CLAIMS

1. A method for transmitting an uplink signal, wherein the method comprises:

receiving, by a terminal device, uplink grant information transmitted by a network device, wherein the uplink grant information is used to instruct the terminal device to transmit a first uplink channel in a first sub-slot and to transmit a second uplink channel in a second sub-slot, wherein the first uplink channel comprises ~~first~~ uplink data and does not comprise a reference signal, the second uplink channel comprises a ~~first~~ reference signal and does not comprise uplink data, the first sub-slot and the second sub-slot are adjacent sub-slots on a first carrier, the first sub-slot is located previous to the second sub-slot, and the ~~first~~ reference signal comprised in the second uplink channel is used to demodulate the ~~first~~ uplink data comprised in the first uplink channel;

if the terminal device is to transmit at least two uplink channel in the first sub-slot and the total transmitting power of the at least two uplink channel exceeds a maximum transmitting power of the terminal device, determining, by the terminal device, whether to transmit the first uplink channel in the first sub-slot according to a priority of ~~an~~ uplink channel, wherein the priority of ~~the~~ uplink channel from low to high comprises:

an uplink channel without Hybrid Automatic Repeat request-Acknowledgement HARQ-ACK on a subframe;

an uplink channel without HARQ-ACK in a slot;

an uplink channel without HARQ-ACK without reference signal in a sub-slot;

an uplink channel without HARQ-ACK with reference signal in a sub-slot;

an uplink channel with HARQ-ACK on a subframe;

an uplink channel with HARQ-ACK in a slot;

an uplink channel with HARQ-ACK in a sub-slot;

wherein if the first uplink channel does not comprise the HARQ-ACK, determining, by the terminal device, whether to transmit the first uplink channel in the first sub-slot according to the priority of ~~the~~ uplink channel without HARQ-ACK with reference signal in ~~the~~ a sub-slot.

2. The method according to claim 1, wherein if the terminal device determines, according

to the priority of ~~the~~ uplink channel, to transmit the first uplink channel in the first sub-slot, the method further comprising:

if the first uplink channel does not comprise the HARQ-ACK, determining, by the terminal device, whether to transmit the second uplink channel in the second sub-slot according to the priority of ~~the~~ uplink channel without HARQ-ACK with reference signal in ~~the~~ a sub-slot; or

if the first uplink channel comprises the HARQ-ACK, determining, by the terminal device, whether to transmit the second uplink channel in the second sub-slot according to the priority of ~~the~~ uplink channel with HARQ-ACK in ~~the~~ a sub-slot.

3. The method according to claim 1, wherein if the terminal device determines, according to the priority of ~~the~~ uplink channel, not to transmit the first uplink channel in the first sub-slot, the method further comprising:

not transmitting, by the terminal device, the second uplink channel in the second sub-slot.

4. The method according to any one of claims 1 to 3, wherein in the case that whether the uplink channel comprises the HARQ-ACK and whether the uplink channel comprises the reference signal has same situation, a priority of ~~an~~ uplink channel transmitted on a second carrier is lower than a priority of ~~an~~ uplink channel transmitted on the first carrier,

wherein the first carrier is a carrier in a primary physical uplink control channel PUCCH group configured for the terminal device, and the second carrier is a carrier in a secondary PUCCH group configured for the terminal device.

5. The method according to any one of claims 1 to 3, wherein the terminal device has a capability of uplink channel concurrent transmission for different time lengths, and is configured to be able to perform the uplink channel concurrent transmission for different time lengths.

~~6. A method for transmitting an uplink signal, comprising:~~

~~receiving, by a terminal device, uplink grant information transmitted by a network device, wherein the uplink grant information is used to instruct the terminal device to transmit first uplink data in a first sub-slot, and transmit a first reference signal in a second sub-slot and not transmit the uplink data, wherein the first sub-slot and the second sub-slot are adjacent sub-slot, the first sub-slot is located previous to the second sub-slot, the first reference signal is used to demodulate the first uplink data, the second sub-slot is further used to transmit a first physical~~

~~uplink control channel PUCCH, and the first PUCCH comprises first uplink control information UCI;~~

~~transmitting, by the terminal device, one of the first reference signal and the first PUCCH in the second sub-slot according to information content comprised in a first Physical Uplink Shared Channel PUSCH used to transmit the first uplink data and/or the first UCI;~~

