

CLAIMS

WHAT IS CLAIMED IS:

1. A method of wireless communication at a User Equipment (UE), comprising:
 - monitoring for a wake-up signal (WUS) from a base station on resources associated with multiple control resource sets (CORESETs), including monitoring for the WUS while performing a discontinuous reception (DRX) cycle, wherein the monitoring includes monitoring for a first WUS in a first CORESET and monitoring for a second WUS in a second CORESET;
 - receiving, from the base station, the WUS in at least one of the multiple CORESETs during a wake-up signal occasion prior to an on-duration of the DRX cycle; and
 - transmitting a sounding reference signal (SRS) based on the WUS received in the at least one of the multiple CORESETs, wherein the WUS causes the UE to enter an awake state during the on-duration of the DRX cycle, and the SRS is transmitted during the on-duration of the DRX cycle and in an active bandwidth part (BWP).
2. The method of claim 1, further comprising:
 - receiving a Channel State Information – Reference Signal (CSI-RS) based on the WUS during the on-duration of the DRX cycle; and
 - sending a CSI report to the base station based on the WUS, wherein the UE receives data based on the CSI report.
3. The method of claim 2, wherein the WUS is received on a first BWP and the CSI-RS is received on a second BWP, and wherein the WUS comprises an uplink grant triggering a BWP configuration switch and reception of the CSI-RS is spaced from the WUS by a CSI offset.
4. The method of claim 2, wherein the WUS is received on a first BWP and the CSI-RS or the SRS is respectively received or transmitted on a second BWP, the WUS comprises a downlink assignment without corresponding downlink data, and the WUS triggers a BWP configuration switch.

5. The method of claim 4, further comprising:
receiving a CSI-Reference Signal (CSI-RS) trigger for reception of the CSI-RS within a same slot as the CSI-RS trigger, wherein the CSI-RS trigger is received on the second BWP and is spaced from the WUS by a slot offset for BWP configuration transition.
6. The method of claim 4, further comprising:
receiving a CSI-Reference Signal (CSI-RS) trigger for reception of the CSI-RS on the second BWP, wherein the CSI-RS trigger is spaced from the WUS by a slot offset sufficient for BWP configuration transition, and wherein the reception of the CSI-RS is spaced from the CSI-RS trigger by at least a CSI trigger offset.
7. The method of claim 1, wherein the WUS is received on a first BWP and the SRS is transmitted on a second BWP.
8. The method of claim 1, wherein the UE transmits the SRS to the base station based on the WUS.
9. The method of claim 1, wherein the WUS is received during the wake-up signal occasion prior to the on-duration of the DRX cycle, wherein the WUS is comprised in at least one of a control channel or another reference signal.
10. The method of claim 9, wherein the WUS is received on a first BWP during the wake-up signal occasion prior to the on-duration of the DRX cycle, and the SRS is transmitted on a second BWP during the on-duration of the DRX cycle.
11. The method of claim 10, wherein the first BWP has a preconfigured relationship to the second BWP.
12. An apparatus for wireless communication at a User Equipment (UE), comprising:
at least one memory; and

at least one processor coupled to the at least one memory and configured to cause the UE to:

monitor for a wake-up signal (WUS) from a base station on resources associated with multiple control resource sets (CORESETs), including to monitor for the WUS while performing a discontinuous reception (DRX) cycle, wherein to monitor for the WUS includes monitor for a first WUS in a first CORESET and monitor for a second WUS in a second CORESET;

receive, from the base station, the WUS in at least one of the multiple CORESETs during a wake-up signal occasion prior to an on-duration of the DRX cycle; and

transmit a sounding reference signal (SRS) based on the WUS received in the at least one of the multiple CORESETs, wherein the WUS causes the UE to enter an awake state during the on-duration of the DRX cycle, and the SRS is transmitted during the on-duration of the DRX cycle and in an active bandwidth part (BWP).

