

CLAIMS

1. A method for information transmission, ~~performed by~~applied to a terminal device and comprising:

reporting reference time interest information to a network-side device; wherein

the reference time interest information is used to indicate whether the terminal device is interested in a reference time delivered by the network-side device ~~indicate at least one of a reference time of interest to the terminal device and a reference time of no interest to the terminal device.~~

2. The method according to claim 1, wherein the reporting reference time interest information to a network-side device comprises:

if a protocol predefines that the terminal device is allowed to report reference time interest information, reporting the reference time interest information to a network-side device;

or

if first indication information received from the network-side device indicates that the terminal device is allowed to report reference time interest information, reporting the reference time interest information to the network-side device, wherein the first indication information is used to indicate whether reporting of reference time interest information is allowed.

3. The method according to claim 1, wherein the reference time interest information comprises at least one of the following:

reference time information of interest; and

reference time information of no interest.

4. The method according to claim 3, wherein the reference time information comprises at least one of the following:

type of reference time;

time precision of reference time; and

clock source of reference time.

5. The method according to claim 1, wherein a trigger condition for reporting the reference time interest information by the terminal device to the network-side device comprises one of the following:

- the terminal device is interested in at least one piece of reference time information;
- the terminal device is not interested in at least one piece of reference time information;
- the terminal device has changed interest in at least one piece of reference time information;
- first content reported by the terminal device has changed, wherein the first content comprises content of reference time information of interest reported by the terminal device or content of reference time information of no interest reported by the terminal device; and
- the terminal device detects that reference time information received by the terminal device needs to be corrected.

6. The method according to claim 5, wherein a determining condition for the terminal device to detect that the reference time information received by the terminal device needs to be corrected comprises one of the following:

- a path loss measured by the terminal device is greater than or equal to a first threshold;
- a path loss variation measured by the terminal device is greater than or equal to a second threshold;
- an uplink timing advance of the terminal device is greater than or equal to a third threshold;
- an uplink timing advance variation measured by the terminal device is greater than or equal to a fourth threshold; and
- indication information received by the terminal device from the network-side device indicates that a cell requires to correct the reference time information.

7. The method according to claim 1, wherein after the reporting reference time interest information to a network-side device, the method further comprises:

- starting a prohibit timer; wherein
- before the prohibit timer expires, the terminal device is prohibited from reporting reference time interest information;
- wherein a parameter of the prohibit timer is predefined by a protocol or configured by a network side.

8. A method for information transmission, ~~applied to~~performed by a network-side device and comprising:

receiving reference time interest information reported by a terminal device; wherein

the reference time interest information is used to indicate whether the terminal device is interested in a reference time delivered by the network-side device~~indicate at least one of a reference time of interest to the terminal device and a reference time of no interest to the terminal device.~~

9. The method according to claim 8, further comprising:

transmitting first indication information to the terminal device, wherein the first indication information is used to indicate whether the terminal device is allowed to report reference time interest information;

and/or,

further comprising:

configuring a parameter of a prohibit timer for the terminal device.

10. The method according to claim 8, wherein the reference time interest information comprises at least one of the following:

reference time information of interest; and

reference time information of no interest.

11. The method according to claim 10, wherein the reference time information comprises at least one of the following:

type of reference time;

time precision of reference time; and

clock source of reference time.

12. The method according to claim 8, wherein the network-side device is a source node; and

after the receiving reference time interest information reported by a terminal device, the method further comprises:

transmitting the reference time interest information to a destination node.

13. A terminal device, comprising:

a reporting module, configured to report reference time interest information to a network-side device; wherein

the reference time interest information is used to indicate whether the terminal device is interested in a reference time delivered by the network-side device~~indicate at least one of a reference time of interest to the terminal device and a reference time of no interest to the terminal device.~~

14. The terminal device according to claim 13, wherein the reporting module is specifically configured to:

if a protocol predefines that the terminal device is allowed to report reference time interest information, report the reference time interest information to a network-side device;

or

if first indication information received from the network-side device indicates that the terminal device is allowed to report reference time interest information, report the reference time interest information to the network-side device, wherein the first indication information is used to indicate whether reporting of reference time interest information is allowed.

15. The terminal device according to claim 13, wherein the reference time interest information comprises at least one of the following:

reference time information of interest; and

reference time information of no interest.

16. The terminal device according to claim 15, wherein the reference time information comprises at least one of the following:

type of reference time;

time precision of reference time; and

clock source of reference time.

17. The terminal device according to claim 13, wherein a trigger condition for reporting the reference time interest information by the terminal device to the network-side device comprises one of the following:

the terminal device is interested in at least one piece of reference time information;

the terminal device is not interested in at least one piece of reference time information;

the terminal device has changed interest in at least one piece of reference time information;

first content reported by the terminal device has changed, wherein the first content comprises content of reference time information of interest reported by the terminal device or content of reference time information of no interest reported by the terminal device; and

the terminal device detects that reference time information received by the terminal device needs to be corrected.

18. A network-side device, comprising:

a receiving module, configured to receive reference time interest information reported by a terminal device; wherein

the reference time interest information is used to indicate whether the terminal device is interested in a reference time delivered by the network-side device~~indicate at least one of a reference time of interest to the terminal device and a reference time of no interest to the terminal device.~~

19. The network-side device according to claim 18, wherein the network-side device further comprises:

a first transmitting module, configured to transmit first indication information to the terminal device, wherein the first indication information is used to indicate whether the terminal device is allowed to report reference time interest information.

20. The network-side device according to claim 18, wherein the reference time interest information comprises at least one of the following:

reference time information of interest; and
reference time information of no interest.