~~wherein if the first PUSCH does not comprise the UCI, or the first PUSCH comprises second UCI and the second UCI does not comprise Hybrid Automatic Repeat request-Acknowledgement HARQ-ACK information, transmitting, by the terminal device, the first PUCCH in the second sub-slot; or~~

~~if the first PUSCH comprises the second UCI and the second UCI comprises the HARQ-ACK information, transmitting, by the terminal device, the first reference signal in the second sub-slot.~~

~~7. The method according to claim 6, wherein the first UCI comprises the HARQ-ACK information, and the method further comprises:~~

~~transmitting, by the terminal device, the HARQ-ACK information in the first UCI in the first sub-slot.~~

~~8. The method according to claim 6, wherein the first UCI comprises the HARQ-ACK information,~~

~~the transmitting, by the terminal device, one of the first reference signal and the first PUCCH in the second sub-slot, comprises:~~

~~transmitting, by the terminal device, the first PUCCH in the second sub-slot~~

~~9. The method according to claim 6, wherein the first UCI does not comprise the HARQ-ACK information.~~

~~the transmitting, by the terminal device, one of the first reference signal and the first PUCCH in the second sub-slot, comprises:~~

~~transmitting, by the terminal device, the first reference signal in the second sub-slot if the first PUSCH comprises the second UCI and the second UCI comprises the HARQ-ACK information; and/or,~~

~~transmitting, by the terminal device, the first PUCCH in the second sub-slot if the first PUSCH does not comprise the UCI, or the first PUSCH comprises the second UCI and the~~

~~second UCI does not comprise the HARQ-ACK information.~~

~~10. The method according to any one of claims 6 to 9, wherein:~~

~~the terminal device does not have a capability of uplink channel concurrent transmission; or,~~

~~the terminal device has a capability of uplink channel concurrent transmission but is configured to not perform the uplink channel concurrent transmission.~~

~~11~~6. A terminal device, comprising:

a receiving unit, configured to receive uplink grant information transmitted by a network device, and the uplink grant information is used to instruct the terminal device to transmit a first uplink channel in a first sub-slot and to transmit a second uplink channel in a second sub-slot, wherein the first uplink channel comprises ~~first~~ uplink data and does not comprise a reference signal, the second uplink channel comprises a ~~first~~ reference signal and does not comprise uplink data, the first sub-slot and the second sub-slot are adjacent sub-slots on a first carrier, the first sub-slot is located previous to the second sub-slot, and the ~~first~~ reference signal comprised in the second uplink channel is used to demodulate the first uplink data comprised in the first uplink channel;

a determining unit, configured to, if the terminal device is to transmit at least two uplink channel in the first sub-slot and the total transmitting power of the at least two uplink channel exceeds a maximum transmitting power of the terminal device, determine, according to a priority of ~~an~~ uplink channel, whether to transmit the first uplink channel in the first sub-slot, wherein the priority of ~~the~~ uplink channel from low to high comprises:

an uplink channel without Hybrid Automatic Repeat request-Acknowledgement HARQ-ACK on a subframe;

an uplink channel without HARQ-ACK in a slot;

an uplink channel without HARQ-ACK without reference signal in a sub-slot;

an uplink channel without HARQ-ACK with reference signal in a sub-slot;

an uplink channel with HARQ-ACK on a subframe;

an uplink channel with HARQ-ACK in a slot;

an uplink channel with HARQ-ACK in a sub-slot.

wherein the determining unit is specifically configured to: if the first uplink channel does

not comprise the HARQ-ACK, determining, by the terminal device, whether to transmit the first uplink channel in the first sub-slot according to the priority of ~~the~~ uplink channel without HARQ-ACK with reference signal in ~~the~~ a sub-slot.

~~12~~7. The terminal device according to claim ~~11~~6, wherein if determining, according to a priority of ~~the~~ uplink channel, to transmit the first uplink channel in the first sub-slot, the determining unit is further configured to:

if the first uplink channel does not comprise the HARQ-ACK, determine whether to transmit the second uplink channel in the second sub-slot according to the priority of ~~the~~ uplink channel without HARQ-ACK with reference signal in ~~the~~ a sub-slot; or

if the first uplink channel comprises the HARQ-ACK, determining, by the terminal device, whether to transmit the second uplink channel in the second sub-slot according to the priority of ~~the~~ uplink channel with HARQ-ACK in ~~the~~ a sub-slot.

