

WHAT IS CLAIMED IS:

1. A method for uplink transmission, applicable to User Equipment (UE) and comprising:

determining a time-domain overlapping channel group to be transmitted in a time unit, where the time-domain overlapping channel group comprises a group of Physical Uplink Control Channels (PUCCHs) and a group of Physical Uplink Shared Channels (PUSCHs), the group of PUCCHs and the group of PUSCHs comprise a PUCCH and PUSCH that overlap in time domain, the PUCCH comprised in the group of PUCCHs being configured to transmit an uplink Scheduling Request (SR), and the PUSCH comprised in the group of PUSCHs being configured to transmit uplink data; and

performing multiplexing transmission on Uplink Control Information (UCI) and uplink data to be transmitted by the time-domain overlapping channel group, wherein the UCI comprises the uplink SR, the PUCCH configured to transmit the uplink SR is overlapped in the time domain with a PUCCH configured to transmit a Hybrid Automatic Repeat reQuest (HARQ); and the PUCCH configured to transmit the HARQ is overlapped in the time domain with the PUSCH configured to transmit the uplink data,

wherein the performing multiplexing transmission on the UCI and uplink data to be transmitted by the time-domain overlapping channel group comprises,

removing the uplink SR from the UCI;

performing channel coding and modulation on the uplink data and other UCI than the uplink SR, and mapping the uplink data and the other UCI to a time-frequency resource for the PUSCH transmission; and

dropping transmission of the PUCCHs comprised in the time-domain overlapping channel group.

2. A method for uplink transmission, applicable to a base station and comprising:

determining a time-domain overlapping channel group to be transmitted in a time unit, wherein the time-domain overlapping channel group comprises a group of Physical Uplink Control Channels (PUCCHs) and a group of Physical Uplink Shared Channels (PUSCHs), the

group of PUCCHs and the group of PUSCHs comprise a PUCCH and PUSCH that overlap in time domain, the PUCCH comprised in the group of PUCCHs is configured to transmit an uplink Scheduling Request (SR), and the PUSCH comprised in the group of PUSCHs is configured to transmit uplink data; and

receiving multiplexing transmission of Uplink Control Information (UCI) and uplink data to be transmitted by the time-domain overlapping channel group, wherein the UCI comprises the uplink SR, the PUCCH configured to transmit the uplink SR is overlapped in the time domain with a PUCCH configured to transmit a Hybrid Automatic Repeat request (HARQ); and the PUCCH configured to transmit the HARQ is overlapped in the time domain with the PUSCH configured to transmit the uplink data,

wherein the receiving multiplexing transmission of the UCI and uplink data to be transmitted by the time-domain overlapping channel group comprises,

receiving a modulation symbol of the uplink data and other UCI than the uplink SR in the PUSCH transmitting the uplink data; and

cancelling reception of the uplink SR.

3. An apparatus for uplink transmission, comprising:

a processor; and

memory configured to store instructions executable by the processor,

wherein the processor is configured to:

determine a time-domain overlapping channel group to be transmitted in a time unit, where the time-domain overlapping channel group comprises a group of Physical Uplink Control Channels (PUCCHs) and a group of Physical Uplink Shared Channels (PUSCHs), the group of PUCCHs and the group of PUSCHs comprise a PUCCH and PUSCH that overlap in time domain, the PUCCH comprised in the group of PUCCHs being configured to transmit an uplink Scheduling Request (SR), and the PUSCH comprised in the group of PUSCHs being configured to transmit uplink data; and

perform multiplexing transmission on Uplink Control Information (UCI) and uplink data to be transmitted by the time-domain overlapping channel group, the UCI comprising the

uplink SR, the PUCCH configured to transmit the uplink SR is overlapped in the time domain with a PUCCH configured to transmit a Hybrid Automatic Repeat request (HARQ); and the PUCCH configured to transmit the HARQ is overlapped in the time domain with the PUSCH configured to transmit the uplink data,

wherein the processor is further configured to,

remove the uplink SR from the UCI;

perform channel coding and modulation on the uplink data and other UCI than the uplink SR, and map the uplink data and the other UCI to a time-frequency resource for the PUSCH transmission; and

drop transmission of the PUCCHs comprised in the time-domain overlapping channel group.

4. An apparatus for uplink transmission, comprising:

a processor; and

memory configured to store instructions executable by the processor,

wherein the processor is configured to:

determine a time-domain overlapping channel group to be transmitted in a time unit, where the time-domain overlapping channel group comprises a group of Physical Uplink Control Channels (PUCCHs) and a group of Physical Uplink Shared Channels (PUSCHs), the group of PUCCHs and the group of PUSCHs comprise a PUCCH and PUSCH that overlap in time domain, the PUCCH comprised in the group of PUCCHs being configured to transmit an uplink Scheduling Request (SR), and the PUSCH comprised in the group of PUSCHs being configured to transmit uplink data; and

receive multiplexing transmission of Uplink Control Information (UCI) and uplink data to be transmitted by the time-domain overlapping channel group, the UCI comprising the uplink SR, the PUCCH configured to transmit the uplink SR is overlapped in the time domain with a PUCCH configured to transmit a Hybrid Automatic Repeat request (HARQ); and the PUCCH configured to transmit the HARQ is overlapped in the time domain with the PUSCH configured to transmit the uplink data,

wherein the processor is further configured to,
receive a modulation symbol of the uplink data and other UCI than the uplink SR in the PUSCH transmitting the uplink data; and
cancel reception of the uplink SR.

5. A computer-readable storage medium, having stored computer instructions therein that, when executed by a processor, implement the method of claim 1 or the method of claim 2.