

CLAIMS

What is claimed is:

- 1 1. A method of wireless communication comprising:
2 entering a sleep mode of a discontinuous reception (DRX) configuration;
3 identifying that a scheduling request is to be transmitted to a base station;
4 identifying a time period associated with a random access channel (RACH);
5 and
6 transmitting the scheduling request to the base station during the time period
7 associated with the RACH.
- 1 2. The method of claim 1, further comprising:
2 entering an active mode of the DRX configuration, wherein the scheduling
3 request is transmitted during the active mode.
- 1 3. The method of claim 1, further comprising:
2 receiving a directional synchronization subframe from the base station,
3 wherein a resource associated with the scheduling request is identified based at least in part
4 on the received directional synchronization subframe.
- 1 4. The method of claim 3, wherein the resource associated with the
2 scheduling request comprises a symbol index, a set of subcarriers, or a combination thereof.
- 1 5. The method of claim 3, further comprising:
2 identifying the directional synchronization subframe from a set of directional
3 subframes transmitted by the base station based at least in part on a signal strength of the
4 directional synchronization subframe.
- 1 6. The method of claim 1, further comprising:
2 receiving a directional synchronization subframe from the base station,
3 wherein a resource associated with the RACH is identified based at least in part on the
4 received directional synchronization subframe.
- 1 7. The method of claim 1, further comprising:
2 selecting at least one of a random cyclic shift, a random set of subcarriers, or a
3 random sequence, wherein the scheduling request is transmitted using the random cyclic
4 shift, the random set of subcarriers, the random sequence, or combinations thereof.

1 8. The method of claim 1, further comprising:
2 receiving an indication of at least one of a cyclic shift, a set of subcarriers, or a
3 sequence index from the base station, wherein the scheduling request is transmitted using the
4 cyclic shift, the set of subcarriers, the sequence index, or combinations thereof.

1 9. The method of claim 1, further comprising:
2 identifying a frequency region associated with the RACH, wherein the
3 scheduling request is transmitted using resources located within the frequency region
4 associated with the RACH.

1 10. The method of claim 9, further comprising:
2 determining that a length of a sleep period of the DRX configuration is greater
3 than a threshold, wherein the scheduling request is transmitted using the resources located
4 within the frequency region associated with the RACH based at least in part on the
5 determination that the length of the sleep period is greater than the threshold.

1 11. The method of claim 1, further comprising:
2 identifying a frequency region associated with the RACH and a frequency
3 region associated with scheduling requests that does not overlap with the frequency region
4 associated with the RACH, wherein the scheduling request is transmitted using resources
5 located within the frequency region associated with scheduling requests based at least in part
6 on a sleep period of the DRX configuration.

1 12. The method of claim 11, further comprising:
2 determining that a length of the sleep period is less than a threshold, wherein
3 the scheduling request is transmitted using the resources located within the frequency region
4 associated with scheduling requests based at least in part on the determination that the length
5 of the sleep period is less than the threshold.

1 13. A method of wireless communication comprising:
2 configuring a user equipment (UE) with a discontinuous reception (DRX)
3 configuration;
4 identifying a time period associated with a random access channel (RACH)
5 following a sleep period of the DRX configuration; and
6 receiving a scheduling request from the UE during the time period associated
7 with the RACH.

- 1 14. The method of claim 13, further comprising:
2 transmitting a directional synchronization subframe to the UE, wherein a
3 resource associated with the scheduling request is associated with the received directional
4 synchronization subframe.
- 1 15. The method of claim 13, further comprising:
2 transmitting an indication of at least one of a cyclic shift, a set of subcarriers,
3 or a sequence index to the UE, wherein the scheduling request is received using the cyclic
4 shift, the set of subcarriers, the sequence index, or combinations thereof.
- 1 16. The method of claim 13, further comprising:
2 identifying a frequency region associated with the RACH, wherein the
3 scheduling request is received using resources located within the frequency region associated
4 with the RACH.
- 1 17. The method of claim 13, further comprising:
2 identifying a frequency region associated with the RACH and a frequency
3 region associated with scheduling requests that does not overlap with the frequency region
4 associated with the RACH, wherein the scheduling request is transmitted using resources
5 located within the frequency region associated with scheduling requests based at least in part
6 on the sleep period of the DRX configuration.
- 1 18. An apparatus for wireless communication comprising:
2 means for entering a sleep mode of a discontinuous reception (DRX)
3 configuration;
4 means for identifying that a scheduling request is to be transmitted to a base
5 station;
6 means for identifying a time period associated with a random access channel
7 (RACH); and
8 means for transmitting the scheduling request to the base station during the
9 time period associated with the RACH.
- 1 19. The apparatus of claim 18, further comprising:
2 means for entering an active mode of the DRX configuration, wherein the
3 scheduling request is transmitted during the active mode.
- 1 20. The apparatus of claim 18, further comprising:

2 means for receiving a directional synchronization subframe from the base
3 station, wherein a resource associated with the scheduling request is identified based at least
4 in part on the received directional synchronization subframe.

