message or downlink dedicated signaling.

8. The method according to any one of claims 1 to 4, wherein different time information in the multiple pieces of time information correspond to different clock sources; or

N pieces of time information corresponding to different clock sources but belonging to a same time type are present in the multiple pieces of time information, wherein N is an integer greater than 1, and N is less than or equal to the number of pieces of time information comprised in the first message.

9. A time information transmission method, performed by a network device, comprising:

transmitting a first message to a terminal, wherein the first message comprises multiple pieces of time information, and the multiple pieces of time information

correspond to different respective clock sources providing different types of time information.

10. The method according to claim 9, wherein the multiple pieces of time information comprise:

multiple pieces of time information associated with a terminal; or

time information corresponding to multiple clock sources.

11. The method according to claim 10, wherein the multiple pieces of time information associated with the terminal comprise:

multiple pieces of time information subscribed to by subscription information of the terminal; or

multiple pieces of time information requested by a request message transmitted by the terminal.

12. The method according to claim 11, wherein the request message comprises at least one of the following:

clock source identifiers, time type identifiers, and time precision identifiers, wherein

in a case that the request message comprises the clock source identifiers, clock sources corresponding to the multiple pieces of time information are clock sources identified by the clock source identifiers; and/or

in a case that the request message comprises the time type identifiers, time types of the multiple pieces of time information are time types identified by the time type identifiers; and/or

in a case that the request message comprises the time precision identifiers, time precisions of the multiple pieces of time information are time precisions identified by the time precision identifiers.

13. The method according to any one of claims 9 to 12, wherein a clock source corresponding to each piece of time information is prescribed by a protocol; or

a clock source corresponding to each piece of time information is determined by subscription by the terminal with the network device.

14. The method according to any one of claims 9 to 12, wherein the first message further comprises clock source identifiers of the clock sources corresponding to the multiple pieces of time information; or

clock source identifiers of the clock sources corresponding to the multiple pieces of time information are implicitly indicated by a protocol; or

clock source identifiers of the clock sources corresponding to the multiple pieces of time information are implicitly indicated by subscription by the terminal with the network device.

15. The method according to any one of claims 9 to 12, wherein the first message comprises:

a broadcast message or downlink dedicated signaling.

16. The method according to any one of claims 9 to 12, wherein different time information in the multiple pieces of time information correspond to different clock sources; or

N pieces of time information corresponding to different clock sources but belonging to a same time type are present in the multiple pieces of time information, wherein N is an integer greater than 1, and N is less than or equal to the number of pieces of time information comprised in the first message.

17. A terminal, comprising:

a receiving module, configured to receive a first message, wherein the first message comprises multiple pieces of time information, and the multiple pieces of time information correspond to different respective clock sources providing different types of time information; and

an obtaining module, configured to obtain, from the first message, time information corresponding to a clock source required by the terminal.

18. The terminal according to claim 17, wherein the multiple pieces of time information comprise:

multiple pieces of time information associated with the terminal; or

time information corresponding to multiple clock sources.

19. A network device, comprising:

a transmission module, configured to transmit a first message, wherein the first message comprises multiple pieces of time information, and the multiple pieces of time information correspond to different respective clock sources providing different types of time information.

20. A computer-readable storage medium, wherein the computer-readable storage medium stores a computer program, and when the computer program is executed by a processor, the steps of the time information obtaining method according to any one of claims 1 to 8 are implemented, or when the computer program is executed by a processor, the steps of the time information transmission method according to any one of claims 9 to 16 are implemented.