13. A method of wireless communication at a base station, comprising:

transmitting a wake-up signal (WUS) in multiple control resource sets (CORESETs) to a User Equipment (UE) performing a discontinuous reception (DRX) cycle, the WUS including a first instance of the WUS transmitted in a first CORESET and a second instance of the WUS transmitted in a second CORESET; and

receiving a sounding reference signal (SRS) based on the WUS, wherein the WUS indicates for the UE to enter an awake state during an on-duration of the DRX cycle, and the SRS is received during the on-duration of the DRX cycle and in an active bandwidth part (BWP).

14. The method of claim 13, further comprising:

transmitting a Channel State Information – Reference Signal (CSI-RS) to the UE based on the WUS during the on-duration of the DRX cycle;

receiving a CSI report from the UE based on the WUS; and

transmitting data based on the CSI report.

15. The method of claim 14, wherein the WUS is transmitted on a first BWP and the CSI-RS is transmitted on a second BWP, and wherein the WUS comprises an uplink grant triggering a BWP configuration switch and transmission of the CSI-RS is spaced from the WUS by a CSI offset.
16. The method of claim 14, wherein the WUS is transmitted on a first BWP and the SRS or the CSI-RS is respectively received or transmitted on a second BWP, the WUS comprising a downlink assignment without corresponding downlink data, and the WUS triggering a BWP configuration switch.
17. The method of claim 16, further comprising:
transmitting a CSI-RS trigger for reception of the CSI-RS at the UE within a same slot as the CSI-RS trigger, wherein the CSI-RS trigger is transmitted on the second BWP and is spaced from the WUS by a slot offset for BWP configuration transition.
18. The method of claim 16, further comprising:
transmitting a CSI-RS trigger for transmission of the CSI-RS on the second BWP, wherein the CSI-RS trigger is spaced from the WUS by a slot offset sufficient for BWP configuration transition, and wherein the transmission of the CSI-RS is spaced from the CSI-RS trigger by at least a CSI trigger offset.
19. The method of claim 13, wherein the WUS is transmitted on a first BWP and the SRS is transmitted on a second BWP.
20. The method of claim 13, wherein the base station receives the SRS from the UE based on the WUS.
21. The method of claim 13, wherein the WUS is transmitted during a wake-up signal occasion prior to the on-duration of the DRX cycle, wherein the WUS is comprised in at least one of a control channel or another reference signal.

22. The method of claim 21, wherein during the on-duration of the DRX cycle, the base station transmits a trigger to receive the SRS within a same slot as the trigger.
23. The method of claim 21, wherein the base station further transmits a Periodic Tracking Reference Signal (P-TRS) during the wake-up signal occasion prior to the on-duration of the DRX cycle, and wherein the WUS transmitted during the wake-up signal occasion is comprised in the control channel.
24. The method of claim 21, wherein the WUS is transmitted on a first BWP during the wake-up signal occasion prior to the on-duration of the DRX cycle, and the SRS is transmitted on a second BWP during the on-duration of the DRX cycle.
25. The method of claim 21, wherein the base station transmits a Periodic Channel State Information Reference Signal (P-CSI-RS) during the wake-up signal occasion prior to the on-duration of the DRX cycle.
26. An apparatus for wireless communication at a base station, comprising:
at least one memory; and
at least one processor coupled to the at least one memory and configured to cause the base station to:
transmit a wake-up signal (WUS) in multiple control resource sets (CORESETs) to a User Equipment (UE) performing a discontinuous reception (DRX) cycle, the WUS including a first instance of the WUS transmitted in a first CORESET and a second instance of the WUS transmitted in a second CORESET; and
receive a sounding reference signal (SRS) based on the WUS, wherein the WUS indicates for the UE to enter an awake state during an on-duration of the DRX cycle, and the SRS is received during the on-duration of the DRX cycle and in an active bandwidth part (BWP).
27. The method of claim 1, further comprising:

decoding the first WUS and the second WUS to determine the first WUS and the second WUS comprise WUS information that is not inconsistent.

28. The method of claim 1, wherein the first WUS and the second WUS in the multiple CORESETs comprise WUS information that is not inconsistent.