

CLAIMS

What is claimed is:

1. A downlink reception triggering method, applied to a terminal and comprising:
transmitting a first uplink signal, wherein the first uplink signal is used to trigger
5 a first downlink reception.

2. The method according to claim 1, wherein there is a time-domain association
relationship between the first uplink signal and the first downlink reception;

~~3. The method according to claim 2, wherein the association relationship is
configured by a network-side device or prescribed by a protocol.~~

10 wherein the method further comprises~~4. The method according to claim 3, further
comprising:~~

triggering, based on at least one of a type of the first uplink signal, a logical channel
which the first uplink signal belongs to, and a service priority of the first uplink signal,
the first downlink reception associated with the first uplink signal.

15 53. The method according to claim 1, wherein the first uplink signal comprises a
first indication information, the first indication information comprises at least one of an
identifier of the first downlink reception and a time-domain configuration parameter of
the first downlink reception, the first indication information is used to trigger M first
downlink receptions among N downlink receptions, the N downlink receptions are
20 configured by a network-side device or prescribed by a protocol, and both N and M are
integers greater than or equal to 1.

64. The method according to claim 53, wherein if M is greater than 1, the method
further comprises:

receiving first downlink control information DCI after the first uplink signal is
25 transmitted; and

triggering K first downlink receptions among the M first downlink receptions by
using the first DCI, wherein K is an integer greater than or equal to 1.

~~7. The method according to claim 5, wherein the first indication information comprises at least one of an identifier of the first downlink reception and a time-domain configuration parameter of the first downlink reception.~~

~~8. The method according to claim 1, wherein a time-domain configuration parameter of the first downlink reception is configured by a network-side device or prescribed by a protocol.~~

95. The method according to claim ~~7 or 8~~3, wherein the time-domain configuration parameter of the first downlink reception comprises at least one of the following:

time-domain start time of the first downlink reception;

time-domain monitoring method for the first downlink reception;

duration of the first downlink reception; and

first cycle parameter of the first downlink reception, wherein the first cycle parameter comprises at least one of length of a first cycle, on duration length of the first cycle, and start offset of the on duration of the first cycle.

106. The method according to claim 95, wherein the time-domain start time of the first downlink reception is any one of the following:

a reference time, wherein the reference time is an end time of a time-domain resource carrying the first uplink signal;

a first time, wherein the first time is a time that is a first time interval apart from the reference time;

a start time of the 1-st available downlink time-domain resource after the reference time;

a start time of a time-domain resource after expiration of a first timer, wherein the first timer is started at the reference time;

a start time of the 1-st available downlink time-domain resource after the first time; and

a start time of the 1-st available downlink time-domain resource after expiration of the first timer.

117. The method according to claim 95, wherein the duration of the first downlink reception comprises any one of a first time length and a time length of the second timer.

~~128~~. The method according to claim ~~95~~, wherein the time-domain monitoring method for the first downlink reception comprises any one of the following:

monitoring the first downlink reception within the duration of the first downlink reception;

5 monitoring the first downlink reception within an on duration of each first cycle; and

monitoring the first downlink reception within an on duration of each first cycle in the duration of the first downlink reception.

~~139~~. The method according to claim ~~128~~, further comprising:

10 stopping monitoring the first downlink reception if Q downlink receptions in the first downlink reception are not received within on durations of L consecutive first cycles, wherein $1 \leq Q \leq L$, and both L and Q are integers greater than or equal to 1.

~~14. The method according to claim 9, wherein the on duration length of the first cycle is indicated by a bitmap.~~

15 ~~1510~~. The method according to claim ~~7 or 83~~, wherein if the first downlink reception comprises the reception of physical downlink control channel (PDCCH), the time-domain configuration parameter of the first downlink reception comprises at least one of the following:

PDCCH blind decoding parameter;

20 PDCCH monitoring periodicity;

PDCCH monitoring offset;

PDCCH monitoring duration;

control resource set (CORESET);

search space group;

25 search space;

DCI format;

radio network temporary identifier (RNTI);

time interval between a PDCCH and a physical downlink shared channel (PDSCH) scheduled by the PDCCH;

30 time interval between a PDSCH and a HARQ-ACK feedback for the PDSCH;

time interval between a PDCCH and a physical uplink shared channel PUSCH scheduled by the PDCCH;

PDSCH processing delay; and

PUSCH preparation delay.

5 ~~16. The method according to claim 2, wherein the association relationship is configured for at least one of a specified terminal, a specified medium access control MAC entity, a specified service type, and a specified frequency range.~~

10 ~~17. The method according to claim 1 or 4, wherein a type of the first uplink signal comprises at least one of an uplink channel type and a type of signal carried on uplink channel.~~

~~18. The method according to claim 1, wherein the first downlink reception comprises at least one of downlink scheduling information reception, downlink signal reception, downlink data information reception, and downlink channel monitoring.~~

15 ~~19~~11. The method according to claim 1, further comprising:
receiving a first message from a network-side device, wherein the first message is used to indicate the terminal to stop receiving at least one of the downlink reception of the first downlink reception; or,

~~20. The method according to claim 9, further comprising:~~
receiving a second message from the network-side device, wherein the second
20 message is used to indicate the terminal to switch the receiving cycle for the first downlink reception from the first cycle to a second cycle; and the second cycle is different from the first cycle in at least one of length, on duration length, and on duration start offset.

