

CLAIMS

What is claimed is:

1. A method for wireless communications, comprising:
determining, by a first wireless device in a vehicle-to-everything system, a data packet for transmission to at least one other wireless device in the vehicle-to-everything system;

determining a set of data packet segments of the data packet, each data packet segment corresponding to a single transmission time interval for transmission to the at least one other wireless device; and

transmitting a first data packet segment of the set of data packet segments via a first transmission time interval, the first data packet segment comprising information indicating respective time and frequency resources for each of a remainder of data packet segments of the set of data packet segments and indicating time and frequency resources for retransmission of the first data packet segment; and

transmitting a second data packet segment of the set of data packet segments via a second transmission time interval, the second data packet segment indicating time and frequency resources for retransmission of the second data packet segment~~transmitting the set of data packet segments to at least one other wireless device via each transmission time interval corresponding to the set of data packet segments, wherein a data packet segment transmission indicates resources for at least one of a retransmission of the data packet segment transmission or subsequent data packet segment transmissions.~~

2. The method of claim 1, further comprising:
determining that a size of the data packet exceeds a threshold size; and
determining the set of data packet segments based at least in part on determining that the size of the data packet exceeds the threshold size.

3. The method of claim 1, further comprising:
segmenting the data packet into the set of data packet segments, wherein each of the set of data packet segments corresponds to a respective code block; and
encoding the set of data packet segments after segmentation.

4. The method of claim 1, wherein determining the set of data packet segments comprises:

segmenting a radio link control (RLC) protocol data unit (PDU) into a set of media access control (MAC) PDUs.

5. The method of claim 4, wherein one or more MAC PDUs subsequent to an initial MAC PDU of the set of MAC PDUs include respective indications of reserved resources for corresponding one or more MAC PDUs.

6. The method of claim 1, wherein determining the set of data packet segments comprises:

segmenting the data packet into a set of radio link control (RLC) protocol data units (PDUs); and

segmenting each of the set of RLC PDUs into respective sets of media access control (MAC) PDUs.

7. The method of claim 1, further comprising:

encoding the data packet for transmission to the at least one other wireless device;

identifying a number of coded bits for the single transmission time interval; and

segmenting the encoded data packet into the set of data packet segments based at least in part on the number of coded bits.

8. The method of claim 1, further comprising:

encoding a media access control (MAC) protocol data unit (PDU) corresponding to the data packet into a buffer;

mapping encoded bits of the encoded MAC PDU from the buffer to resources associated with a respective transmission time interval; and

transmitting each data packet segment based at least in part on the mapping.

9. The method of claim 1, wherein each data packet segment transmission indicates resources for retransmission of each respective data packet segment.

10. 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:

determine, by a first wireless device in a vehicle-to-everything system, a data packet for transmission to at least one other wireless device in the vehicle-to-everything system;

determine a set of data packet segments of the data packet, each data packet segment corresponding to a single transmission time interval for transmission to the at least one other wireless device; and

transmit a first data packet segment of the set of data packet segments via a first transmission time interval, the first data packet segment comprising information indicating respective time and frequency resources for each of a remainder of data packet segments of the set of data packet segments and indicating time and frequency resources for retransmission of the first data packet segment; and

transmit a second data packet segment of the set of data packet segments via a second transmission time interval, the second data packet segment indicating time and frequency resources for retransmission of the second data packet segment
~~transmit the set of data packet segments to the at least one other wireless device via each transmission time interval corresponding to the set of data packet segments, wherein a data packet segment transmission indicates resources for at least one of a retransmission of the data packet segment transmission or subsequent data packet segment transmissions.~~

11. The apparatus of claim 10, wherein the instructions are further executable by the processor to cause the apparatus to:

determine that a size of the data packet exceeds a threshold size; and

determine the set of data packet segments based at least in part on determining that the size of the data packet exceeds the threshold size.

12. The apparatus of claim 10, wherein the instructions are further executable by the processor to cause the apparatus to:

segment the data packet into the set of data packet segments, wherein each of the set of data packet segments corresponds to a respective code block; and

encode the set of data packet segments after segmentation.

13. The apparatus of claim 10, wherein the instructions to determine the set of data packet segments are executable by the processor to cause the apparatus to:

segment a radio link control (RLC) protocol data unit (PDU) into a set of media access control (MAC) PDUs.

14. The apparatus of claim 13, wherein one or more MAC PDUs subsequent to an initial MAC PDU of the set of MAC PDUs include respective indications of reserved resources for corresponding one or more MAC PDUs.

15. The apparatus of claim 10, wherein the instructions to determine the set of data packet segments are executable by the processor to cause the apparatus to:

segment the data packet into a set of radio link control (RLC) protocol data units (PDUs); and

segment each of the set of RLC PDUs into respective sets of media access control (MAC) PDUs.