~~13~~8. The terminal device according to claim ~~11~~6, wherein if the terminal device determines, according to the priority of ~~the~~ uplink channel, not to transmit the first uplink channel in the first sub-slot, the determining unit is further configured to:

not transmit the second uplink channel in the second sub-slot.

~~14~~9. The terminal device according to any one of claims ~~11~~ 6 to ~~13~~8, wherein, in the case that whether the uplink channel comprises the HARQ-ACK and whether the uplink channel comprises the reference signal has same situation, a priority of ~~an~~ uplink channel transmitted on a second carrier is lower than a priority of ~~an~~ uplink channel transmitted on the first carrier,

wherein the first carrier is a carrier in a primary physical uplink control channel PUCCH group configured for the terminal device, and the second carrier is a carrier in a secondary PUCCH group configured for the terminal device.

~~15~~10. The terminal device according to any one of claims ~~11~~ 6 to ~~13~~8, wherein the terminal device has a capability of uplink channel concurrent transmission for different time lengths, and is configured to be able to perform the uplink channel concurrent transmission for different time lengths.

~~16. A terminal device for transmitting an uplink signal, comprising:~~

~~a receiving unit, configured to receive uplink grant information transmitted by a network device, and the uplink grant information is used to instruct the terminal device to transmit first~~

uplink data in a first sub-slot, and transmit a first reference signal and not transmit uplink data in a second sub-slot, wherein the first sub-slot and the second sub-slot are adjacent sub-slots, the first sub-slot is located previous to the second sub-slot, the first reference signal is used to demodulate the first uplink data, the second sub-slot is further configured to transmit a first physical uplink control channel PUCCH, and the first PUCCH comprises first uplink control information UCI;

a transmitting unit, configured to transmit, according to the first Physical Uplink Shared Channel PUSCH used to transmit the first uplink data and/or information content comprised in the first UCI, one of the first reference signal and the first PUCCH in the second sub-slot;

wherein the transmitting unit is specifically configured to: if the first PUSCH does not comprise a UCI or the first PUSCH comprises a second UCI, and the second UCI does not comprise Hybrid Automatic Repeat request-Acknowledgement HARQ-ACK information, transmit the first PUCCH in the second sub-slot; or if the first PUSCH comprises the second UCI and the second UCI comprises the HARQ-ACK information, transmit the first reference signal in the second sub-slot.

17. The terminal device according to claim 16, wherein the first UCI comprises the HARQ-ACK information, and the transmitting unit is further configured to:

transmit the HARQ-ACK information in the first UCI in the first sub-slot.

18. The terminal device according to claim 16, wherein the first UCI comprises the HARQ-ACK information, and the transmitting unit is further configured to:

transmit the first PUCCH in the second sub-slot.

19. The terminal device according to claim 16, wherein the first UCI does not comprise the HARQ-ACK information, and the transmitting unit is further configured to:

transmit the first reference signal in the second sub-slot if the first PUSCH comprises the second UCI and the second UCI comprises the HARQ-ACK information; and/or,

transmit the first PUCCH in the second sub-slot if the first PUSCH does not comprise the UCI, or the first PUSCH comprises the second UCI and the second UCI does not comprise the HARQ-ACK information.

20. The terminal device according to any one of claims 16 to 19, wherein:

the terminal device does not have a capability of uplink channel concurrent transmission;

~~or~~

~~the terminal device has a capability of uplink channel concurrent transmission but is configured to not perform the uplink channel concurrent transmission.~~

~~21~~11. A terminal device, wherein the terminal device comprises a processor for calling instructions stored in a memory to perform the method according to any one of claims 1 to 5.

~~22. A terminal device, wherein the terminal device comprises a processor for calling instructions stored in a memory to perform the method according to any one of claims 6 to 10.~~

~~23~~12. A computer readable storage medium having a computer program stored thereon, wherein when the computer program is executed by a computing device, implementing the method according to any one of claims 1 to 5.

~~24. A computer readable storage medium having a computer program stored thereon, wherein when the computer program is executed by a computing device, implementing the method according to any one of claims 6 to 10.~~

~~25~~13. A chip, wherein the chip comprises a processor that may call and run a computer program from a memory to enable a device on which the chip is mounted to perform the method for transmitting an uplink signal according to any one of claims 1 to 5.

~~26. A chip, wherein the chip comprises a processor that may call and run a computer program from a memory to enable a device on which the chip is mounted to perform the method for transmitting an uplink signal according to any one of claims 6 to 10.~~