

What is claimed is:

1. A method for use in a wireless transmit/receive unit (WTRU), the method comprising:

selecting, from a set of percentage value thresholds configured in the WTRU, a percentage value threshold based on a quality of service (QoS) parameter associated with data to be transmitted, wherein the percentage value threshold indicates an available resource percentage that corresponds to the QoS parameter of the data to be transmitted;

processing range information for the data to be transmitted;

transmitting a sidelink control information (SCI) transmission including an index value, wherein the index value is selected from a plurality of indices, and wherein the index value is associated with a physical distance, wherein the index value is based on the range information, and further wherein the range information is associated with one or more logical channels multiplexed into a protocol data unit (PDU) that includes at least a portion of the data to be transmitted associated with the SCI transmission; and

on a condition that a number of available resources determined based on the QoS parameter of the data to be transmitted is above or equal to a threshold determined based on the percentage value threshold selected from the set of the percentage value thresholds, transmitting, using at least one of the available resources, the PDU to another WTRU.

2. The method of claim 1, further comprising:

on a condition that the number of available resources determined based on the QoS parameter of the data to be transmitted is below the threshold determined based on the percentage value threshold selected from the set of percentage value thresholds, increasing a reference signal received power (RSRP) threshold for a resource selection.

3. The method of claim 1, further comprising:

receiving configuration information that includes information indicating the set of percentage value thresholds.

4. The method of claim 1, wherein the range information is associated with one or more quality of service (QoS) flows mapped to the one or more logical channels.

5. The method of claim 1, wherein the range information is associated with at least one of a sidelink radio bearer or a quality of service (QoS) flow that is mapped to at least one of the one or more logical channels multiplexed into the PDU.

6. A wireless transmit/receive unit (WTRU) comprising:

a processor configured with range information for data to be transmitted; and

a transceiver;

the processor and the transceiver configured to:

select, from a set of percentage value thresholds configured by the processor, a percentage value threshold based on quality of service (QoS) parameter associated with data to be transmitted, wherein the percentage value threshold indicates an available resource percentage that corresponds to the QoS parameter of the data to be transmitted;

transmit a sidelink control information (SCI) transmission including an index value, wherein the index value is selected from a plurality of indices, and wherein the index value is associated with a physical distance, wherein the index value is based on the range information, and further wherein the range information is associated with one or more logical channels multiplexed into a protocol data unit (PDU) that includes at least a portion of the data to be transmitted associated with the SCI transmission; and

transmit, on a condition that a number of available resources determined based on the QoS parameter of the data to be transmitted is above or equal to a threshold determined based on the percentage value threshold selected from the set of the percentage value thresholds, the PDU to another WTRU using at least one of the available resources.

7. The WTRU of claim 6, wherein the processor and the transceiver are further configured to increase, on a condition that the number of the available resources determined based on the QoS parameter of the data to be transmitted is below the threshold determined based on the percentage value threshold selected from the set of percentage value thresholds, a reference signal received power (RSRP) threshold for a resource selection.

8. The WTRU of claim 6, wherein the processor and the transceiver are configured to receive configuration information that includes information indicating the set of percentage value thresholds.

9. The WTRU of claim 6, wherein the range information is associated with one or more quality of service (QoS) flows mapped to the one or more logical channels.

10. The WTRU of claim 1, wherein the range information is associated with at least one of a sidelink radio bearer or a quality of service (QoS) flow that is mapped to at least one of the one or more logical channels multiplexed into the PDU.