1 21. The apparatus of claim 20, wherein the resource associated with the
2 scheduling request comprises a symbol index, a set of subcarriers, or a combination thereof.

1 22. The apparatus of claim 20, further comprising:
2 means for identifying the directional synchronization subframe from a set of
3 directional subframes transmitted by the base station based at least in part on a signal strength
4 of the directional synchronization subframe.

1 23. The apparatus of claim 18, further comprising:
2 means for receiving a directional synchronization subframe from the base
3 station, wherein a resource associated with the RACH is identified based at least in part on
4 the received directional synchronization subframe.

1 24. The apparatus of claim 18, further comprising:
2 means for selecting at least one of a random cyclic shift, a random set of
3 subcarriers, or a random sequence, wherein the scheduling request is transmitted using the
4 random cyclic shift, the random set of subcarriers, the random sequence, or combinations
5 thereof.

1 25. The apparatus of claim 18, further comprising:
2 means for receiving an indication of at least one of a cyclic shift, a set of
3 subcarriers, or a sequence index from the base station, wherein the scheduling request is
4 transmitted using the cyclic shift, the set of subcarriers, the sequence index, or combinations
5 thereof.

1 26. The apparatus of claim 18, further comprising:
2 means for identifying a frequency region associated with the RACH, wherein
3 the scheduling request is transmitted using resources located within the frequency region
4 associated with the RACH.

1 27. The apparatus of claim 26, further comprising:
2 means for determining that a length of a sleep period of the DRX
3 configuration is greater than a threshold, wherein the scheduling request is transmitted using

4 the resources located within the frequency region associated with the RACH based at least in
5 part on the determination that the length of the sleep period is greater than the threshold.

1 28. The apparatus of claim 18, further comprising:
2 means for identifying a frequency region associated with the RACH and a
3 frequency region associated with scheduling requests that does not overlap with the
4 frequency region associated with the RACH, wherein the scheduling request is transmitted
5 using resources located within the frequency region associated with scheduling requests
6 based at least in part on a sleep period of the DRX configuration.

1 29. The apparatus of claim 28, further comprising:
2 means for determining that a length of the sleep period is less than a threshold,
3 wherein the scheduling request is transmitted using the resources located within the
4 frequency region associated with scheduling requests based at least in part on the
5 determination that the length of the sleep period is less than the threshold.

1 30. An apparatus for wireless communication comprising:
2 means for configuring a user equipment (UE) with a discontinuous reception
3 (DRX) configuration;
4 means for identifying a time period associated with a random access channel
5 (RACH) following a sleep period of the DRX configuration; and
6 means for receiving a scheduling request from the UE during the time period
7 associated with the RACH.

1 31. The apparatus of claim 30, further comprising:
2 means for transmitting a directional synchronization subframe to the UE,
3 wherein a resource associated with the scheduling request is associated with the received
4 directional synchronization subframe.

1 32. The apparatus of claim 30, further comprising:
2 means for transmitting an indication of at least one of a cyclic shift, a set of
3 subcarriers, or a sequence index to the UE, wherein the scheduling request is received using
4 the cyclic shift, the set of subcarriers, the sequence index, or combinations thereof.

1 33. The apparatus of claim 30, further comprising:

2 means for identifying a frequency region associated with the RACH, wherein
3 the scheduling request is received using resources located within the frequency region
4 associated with the RACH.

1 34. The apparatus of claim 30, further comprising:
2 means for identifying a frequency region associated with the RACH and a
3 frequency region associated with scheduling requests that does not overlap with the
4 frequency region associated with the RACH, wherein the scheduling request is transmitted
5 using resources located within the frequency region associated with scheduling requests
6 based at least in part on the sleep period of the DRX configuration.

1 35. An apparatus for wireless communication, comprising:
2 a processor;
3 memory in electronic communication with the processor; and
4 instructions stored in the memory and operable, when executed by the
5 processor, to cause the apparatus to:
6 enter a sleep mode of a discontinuous reception (DRX) configuration;
7 identify that a scheduling request is to be transmitted to a base station;
8 identify a time period associated with a random access channel (RACH); and
9 transmit the scheduling request to the base station during the time period
10 associated with the RACH.

