

CLAIMS

What is claimed is:

1. A method for wireless communications, comprising:
 - identifying, by a first wireless device in a sidelink system, a first packet for transmission during a transmission time interval within the sidelink system;
 - determining that a second packet is reserved for transmission by a second wireless device during at least a portion of the transmission time interval within the sidelink system;
 - communicating with the second wireless device, in resources reserved for negative acknowledgment messaging, a reservation for the transmission time interval;
 - determining whether the first packet or the second packet has a higher relative priority; and
 - communicating in the sidelink system during the transmission time interval by either transmitting the first packet or receiving the second packet based at least in part on which of the first packet or second packet has the higher relative priority, including refraining from transmitting the first packet during the transmission time interval in response to a determination that the second packet comprises an initial transmission of a packet with a higher relative priority than the first packet and having received a reservation for the second packet in the resources reserved for negative acknowledgment messaging;
 - receiving the second packet within a pre-determined preemption time period that is at least partially within the transmission time interval; and
 - refraining from transmitting a negative acknowledgment message in the resources reserved for negative acknowledgment messaging.
2. The method of claim 1, wherein the determining that the second packet is reserved for transmission by the second wireless device further comprises:
 - receiving an indication that one or more resources of the transmission time interval are reserved via a first reservation for the second packet.
3. The method of claim 2, further comprising:

maintaining the one or more resources of the transmission time interval in a set of candidate resources based at least in part on the first packet having the higher relative priority, wherein the communicating comprises transmitting the first packet based at least in part on the first packet having the higher relative priority.

4. The method of claim 2, further comprising:

updating a set of candidate resources to exclude the one or more resources of the transmission time interval based at least in part on the second packet having the higher relative priority;

refraining from transmitting the first packet during the one or more resources of the transmission time interval based at least in part on the second packet having the higher relative priority; and

selecting one or more updated resources of the updated set of candidate resources to transmit the first packet based at least in part on the refraining.

5. The method of claim 1, further comprising:

determining that a reference signal received power measurement associated with a reservation for the second packet by the second wireless device is greater than a reference signal received power threshold, wherein the communicating comprises receiving the second packet based at least in part on the reference signal received power measurement being greater than the reference signal received power threshold; and

selecting one or more updated resources of an updated set of candidate resources to transmit the first packet based at least in part on the reference signal received power measurement being greater than the reference signal received power threshold.

6. The method of claim 1, wherein the first packet comprises a re-transmission of a packet with a higher relative priority than the second packet, the method further comprising:

selecting the transmission time interval to transmit the first packet based at least in part on the second packet having a lower relative priority than the first packet.

7. The method of claim 6, wherein the selecting further comprises:

determining that a resource reservation comprises one or more reserved transmissions such that any transmission time interval selection for transmission of the first

packet in the resource reservation overlaps with at least one reserved transmission of the one or more reserved transmissions; and

selecting the transmission time interval to transmit the first packet such that the selected transmission time interval at least partially overlaps in time with a reserved transmission of the second packet based at least in part on the determining that the resource reservation comprises the one or more reserved transmissions.

8. The method of claim 7, further comprising:

determining that a third packet is reserved for transmission by a third wireless device during a different transmission time interval than the selected transmission time interval, wherein the first packet additionally has a higher relative priority than the third packet; and

determining that a first signal strength corresponding to a reservation for transmission of the second packet is less than a second signal strength corresponding to a reservation for transmission of the third packet, wherein the transmission time interval is further selected such that the selected transmission time interval is non-overlapping with the different transmission time interval based at least in part on the determining that the first signal strength is less than the second signal strength.

9. The method of claim 1, wherein the second packet comprises a re-transmission of a packet with a higher relative priority than the first packet, the method further comprising:

selecting the transmission time interval to transmit the first packet;

receiving control information comprising a reservation for transmission of the second packet during at least the portion of the selected transmission time interval; and

refraining from transmitting the first packet during the selected transmission time interval based at least in part on the reservation for transmission of the second packet and the determining whether the first packet or the second packet has the higher relative priority.

10. The method of claim 1, ~~further comprising:~~

~~wherein communicating, in resources reserved for negative acknowledgment messaging, a~~ the reservation for the transmission time interval ~~by either at least one of~~ transmitting a reservation for the first packet or receiving a reservation for the second packet,

and wherein either ~~determining at least one of identifying~~ the first packet for transmission during the transmission time interval or determining that the second packet is reserved for transmission during at least the portion of the transmission time interval is based at least in part on the reservation as communicated.

