

CLAIMS

1. A method for wireless communication by a first device, comprising:
receiving (1202) via sidelink from a second device a first data packet in one or more receiving slots of a time division duplex, TDD, frame;
determining (1204) whether the first data packet is received incorrectly;
waiting (1206) until an end of the one or more receiving slots;
transmitting (1208) via sidelink to the second device a first negative acknowledgement signal, NACK, in at least one NACK feedback symbol in a slot after the end of the one or more receiving slots in response to determining that the first data packet is received incorrectly, characterized by
switching (1210) from a receiving mode to a transmitting mode during a first turnaround symbol in the slot in order to transmit the first NACK in the at least one NACK feedback symbol, wherein the first turnaround symbol comes one symbol before the at least one NACK feedback symbol; and
switching (1212) from the transmitting mode back to the receiving mode during a second turnaround symbol in the slot, wherein the second turnaround symbol comes one symbol after the at least one NACK feedback symbol.
2. The method of claim 1, further comprising:
switching by the first device to the transmitting mode to transmit a third packet in a subsequent slot following the slot after transmitting the first NACK in the NACK feedback symbol in the slot.
3. The method of claim 1, wherein the slot comprises a first slot that follows the one or more receiving slots, the NACK feedback symbol comprising a symbol thirteen of the slot, the first turnaround symbol comprising symbol twelve of the slot, and the second turnaround symbol comprising symbol fourteen of the slot.

4. The method of claim 1, wherein the slot comprises a second slot that is separated from the one or more receiving slots by at least one slot, the NACK feedback symbol comprises a second symbol of the slot, the first turnaround symbol comprises a first symbol of the slot, and the second turnaround symbol comprises a third symbol of the slot.

5. The method of claim 1, wherein the slot is at a configurable number of slots after the one or more receiving slots.

6. The method of claim 1, further comprising:

switching from the receiving mode to a transmitting mode during a first turnaround symbol of the NACK feedback symbol of the slot; and

switching from the transmitting mode back to the receiving mode during a second turnaround symbol of the NACK feedback symbol of the slot,

and wherein transmitting to the second device the first NACK in the NACK feedback symbol in the slot comprises transmitting the first NACK in a transmitting portion of the NACK feedback symbol of the slot during the transmitting mode.

7. The method of claim 6, wherein the NACK feedback symbol comprise a larger sub-carrier spacing than a sub-carrier spacing of other symbols in the one or more receiving slots and wherein the transmitting portion of the NACK feedback symbol is less than a symbol length of the NACK feedback symbol.

8. The method of claim 1, further comprising:

receiving, by the first device from a third device, one or more additional data packets in the one or more receiving slots;

determining whether the one or more additional data packets are received correctly; and

transmitting to the third device an additional NACK with the first NACK in the NACK feedback symbol in the slot in response to determining that the one or more additional data packets are received incorrectly.

9. The method of claim 8, wherein a number of the one or more receiving slots is configurable for receiving the first data packet and the one or more additional data packets.

10. The method of claim 1, wherein the NACK feedback symbol comprises a symbol after every N slots of the TDD frame and wherein the NACK feedback symbol is dedicated to transmitting the NACK.

11. The method of claim 1, wherein the NACK comprises one or more additional feedback bits transmitted in the NACK feedback symbol.

12. The method of claim 11, wherein the one or more additional feedback bits are transmitted by the first device in a unicast transmission.

13. The method of claim 11, wherein the one or more additional feedback bits comprise a reference signal that is transmitted by the first device on one of every N subcarriers of the NACK feedback symbol.

14. The method of claim 1, wherein the at least one NACK feedback symbol comprises at least one NACK feedback symbol for transmitting only NACK feedback.

15. An apparatus for wireless communication comprising means arranged to perform the steps of any one of claims 1 to 14.