1 36. The apparatus of claim 35, wherein the instructions are operable to
2 cause the apparatus to:
3 enter an active mode of the DRX configuration, wherein the scheduling
4 request is transmitted during the active mode.

1 37. The apparatus of claim 35, wherein the instructions are operable to
2 cause the apparatus to:
3 receive a directional synchronization subframe from the base station, wherein
4 a resource associated with the scheduling request is identified based at least in part on the
5 received directional synchronization subframe.

1 38. The apparatus of claim 37, wherein the resource associated with the
2 scheduling request comprises a symbol index, a set of subcarriers, or a combination thereof.

1 39. The apparatus of claim 37, wherein the instructions are operable to
2 cause the apparatus to:

3 identify the directional synchronization subframe from a set of directional
4 subframes transmitted by the base station based at least in part on a signal strength of the
5 directional synchronization subframe.

1 40. The apparatus of claim 35, wherein the instructions are operable to
2 cause the apparatus to:

3 receive a directional synchronization subframe from the base station, wherein
4 a resource associated with the RACH is identified based at least in part on the received
5 directional synchronization subframe.

1 41. The apparatus of claim 35, wherein the instructions are operable to
2 cause the apparatus to:

3 select at least one of a random cyclic shift, a random set of subcarriers, or a
4 random sequence, wherein the scheduling request is transmitted using the random cyclic
5 shift, the random set of subcarriers, the random sequence, or combinations thereof.

1 42. The apparatus of claim 35, wherein the instructions are operable to
2 cause the apparatus to:

3 receive an indication of at least one of a cyclic shift, a set of subcarriers, or a
4 sequence index from the base station, wherein the scheduling request is transmitted using the
5 cyclic shift, the set of subcarriers, the sequence index, or combinations thereof.

1 43. The apparatus of claim 35, wherein the instructions are operable to
2 cause the apparatus to:

3 identify a frequency region associated with the RACH, wherein the scheduling
4 request is transmitted using resources located within the frequency region associated with the
5 RACH.

1 44. The apparatus of claim 43, wherein the instructions are operable to
2 cause the apparatus to:

3 determine that a length of a sleep period of the DRX configuration is greater
4 than a threshold, wherein the scheduling request is transmitted using the resources located
5 within the frequency region associated with the RACH based at least in part on the
6 determination that the length of the sleep period is greater than the threshold.

1 45. The apparatus of claim 35, wherein the instructions are operable to
2 cause the apparatus to:
3 identify a frequency region associated with the RACH and a frequency region
4 associated with scheduling request that does not overlap with the frequency region associated
5 with the RACH, wherein the scheduling request is transmitted using resources located within
6 the frequency region associated with scheduling request based at least in part on a sleep
7 period of the DRX configuration.

1 46. The apparatus of claim 45, wherein the instructions are operable to
2 cause the apparatus to:
3 determine that a length of the sleep period is less than a threshold, wherein the
4 scheduling request is transmitted using the resources located within the frequency region
5 associated with scheduling requests based at least in part on the determination that the length
6 of the sleep period is less than the threshold.

1 47. An apparatus for wireless communication, comprising:
2 a processor;
3 memory in electronic communication with the processor; and
4 instructions stored in the memory and operable, when executed by the
5 processor, to cause the apparatus to:
6 configure a user equipment (UE) with a discontinuous reception (DRX)
7 configuration;
8 identify a time period associated with a random access channel (RACH)
9 following a sleep period of the DRX configuration; and
10 receive a scheduling request from the UE during the time period associated
11 with the RACH.

1 48. The apparatus of claim 47, wherein the instructions are operable to
2 cause the apparatus to:
3 transmit a directional synchronization subframe to the UE, wherein a resource
4 associated with the scheduling request is associated with the received directional
5 synchronization subframe.

1 49. The apparatus of claim 47, wherein the instructions are operable to
2 cause the apparatus to:

3 transmit an indication of at least one of a cyclic shift, a set of subcarriers, or a
4 sequence index to the UE, wherein the scheduling request is received using the cyclic shift,
5 the set of subcarriers, the sequence index, or combinations thereof.

1 50. The apparatus of claim 47, wherein the instructions are operable to
2 cause the apparatus to:
3 identify a frequency region associated with the RACH, wherein the scheduling
4 request is received using resources located within the frequency region associated with the
5 RACH.