11. The method of claim 10, wherein:

the first packet comprises an initial transmission of a packet with a higher relative priority than the second packet;

the communicating the reservation for the transmission time interval comprises transmitting the reservation for the first packet in the resources reserved for negative acknowledgment messaging; and

the communicating during the transmission time interval comprises transmitting the first packet based at least in part on the reservation for the transmission time interval.

~~12. The method of claim 10, wherein:~~

~~the second packet comprises an initial transmission of a packet with a higher relative priority than the first packet; and~~

~~the communicating the reservation for the transmission time interval comprises receiving the reservation for the second packet in the resources reserved for negative acknowledgment messaging, the method further comprising:~~

~~refraining from transmitting the first packet during the transmission time interval based at least in part on the reservation for the transmission time interval, wherein the communicating during the transmission time interval comprises receiving the second packet based at least in part on the reservation for the transmission time interval.~~

~~13. The method of claim 12, wherein the second packet is received within a pre-determined preemption time period.~~

~~14. The method of claim 13, further comprising:~~

~~selecting the transmission time interval to transmit the first packet such that the selected transmission time interval is at least partially within the pre-determined preemption time period;~~

~~refraining from transmitting a negative acknowledgment message in the resources reserved for negative acknowledgment messaging based at least in part on the selected transmission time interval; and~~

~~monitoring the resources reserved for negative acknowledgment messaging for the reservation for the transmission time interval based at least in part on the refraining from transmitting the negative acknowledgment message.~~

~~15~~12. The method of claim 10, wherein the reservation for the transmission time interval comprises a dedicated sequence.

~~16~~13. The method of claim 1, wherein:

the determining whether the first packet or the second packet has the higher relative priority comprises determining that the first packet has a higher relative priority than the second packet; and

the communicating comprises transmitting the first packet during the transmission time interval.

~~17. The method of claim 1, wherein:~~

~~the determining whether the first packet or the second packet has the higher relative priority comprises determining that the second packet has a higher relative priority than the first packet; and~~

~~the communicating comprises receiving the second packet during the transmission time interval.~~

~~18~~14. The method of claim 1, wherein the transmission time interval comprises a plurality of slots.

~~19~~15. The method of claim 1, further comprising:

modifying a maximum re-transmission limit for a packet in the sidelink system based at least in part on a relative priority of the packet.

~~20~~16. An apparatus for wireless communications, comprising:

means for identifying, by a first wireless device in a sidelink system, a first packet for transmission during a transmission time interval within the sidelink system;

means for determining that a second packet is reserved for transmission by a second wireless device during at least a portion of the transmission time interval within the sidelink system;

means for communicating with the second wireless device, in resources reserved for negative acknowledgment messaging, a reservation for the transmission time interval;

means for determining whether the first packet or the second packet has a higher relative priority; and

means for communicating in the sidelink system during the transmission time interval by either transmitting the first packet or receiving the second packet based at least in part on which of the first packet or the second packet has the higher relative priority,

including

means for refraining from transmitting the first packet during the transmission time interval in response to a determination that the second packet comprises an initial transmission of a packet with a higher relative priority than the first packet and having received a reservation for the second packet in the resources reserved for negative acknowledgment messaging;

means for receiving the second packet within a pre-determined preemption time period that is at least partially within the transmission time interval;
and

means for refraining from transmitting a negative acknowledgment message in the resources reserved for negative acknowledgment messaging.

2417. The apparatus of claim 2016, wherein the means for determining that the second packet is reserved for transmission by the second wireless device further comprise:

means for receiving an indication that one or more resources of the transmission time interval are reserved via a first reservation for the second packet.

2218. The apparatus of claim 2417, further comprising:

means for maintaining the one or more resources of the transmission time interval in a set of candidate resources based at least in part on the first packet having the higher relative priority, wherein the means for communicating comprises means for

transmitting the first packet based at least in part on the first packet having the higher relative priority.

2319. The apparatus of claim 2417, further comprising:

means for updating a set of candidate resources to exclude the one or more resources of the transmission time interval based at least in part on the second packet having the higher relative priority;

means for refraining from transmitting the first packet during the one or more resources of the transmission time interval based at least in part on the second packet having the higher relative priority; and

means for selecting one or more updated resources of the updated set of candidate resources to transmit the first packet based at least in part on the refraining.