25 ~~21~~12. The method according to claim 1, wherein if the terminal has transmitted a second uplink signal within a duration of the first downlink reception and the second uplink signal is used to trigger a second downlink reception, the method further comprises:

performing the first downlink reception and the second downlink reception in parallel; or

30 performing only the second downlink reception;

~~22. The method according to claim 21,~~ wherein in a case of performing the first downlink reception and the second downlink reception in parallel, if the first downlink reception and the second downlink reception contend on one or more resources, the method further comprises:

5 on a resource under contention, performing the second downlink reception and dropping the first downlink reception; or

 on a resource under contention, performing the first downlink reception and dropping the second downlink reception; or

 on a resource under contention, determining, based on at least one of types of the
10 first uplink signal and the second uplink signal, logical channels which the first uplink signal and the second uplink signal belong to, and service priorities of the first uplink signal and the second uplink signal, a to-be-performed downlink reception from the first downlink reception and the second downlink reception.

2313. A downlink reception triggering method, applied to a network-side device
15 and comprising:

 receiving a first uplink signal from a terminal, wherein the first uplink signal is used to trigger a first downlink reception.

2414. The method according to claim 2313, wherein there is a time-domain association relationship between the first uplink signal and the first downlink reception;

20 wherein the method further comprises:

triggering, based on at least one of a type of the first uplink signal, a logical channel which the first uplink signal belongs to, and a service priority of the first uplink signal, the first downlink reception associated with the first uplink signal.

~~25. The method according to claim 24, wherein the association relationship is configured by a network-side device or prescribed by a protocol.~~

2615. The method according to claim 213, wherein the first uplink signal comprises first indication information, the first indication information comprises at least one of an identifier of the first downlink reception and a time-domain configuration parameter of the first downlink reception, the first indication information

30 is used to trigger M first downlink receptions among N downlink receptions, the N

downlink receptions are configured by the network-side device or prescribed by a protocol, and both N and M are integers greater than or equal to 1.

~~27~~¹⁶. The method according to claim ~~23~~¹³, further comprising:

transmitting a first message to the terminal, wherein the first message is used to
5 instruct the terminal to stop receiving at least one downlink reception in the first downlink reception.

~~28~~¹⁷. The method according to claim ~~23~~¹³, further comprising:

transmitting a second message to the terminal, wherein the second message is used
to instruct the terminal to switch a receiving cycle for the first downlink reception from
10 a first cycle to a second cycle; and the second cycle is different from the first cycle in
at least one of length, on duration length, and on duration start offset.

18. The method according to claim 15, wherein the time-domain configuration
parameter of the first downlink reception comprises at least one of the following:

time-domain start time of the first downlink reception;

15 time-domain monitoring method for the first downlink reception;

duration of the first downlink reception; and

first cycle parameter of the first downlink reception, wherein the first cycle
parameter comprises at least one of length of a first cycle, on duration length of the first
cycle, and start offset of the on duration of the first cycle.

20 ~~29. A terminal, comprising:~~

~~a transmitting module, configured to transmit a first uplink signal, wherein the first
uplink signal is used to trigger a first downlink reception.~~

~~30. The terminal according to claim 29, wherein there is a time-domain association
relationship between the first uplink signal and the first downlink reception.~~

25 ~~31. The terminal according to claim 30, wherein the association relationship is
configured by a network-side device or prescribed by a protocol.~~

~~32. The terminal according to claim 29, wherein the first uplink signal comprises
first indication information, the first indication information is used to trigger M first
downlink receptions among N downlink receptions, the N downlink receptions are~~

~~configured by a network-side device or prescribed by a protocol, and both N and M are integers greater than or equal to 1.~~

~~33. A network-side device, comprising:~~

~~a receiving module, configured to receive a first uplink signal from a terminal,
wherein the first uplink signal is used to trigger a first downlink reception.~~

~~34. The network-side device according to claim 33, wherein there is a time-domain association relationship between the first uplink signal and the first downlink reception.~~

~~35. The network-side device according to claim 34, wherein the association relationship is configured by the network-side device or prescribed by a protocol.~~

~~36. The network-side device according to claim 33, wherein the first uplink signal comprises first indication information, the first indication information is used to trigger M first downlink receptions among N downlink receptions, the N downlink receptions are configured by the network-side device or prescribed by a protocol, and both N and M are integers greater than or equal to 1.~~

3719. A terminal, comprising a memory, a processor, and an instruction or program stored in the memory and capable of running on the processor, wherein when the instruction or program is executed by the processor, the steps of the downlink reception triggering method according to any one of claims 1 to 22-12 are implemented.

3820. A network-side device, comprising a memory, a processor, and an instruction or program stored in the memory and capable of running on the processor, wherein when the instruction or program is executed by the processor, the steps of the downlink reception triggering method according to any one of claims 23-13 to 28-18 are implemented.

39. A readable storage medium, wherein the readable storage medium stores an instruction or program, and when the instruction or program is executed by a processor, the steps of the downlink reception triggering method according to any one of claims 1 to 22 or the steps of the downlink reception triggering method according to any one of claims 23 to 28 are implemented.

~~40. A chip, comprising a processor and a communications interface, wherein the communications interface is coupled to the processor, and the processor is configured~~

~~to run a program or instruction to implement the steps of the downlink reception triggering method according to any one of claims 1 to 22, or to implement the steps of the downlink reception triggering method according to any one of claims 23 to 28.~~

5 ~~41. A computer program product, stored in a readable storage medium, wherein the computer program product is executed by at least one processor to implement the steps of the downlink reception triggering method according to any one of claims 1 to 22 or the steps of the downlink reception triggering method according to any one of claims 23 to 28.~~

10 ~~42. A terminal, wherein the terminal is configured to perform the steps of the downlink reception triggering method according to any one of claims 1 to 22.~~

~~43. A network side device, wherein the network side device is configured to perform the steps of the downlink reception triggering method according to any one of claims 23 to 28.~~