

WHAT IS CLAIMED IS:

1. An sounding reference signal (SRS) transmission method, comprising:
receiving, by a terminal device, downlink control information (DCI), wherein the DCI comprises SRS trigger information;
determining, by the terminal device, a transmission latency K according to a first high layer signaling; and
transmitting, by the terminal device, an SRS on an SRS resource in an SRS resource set indicated by the SRS trigger information, according to the transmission latency K, at a Kth time-domain resource unit after receiving the DCI, wherein K is an integer greater than or equal to zero.
2. The method according to claim 1, wherein, the method further comprises:
determining the transmission latency K from SRS transmission latency indication information in the first high layer signaling.
3. The method according to claim 1, wherein, the method further comprises:
determining the transmission delay K according to a DCI format of the DCI.
4. The method according to claim 3, wherein, the determining the transmission latency K according to the DCI format of the DCI comprises:
determining the transmission latency M of the PUSCH from the PUSCH time-domain resource indication information in the DCI, if the DCI format of the DCI is used to schedule PUSCH transmission; and
determining the transmission latency K, based on the transmission latency M.
5. The method according to claim 1, wherein, the method further comprises:
determining the transmission latency K according to a subcarrier spacing used for SRS transmission triggered by the SRS trigger information., or a subcarrier spacing corresponding to a bandwidth part (BWP) receiving the DCI.
6. The method according to claim 1, wherein, the method further comprises:
determining the transmission latency K according to a subcarrier spacing corresponding to

a bandwidth part (BWP) receiving the DCI.

7. The method according to any one of claims 1 to 6, wherein, the transmitting the SRS on the SRS resource in the SRS resource set indicated by the SRS trigger information comprises:

transmitting an SRS signal on each of the SRS resources included in each of the SRS resource sets indicated by the SRS trigger information, at the Kth time-domain resource unit, wherein the time-domain resource unit is a slot.

8. The method according to any one of claims 1 to 7, wherein, the transmitting the SRS on the SRS resource in the SRS resource set indicated by the SRS trigger information comprises:

transmitting the SRS on the SRS resource in the SRS resource set indicated by the SRS trigger information in a slot where the DCI is located, wherein a value of K is zero, wherein the time-domain resource unit is a slot.

9. The method according to any one of claims 1 to 8, wherein, the method further comprises:

if the DCI further includes a transmission power control TPC command for SRS power control, performing power control on the SRS transmission by using the TPC command.

10. The method according to any one of claims 1 to 7, wherein, the transmitting the SRS on the SRS resource in the SRS resource set indicated by the SRS trigger information comprises:

transmitting the SRS on the SRS resource in a currently activated BWP, if the SRS trigger information has indicated the SRS resource sets on a plurality of BWPs, or has indicated the SRS resource set including the SRS resources on a plurality of BWPs.

11. The method according to any one of claims 1 to 10, wherein, the time-domain resource unit is a slot, or a sub-frame, or an orthogonal frequency division multiplexed (OFDM) symbol, or a micro slot, or PUSCH/PDSCH transmission duration.

12. A terminal device, comprising a communication unit and a processing unit, wherein, the communication unit is configured to: receive downlink control information (DCI), wherein the DCI comprises SRS trigger information;

the processing unit is configured to: determine a transmission latency K according to a first high layer signaling; and

the communication unit is further configured to: transmit an SRS on an SRS resource in an SRS resource set indicated by the SRS trigger information, according to the transmission latency K , at a K th time-domain resource unit after receiving the DCI, wherein K is an integer greater than or equal to zero.

13. The device according to claim 12, wherein, the processing unit is further configured to:
determine the transmission latency K according to a first high layer signaling; or
determine the transmission delay K according to a DCI format of the DCI,
wherein the determine the transmission delay K according to a DCI format of the DCI preferably comprises:

determining the transmission delay M of the PUSCH from the PUSCH time-domain resource indication information in the DCI, if the DCI format of the DCI is used to schedule PUSCH transmission; and

determining the transmission delay K , based on the transmission delay M .

14. The device according to claim 12, wherein, the processing unit is further configured to:
determine the transmission latency K according to a subcarrier spacing used for SRS transmission triggered by the SRS trigger information., or a subcarrier spacing corresponding to a BWP receiving the DCI.

15. The device according to claim 12, wherein, the processing unit is further configured to:
determine the transmission latency K according to a subcarrier spacing corresponding to a BWP receiving the DCI.