16. The apparatus of claim 10, wherein the instructions are further executable by the processor to cause the apparatus to:

encode the data packet for transmission to the at least one other wireless device;

identify a number of coded bits for the single transmission time interval; and

segment the encoded data packet into the set of data packet segments based at least in part on the number of coded bits.

17. An apparatus for wireless communications, comprising:

means for determining, by a first wireless device in a vehicle-to-everything system, a data packet for transmission to at least one other wireless device in the vehicle-to-everything system;

means for determining a set of data packet segments of the data packet, each data packet segment corresponding to a single transmission time interval for transmission to the at least one other wireless device; and

means for transmitting a first data packet segment of the set of data packet segments via a first transmission time interval, the first data packet segment comprising

information indicating respective time and frequency resources for each of a remainder of data packet segments of the set of data packet segments and indicating time and frequency resources for retransmission of the first data packet segment; and

means for transmitting a second data packet segment of the set of data packet segments via a second transmission time interval, the second data packet segment indicating time and frequency resources for retransmission of the second data packet segment~~means for transmitting the set of data packet segments to the at least one other wireless device via each transmission time interval corresponding to the set of data packet segments, wherein a data packet segment transmission indicates resources for at least one of a retransmission of the data packet segment transmission or subsequent data packet segment transmissions.~~

18. The apparatus of claim 17, further comprising:

means for determining that a size of the data packet exceeds a threshold size;

and

means for determining the set of data packet segments based at least in part on determining that the size of the data packet exceeds the threshold size.

19. The apparatus of claim 17, further comprising:

means for segmenting the data packet into the set of data packet segments,

wherein each of the set of data packet segments corresponds to a respective code block; and

means for encoding the set of data packet segments after segmentation.

20. The apparatus of claim 17, wherein the means for determining the set of data packet segments comprises:

means for segmenting a radio link control (RLC) protocol data unit (PDU) into a set of media access control (MAC) PDUs.

21. The apparatus of claim 20, wherein one or more MAC PDUs

subsequent to an initial MAC PDU of the set of MAC PDUs include respective indications of reserved resources for corresponding one or more MAC PDUs.

22. The apparatus of claim 17, wherein the means for determining the set of data packet segments comprises:

means for segmenting the data packet into a set of radio link control (RLC) protocol data units (PDUs); and

means for segmenting each of the set of RLC PDUs into respective sets of media access control (MAC) PDUs.

23. The apparatus of claim 17, further comprising:

means for encoding the data packet for transmission to the at least one other wireless device;

means for identifying a number of coded bits for the single transmission time interval; and

means for segmenting the encoded data packet into the set of data packet segments based at least in part on the number of coded bits.

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

determine, by a first wireless device in a vehicle-to-everything system, a data packet for transmission to at least one other wireless device in the vehicle-to-everything system;

determine a set of data packet segments of the data packet, each data packet segment corresponding to a single transmission time interval for transmission to the at least one other wireless device; and

transmit a first data packet segment of the set of data packet segments via a first transmission time interval, the first data packet segment comprising information indicating respective time and frequency resources for each of a remainder of data packet segments of the set of data packet segments and indicating time and frequency resources for retransmission of the first data packet segment; and

transmit a second data packet segment of the set of data packet segments via a second transmission time interval, the second data packet segment indicating time and frequency resources for retransmission of the second data packet segment~~transmit the set of data packet segments to the at least one other wireless device via each transmission time interval corresponding to the set of data packet segments, wherein a data packet segment transmission indicates resources for at least one of a retransmission of the data packet segment transmission or subsequent data packet segment transmissions.~~

25. The non-transitory computer-readable medium of claim 24, wherein the instructions are further executable to:

determine that a size of the data packet exceeds a threshold size; and
determine the set of data packet segments based at least in part on determining
that the size of the data packet exceeds the threshold size.

26. The non-transitory computer-readable medium of claim 24, wherein
the instructions are further executable to:

segment the data packet into the set of data packet segments, wherein each of
the set of data packet segments corresponds to a respective code block; and
encode the set of data packet segments after segmentation.

27. The non-transitory computer-readable medium of claim 24, wherein
the instructions to determine the set of data packet segments are executable to:

segment a radio link control (RLC) protocol data unit (PDU) into a set of
media access control (MAC) PDUs.

28. The non-transitory computer-readable medium of claim 27, wherein
one or more MAC PDUs subsequent to an initial MAC PDU of the set of MAC PDUs
include respective indications of reserved resources for corresponding one or more MAC
PDUs.

29. The non-transitory computer-readable medium of claim 24, wherein
the instructions to determine the set of data packet segments are executable to:

segment the data packet into a set of radio link control (RLC) protocol data
units (PDUs); and

segment each of the set of RLC PDUs into respective sets of media access
control (MAC) PDUs.

30. The non-transitory computer-readable medium of claim 24, wherein
the instructions are further executable to:

encode the data packet for transmission to the at least one other wireless
device;

identify a number of coded bits for the single transmission time interval; and

segment the encoded data packet into the set of data packet segments based at
least in part on the number of coded bits.