CLAIMS

What is Claimed:

1. A method implemented by a wireless transmit/receive unit (WTRU), the method comprising:

receiving configuration information for a first search space and a second search space, wherein the configuration information includes a monitoring periodicity of the first search space and a monitoring periodicity of the second search space;

monitoring the first search space with the monitoring periodicity of the first search space;

receiving a first downlink control information (DCI) in a first physical downlink control channel (PDCCH) transmission in a slot of the first search space, wherein the first DCI comprises an indication of an activation of the second search space;

monitoring, in response to the indication of the activation of the second search space, the second search space using the monitoring periodicity of the second search space; and

receiving a second DCI in a second PDCCH transmission in a slot of the second search space.

2. The method of claim 1, further comprising receiving a message in a physical downlink shared channel (PDSCH) transmission based on the first DCI in the first PDCCH transmission or the second DCI in the second PDCCH transmission.

3. The method of claim 1, wherein the monitoring periodicity of the first search space or the second search space indicates a time slot repetition.

4. The method of claim 1, wherein the configuration information is received from a gNB.

5. The method of claim 1, wherein the configuration information further includes a monitoring offset for the first search space and a monitoring offset for the second search space.

6. The method of claim 1, wherein the configuration information further includes a monitoring pattern that includes a symbol pattern for the first search space and a monitoring pattern that includes a symbol pattern for the second search space.

7. The method of claim 1 further comprising sending an indication of a capability to support search space switching.

8. The method of claim 1, wherein the monitoring periodicity of the first search space is larger than the monitoring periodicity of the second search space.

9. The method of claim 1 further comprising:

monitoring the first search space with the monitoring periodicity of the first search space based on a second search space deactivation determination;

receiving a third control information, wherein the third control information includes an updated monitoring periodicity of the first search space; and

monitoring the first search space with the updated monitoring periodicity.

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

a receiver; and

processor; wherein

the receiver is configured to receive configuration information for a first search space and a second search space, wherein the configuration information includes a monitoring periodicity of the first search space and a monitoring periodicity of the second search space;

the processor is configured to monitor the first search space with the monitoring periodicity of the first search space;

the receiver is further configured to receive a first downlink control information (DCI) in a first physical downlink control channel (PDCCH) transmission in a slot of the first search space, wherein the first DCI comprises an indication of an activation of the second search space;

the processor is further configured to, in response to the indication of the activation of the second search space, monitor the second search space using the monitoring periodicity of the second search space; and

the receiver is further configured to receive a second DCI in a second PDCCH transmission in a slot of the second search space.

11. The WTRU of claim 10, wherein the receiver is further configured to receive a message in a physical downlink shared channel (PDSCH) transmission based on the first DCI in the first PDCCH transmission or the second DCI in the second PDCCH transmission.

12. The WTRU of claim 10, wherein the monitoring periodicity of the first search space or the second search space indicates a time slot repetition.

13. The WTRU of claim 10, wherein the configuration information is received from a gNB.

14. The WTRU of claim 10, wherein the configuration information further includes a monitoring offset for the first search space and a monitoring offset for the second search space.

15. The WTRU of claim 10, wherein the configuration information further includes a monitoring pattern that includes a symbol pattern for the first search space and a monitoring pattern that includes a symbol pattern for the second search space.

16. The WTRU of claim 10 further comprising a transmitter, wherein the transmitter is configured to transmit an indication of a capability to support search space switching.

17. The WTRU of claim 10, wherein the monitoring periodicity of the first search space is larger than the monitoring periodicity of the second search space.

18. The WTRU of claim 10, wherein:

the processor is further configured to: monitor in the first search space with the monitoring periodicity of the first search space based on a second search space deactivation determination;

the receiver is further configured to receive a third DCI, wherein the third DCI includes an updated monitoring periodicity of the first search space; and

the processor is further configured to monitor the first search space with the updated monitoring periodicity.