CLAIMS

1. A method for power control, comprising:

determining (S101) a reference point corresponding to a closed-loop power control parameter of a physical uplink shared channel, PUSCH, transmission occasion i;

determining (S102) a power adjustment value corresponding to the closed-loop power control parameter of the PUSCH transmission occasion i;

determining (S103), according to the reference point and the power adjustment value, the closed-loop power control parameter of the PUSCH transmission occasion i;

determining (S104), according to the closed-loop power control parameter of the PUSCH transmission occasion i, a transmission power of uplink data to be transmitted within the PUSCH transmission occasion i,

wherein the method further comprises:

receiving higher layer signaling from a base station, wherein the higher layer signaling comprises a plurality of open-loop power control parameter sets;

selecting, according to selection information of an open-loop power control parameter, one open-loop power control parameter set from the plurality of open-loop power control parameters sets;

correspondingly, determining, according to the closed-loop power control parameter of the PUSCH transmission occasion i, the transmission power of uplink data to be transmitted within the PUSCH transmission occasion i comprises: determining, according to the closed-loop power control parameter of the PUSCH transmission occasion i and the open-loop power control parameter set, the transmission power of the uplink data to be transmitted within the PUSCH transmission occasion i; and

wherein when a cumulative power control mode is enabled, determining the reference point corresponding to the closed-loop power control parameter of the PUSCH transmission occasion i comprises:

determining a PUSCH transmission occasion (i-r) as the reference point according to following two conditions;

1) determining the PUSCH transmission occasion (i-r) according to one of following conditions:

i) an open-loop power control parameter set selected for the PUSCH transmission occasion (i-r) and an open-loop power control parameter set selected for the PUSCH transmission occasion i are the same;

ii) data transmitted within the PUSCH transmission occasion (i-r) and data transmitted within the PUSCH transmission occasion i belong to a same service type group or a same logical channel group;

iii) a RNTI for scrambling physical layer downlink control information for scheduling the PUSCH transmission occasion (i-r) and a RNTI for scrambling physical layer downlink control information for scheduling the PUSCH transmission occasion i belong to a same RNTI group; or

iv) first indication information included in physical layer downlink control information for scheduling the PUSCH transmission occasion (i-r) and first indication information included in physical layer downlink control information for scheduling the PUSCH transmission occasion i are the same;

2) r takes a minimum positive integer which satisfies the condition 1).

2. The method of claim 1, wherein the selection information of the open-loop power control parameter comprises one of: a logical channel group, a radio network temporary identifier, RNTI, group for scrambling physical layer downlink control information for scheduling data to be transmitted, or first indication information in physical layer downlink control information for scheduling data to be transmitted;

wherein one open-loop power control parameter set has a mapping with at least one piece of the selection information of the open-loop power control parameter.

3. The method of claim 1 or 2, wherein when a cumulative power control mode is enabled, determining the power adjustment value corresponding to the closed-loop power control parameter of the PUSCH transmission occasion i comprises:

determining a power adjustment value indicated by a TPC command included in

physical layer downlink control information of the PUSCH transmission occasion i as the power adjustment value corresponding to the closed-loop power control parameter of the PUSCH transmission occasion i.

4. A device for power control, comprising:

a first determination unit, configured to determine a reference point corresponding to a closed-loop power control parameter of a physical uplink shared channel, PUSCH, transmission occasion i;

a second determination unit, configured to determine a power adjustment value corresponding to the closed-loop power control parameter of the PUSCH transmission occasion i;

a third determination unit, configured to determine, according to the reference point and the power adjustment value, the closed-loop power control parameter of the PUSCH transmission occasion i;

a fourth determination unit, configured to determine, according to the closed-loop power control parameter of the PUSCH transmission occasion i, a transmission power of uplink data to be transmitted within the PUSCH transmission occasion i,

wherein the device further comprises:

a receiving unit, configured to receive higher layer signaling from a base station, wherein the higher layer signaling comprises a plurality of open-loop power control parameter sets;

a selection unit, configured to select, according to selection information of an open-loop power control parameter, one open-loop power control parameter set from the plurality of open-loop power control parameters sets;

correspondingly, the fourth determination unit is configured to determine, according to the closed-loop power control parameter of the PUSCH transmission occasion i and the open-loop power control parameter set, the transmission power of the uplink data to be transmitted within the PUSCH transmission occasion i; and

wherein when a cumulative power control mode is enabled, the first determination unit is configured to determine a PUSCH transmission occasion (i-r) as the reference point

according to following two conditions:

1) determining the PUSCH transmission occasion (i-r) according to one of following conditions:

i) an open-loop power control parameter set selected for the PUSCH transmission occasion (i-r) and an open-loop power control parameter set selected for the PUSCH transmission occasion i are the same;

ii) data transmitted within the PUSCH transmission occasion (i-r) and data transmitted within the PUSCH transmission occasion i belong to a same service type group or a same logical channel group;

iii) a RNTI for scrambling physical layer downlink control information for scheduling the PUSCH transmission occasion (i-r) and a RNTI for scrambling physical layer downlink control information for scheduling the PUSCH transmission occasion i belong to a same RNTI group; or

iv) first indication information included in physical layer downlink control information for scheduling the PUSCH transmission occasion (i-r) and first indication information included in physical layer downlink control information for scheduling the PUSCH transmission occasion i are the same;

2) r takes a minimum positive integer which satisfies the condition 1).

5. The device of claim 4, wherein the selection information of the open-loop power control parameter comprises one of: a logical channel group, a radio network temporary identifier, RNTI, group for scrambling physical layer downlink control information for scheduling data to be transmitted, or first indication information in physical layer downlink control information for scheduling data to be transmitted;

wherein one open-loop power control parameter set has a mapping with at least one piece of the selection information of the open-loop power control parameter.

6. The device of claim 4 or 5, wherein when a cumulative power control mode is enabled, the second determination unit is configured to:

determine a power adjustment value indicated by a TPC command included in physical

layer downlink control information of the PUSCH transmission occasion i as the power adjustment value corresponding to the closed-loop power control parameter of the PUSCH transmission occasion i.

7. A terminal (700), comprising:

a processor (701), and

a memory (703) storing computer instructions executable by the processor,

wherein the processor is configured to, when executing the computer instructions, perform the method for power control of any one of claims 1 to 3.

8. A computer-readable storage medium having stored therein computer instructions that, when executed by a processor, cause the processor to perform the method for power control of any one of claims 1 to 3.