1 51. The apparatus of claim 47, wherein the instructions are operable to
2 cause the apparatus to:
3 identify a frequency region associated with the RACH and a frequency region
4 associated with scheduling requests that does not overlap with the frequency region
5 associated with the RACH, wherein the scheduling request is transmitted using resources
6 located within the frequency region associated with scheduling requests based at least in part
7 on the sleep period of the DRX configuration.

1 52. A non-transitory computer-readable medium storing code for wireless
2 communication, the code comprising instructions executable to:
3 enter a sleep mode of a discontinuous reception (DRX) configuration;
4 identify that a scheduling request is to be transmitted to a base station;
5 identify a time period associated with a random access channel (RACH); and
6 transmit the scheduling request to the base station during the time period
7 associated with the RACH.

1 53. The non-transitory computer-readable medium of claim 52, wherein
2 the instructions are executable to:
3 enter an active mode of the DRX configuration, wherein the scheduling
4 request is transmitted during the active mode.

1 54. The non-transitory computer-readable medium of claim 52, wherein
2 the instructions are executable to:
3 receive a directional synchronization subframe from the base station, wherein
4 a resource associated with the scheduling request is identified based at least in part on the
5 received directional synchronization subframe.

1 55. The non-transitory computer-readable medium of claim 54, wherein
2 the resource associated with the scheduling request comprises a symbol index, a set of
3 subcarriers, or a combination thereof.

1 56. The non-transitory computer-readable medium of claim 54, wherein
2 the instructions are executable to:

3 identify the directional synchronization subframe from a set of directional
4 subframes transmitted by the base station based at least in part on a signal strength of the
5 directional synchronization subframe.

1 57. The non-transitory computer-readable medium of claim 52, wherein
2 the instructions are executable to:

3 receive a directional synchronization subframe from the base station, wherein
4 a resource associated with the RACH is identified based at least in part on the received
5 directional synchronization subframe.

1 58. The non-transitory computer-readable medium of claim 52, wherein
2 the instructions are executable to:

3 select at least one of a random cyclic shift, a random set of subcarriers, or a
4 random sequence, wherein the scheduling request is transmitted using the random cyclic
5 shift, the random set of subcarriers, the random sequence, or combinations thereof.

1 59. The non-transitory computer-readable medium of claim 52, wherein
2 the instructions are executable to:

3 receive an indication of at least one of a cyclic shift, a set of subcarriers, or a
4 sequence index from the base station, wherein the scheduling request is transmitted using the
5 cyclic shift, the set of subcarriers, the sequence index, or combinations thereof.

1 60. The non-transitory computer-readable medium of claim 52, wherein
2 the instructions are executable to:

3 identify a frequency region associated with the RACH, wherein the scheduling
4 request is transmitted using resources located within the frequency region associated with the
5 RACH.

1 61. The non-transitory computer-readable medium of claim 60, wherein
2 the instructions are executable to:

3 determine that a length of a sleep period of the DRX configuration is greater
4 than a threshold, wherein the scheduling request is transmitted using the resources located
5 within the frequency region associated with the RACH based at least in part on the
6 determination that the length of the sleep period is greater than the threshold.

1 62. The non-transitory computer-readable medium of claim 52, wherein
2 the instructions are executable to:

3 identify a frequency region associated with the RACH and a frequency region
4 associated with scheduling requests that does not overlap with the frequency region
5 associated with the RACH, wherein the scheduling request is transmitted using resources
6 located within the frequency region associated with scheduling requests based at least in part
7 on a sleep period of the DRX configuration.

1 63. The non-transitory computer-readable medium of claim 62, wherein
2 the instructions are executable to:

3 determine that a length of the sleep period is less than a threshold, wherein the
4 scheduling request is transmitted using the resources located within the frequency region
5 associated with scheduling requests based at least in part on the determination that the length
6 of the sleep period is less than the threshold.

1 64. A non-transitory computer-readable medium storing code for wireless
2 communication, the code comprising instructions executable to:

3 configure a user equipment (UE) with a discontinuous reception (DRX)
4 configuration;

5 identify a time period associated with a random access channel (RACH)
6 following a sleep period of the DRX configuration; and

7 receive a scheduling request from the UE during the time period associated
8 with the RACH.

1 65. The non-transitory computer-readable medium of claim 64, wherein
2 the instructions are executable to:

3 transmit a directional synchronization subframe to the UE, wherein a resource
4 associated with the scheduling request is associated with the received directional
5 synchronization subframe.

1 66. The non-transitory computer-readable medium of claim 64, wherein
2 the instructions are executable to:

3 transmit an indication of at least one of a cyclic shift, a set of subcarriers, or a
4 sequence index to the UE, wherein the scheduling request is received using the cyclic shift,
5 the set of subcarriers, the sequence index, or combinations thereof.