2420. The apparatus of claim 1620, further comprising:

means for determining that a reference signal received power measurement associated with a reservation for the second packet by the second wireless device is greater than a reference signal received power threshold, wherein the means for communicating comprises means for receiving the second packet based at least in part on the reference signal received power measurement being greater than the reference signal received power threshold; and

means for selecting one or more updated resources of an updated set of candidate resources to transmit the first packet based at least in part on the reference signal received power measurement being greater than the reference signal received power threshold.

2521. The apparatus of claim 2016, wherein the first packet comprises a re-transmission of a packet with a higher relative priority than the second packet, and the apparatus further comprises:

means for selecting the transmission time interval to transmit the first packet based at least in part on the second packet having a lower relative priority than the first packet.

2622. The apparatus of claim 2521, wherein the means for selecting the transmission time interval further comprise:

means for determining that a resource reservation comprises one or more reserved transmissions such that any transmission time interval selection for transmission of the first packet in the resource reservation overlaps with at least one reserved transmission of the one or more reserved transmissions; and

means for selecting the transmission time interval to transmit the first packet such that the selected transmission time interval at least partially overlaps in time with a reserved transmission of the second packet based at least in part on the determining that the resource reservation comprises the one or more reserved transmissions.

2723. The apparatus of claim 2622, further comprising:

means for determining that a third packet is reserved for transmission by a third wireless device during a different transmission time interval than the selected transmission time interval, wherein the first packet additionally has a higher relative priority than the third packet; and

means for determining that a first signal strength corresponding to a reservation for transmission of the second packet is less than a second signal strength corresponding to a reservation for transmission of the third packet, wherein the transmission time interval is further selected such that the selected transmission time interval is non-overlapping with the different transmission time interval based at least in part on the determining that the first signal strength is less than the second signal strength.

2824. The apparatus of claim 2016, further comprising:

~~means for communicating, in resources reserved for negative acknowledgment messaging, a~~ the reservation for the transmission time interval by either at least one of transmitting a reservation for the first packet or receiving a reservation for the second packet, and wherein either determining at least one of identifying the first packet for transmission during the transmission time interval or determining that the second packet is reserved for transmission during at least the portion of the transmission time interval is based at least in part on the reservation as communicated.

2925. An apparatus for wireless communications, comprising:

a processor;

memory in electronic communication with the processor; and

instructions stored in the memory and executable by the processor to cause the apparatus to:

identify, by a first wireless device in a sidelink system, a first packet for transmission during a transmission time interval within the sidelink system;

determine that a second packet is reserved for transmission by a second wireless device during at least a portion of the transmission time interval within the sidelink system;

communicate with the second wireless device in resources reserved for negative acknowledgment messaging, a reservation for the transmission time interval;

determine whether the first packet or the second packet has a higher relative priority; and

communicate in the sidelink system during the transmission time interval by either transmitting the first packet or receiving the second packet based at least in part on which of the first packet or second packet has the higher relative priority, and to:

refrain from transmission of the first packet during the transmission time interval in response to a determination that the second packet comprises an initial transmission of a packet with a higher relative priority than the first packet and having received a reservation for the second packet in the resources reserved for negative acknowledgment messaging;

receive the second packet within a pre-determined preemption time period that is at least partially within the transmission time interval; and

refrain from transmission of a negative acknowledgment message in the resources reserved for negative acknowledgment messaging.

3026. A non-transitory computer-readable medium storing code for wireless communications, the code comprising instructions executable by a processor to:

identify, by a first wireless device in a sidelink system, a first packet for transmission during a transmission time interval within the sidelink system;

determine that a second packet is reserved for transmission by a second wireless device during at least a portion of the transmission time interval within the sidelink system;

communicate with the second wireless device in resources reserved for negative acknowledgment messaging, a reservation for the transmission time interval;

determine whether the first packet or the second packet has a higher relative priority; and

communicate in the sidelink system during the transmission time interval by either transmitting the first packet or receiving the second packet based at least in part on which of the first packet or the second packet has the higher relative priority, and to

refrain from transmission of the first packet during the transmission time interval in response to a determination that the second packet comprises an initial transmission of a packet with a higher relative priority than the first packet and having received a reservation for the second packet in the resources reserved for negative acknowledgment messaging;

receive the second packet within a pre-determined preemption time period that is at least partially within the transmission time interval; and

refrain from transmission of a negative acknowledgment message in the resources reserved for negative acknowledgment messaging.