1 67. The non-transitory computer-readable medium of claim 64, wherein
2 the instructions are executable to:
3 identify a frequency region associated with the RACH, wherein the scheduling
4 request is received using resources located within the frequency region associated with the
5 RACH.

1 68. The non-transitory computer-readable medium of claim 64, wherein
2 the instructions are executable to:
3 identify a frequency region associated with the RACH and a frequency region
4 associated with scheduling requests that does not overlap with the frequency region
5 associated with the RACH, wherein the scheduling request is transmitted using resources
6 located within the frequency region associated with scheduling requests based at least in part
7 on the sleep period of the DRX configuration.

1 69. A method of wireless communication comprising:
2 entering a sleep mode of a discontinuous reception (DRX) configuration;
3 identifying that a scheduling request is to be transmitted to a base station;
4 receiving a directional synchronization subframe from the base station; and
5 transmitting the scheduling request to the base station using resources based at
6 least in part on the received directional synchronization subframe.

1 70. The method of claim 69, further comprising:
2 identifying the directional synchronization subframe from a set of directional
3 subframes transmitted by the base station based at least in part on a signal strength of the
4 directional synchronization subframe.

1 71. The method of claim 69, further comprising:
2 identifying a time period associated with a random access channel (RACH),
3 wherein the time period associated with the RACH is identified based at least in part on the
4 received directional synchronization subframe.

1 72. The method of claim 71, further comprising:

2 transmitting the scheduling request to the base station during the time period
3 associated with the RACH.

1 73. The method of claim 69, further comprising:
2 entering an active mode of the DRX configuration, wherein the scheduling
3 request is transmitted during the active mode.

1 74. A method of wireless communication comprising:
2 configuring a user equipment (UE) with a discontinuous reception (DRX)
3 configuration;
4 transmitting a directional synchronization subframe; and
5 receiving a scheduling request from the UE on resources based at least in part
6 on the transmitted directional synchronization subframe.

1 75. The method of claim 74, further comprising:
2 identifying a time period associated with a random access channel (RACH),
3 wherein the time period associated with the RACH is identified based at least in part on the
4 transmitted directional synchronization subframe.

1 76. The method of claim 75, further comprising:
2 receiving the scheduling request during the time period associated with the
3 RACH.

1 77. An apparatus for wireless communication, comprising:
2 a processor;
3 memory in electronic communication with the process; and
4 instructions stored in the memory and operable, when executed by the
5 processor, to cause the apparatus to:
6 enter a sleep mode of a discontinuous reception (DRX) configuration;
7 identify that a scheduling request is to be transmitted to a base station;
8 receive a directional synchronization subframe from the base station; and
9 transmit the scheduling request to the base station using resources based at
10 least in part on the received directional synchronization subframe.

1 78. The apparatus of claim 77, wherein the instructions are operable to
2 cause the apparatus to:

3 identify the directional synchronization subframe from a set of directional
4 subframes transmitted by the base station based at least in part on a signal strength of the
5 directional synchronization subframe.

1 79. The apparatus of claim 77, wherein the instructions are operable to
2 cause the apparatus to:

3 identify a time period associated with a random access channel (RACH),
4 wherein the time period associated with the RACH is identified based at least in part on the
5 received directional synchronization subframe.

1 80. The apparatus of claim 79, wherein the instructions are operable to
2 cause the apparatus to:

3 transmit the scheduling request to the base station during the time period
4 associated with the RACH.

1 81. The apparatus of claim 77, wherein the instructions are operable to
2 cause the apparatus to:

3 enter an active mode of the DRX configuration, wherein the scheduling
4 request is transmitted during the active mode.

1 82. An apparatus for wireless communication, comprising:

2 a processor;

3 memory in electronic communication with the processor; and

4 instructions stored in the memory and operable, when executed by the
5 processor, to cause the apparatus to:

6 configure a user equipment (UE) with a discontinuous reception (DRX)
7 configuration;

8 transmit a directional synchronization subframe; and

9 receive a scheduling request from the UE on resources based at least in part on
10 the transmitted directional synchronization subframe.

1 83. The apparatus of claim 82, wherein the instructions are operable to
2 cause the apparatus to:

3 identify a time period associated with a random access channel (RACH),
4 wherein the time period associated with the RACH is identified based at least in part on the
5 transmitted directional synchronization subframe.

1 84. The apparatus of claim 83, wherein the instructions are operable to
2 cause the apparatus to:
3 receive the scheduling request during the time period associated with the
4 RACH.