~~CLAIMS~~

~~**What is claimed is:**~~

CLAIMS

1. A method for wireless communication at a user equipment (UE), comprising:

receiving, from a base station, a synchronization signal block of a set of quasi-collocated synchronization signal blocks, the synchronization signal block comprising an indication of a parameter indicating information associated with a plurality of downlink control channel locations corresponding to the set of quasi-collocated synchronization signal blocks;

determining, based at least in part on the parameter, the plurality of downlink control channel locations corresponding to the set of quasi-collocated synchronization signal blocks;

receiving a downlink grant for a system information based at least in part on monitoring one or more downlink control channel locations of the plurality of downlink control channel locations;

receiving the system information based at least in part on the downlink grant; and

establishing a connection with the base station based at least in part on the synchronization signal block and the received system information.

2. The method of claim 1, wherein the parameter comprises an indication of offset between successive synchronization signal blocks within the set of quasi-collocated synchronization signal blocks.

3. The method of claim 1, wherein receiving the synchronization signal block comprises:

receiving a physical broadcast channel portion of the synchronization signal block, the physical broadcast channel portion of the synchronization signal block comprising the indication of the parameter.

4. The method of claim 3, wherein receiving the physical broadcast channel portion of the synchronization block comprises:

performing soft combining across a plurality of synchronization signal blocks.

5. The method of claim 4, wherein the indication of the parameter is common across each synchronization signal block of the plurality of synchronization signal blocks.

6. The method of claim 5, wherein the plurality of synchronization signal blocks comprise at least one of the set of quasi-collocated synchronization signal blocks, a plurality of different sets of quasi-collocated synchronization signal blocks, each synchronization signal block associated with the base station, or a combination thereof.

~~7. The method of claim 1, further comprising:~~

~~determining indices of each synchronization signal block of the set of quasi-collocated synchronization signal blocks,~~

~~wherein determining the plurality of downlink control channel locations is based at least in part on the determined index of each synchronization signal block of the set of quasi-collocated synchronization signal blocks.~~

~~8~~7. The method of claim 1, wherein:

determining the plurality of downlink control channel locations is based at least in part on a frame in which the synchronization signal block is received and the parameter indicated in the synchronization signal block.

~~9~~8. The method of claim 1, wherein receiving the downlink grant comprises:

monitoring each downlink control channel location of the plurality of downlink control channel locations.

~~10~~9. The method of claim 1, wherein receiving the downlink grant comprises:

determining that no downlink control information was detected during a first instance of the plurality of downlink control channel locations; and

monitoring, based at least in part on the parameter, a second instance of the plurality of downlink control channel locations to detect the downlink grant.

~~11~~10. The method of claim 1, wherein the downlink control channel locations of the plurality of downlink control channel locations comprise type 0 physical downlink control channel common search spaces.

11. The method of claim 1, further comprising:

determining indices of each synchronization signal block of the set of quasi-

collocated synchronization signal blocks,

wherein determining the plurality of downlink control channel locations is based at least in part on the determined index of each synchronization signal block of the set of quasi-collocated synchronization signal blocks.

12. A method for wireless communication at a base station, comprising:

transmitting a plurality of synchronization signal blocks, the plurality of synchronization signal blocks comprising a set of quasi-collocated synchronization signal blocks, wherein each synchronization signal block of the plurality of synchronization signal blocks comprises an indication of a parameter indicating information associated with a plurality of downlink control channel locations corresponding to the set of quasi-collocated synchronization signal blocks;

transmitting, based at least in part on the parameter, a downlink grant for a system information over the plurality of downlink control channel locations corresponding to the set of quasi-collocated synchronization signal blocks;

transmitting the system information according to the grant; and

establishing a connection with a user equipment based at least in part on the synchronization signal block and the system information.

13. The method of claim 12, wherein the parameter comprises an indication of an offset between successive synchronization signal blocks within the set of quasi-collocated synchronization signal blocks.

14. The method of claim 12, wherein transmitting the plurality of synchronization signal blocks comprises:

transmitting a physical broadcast channel portion of the synchronization signal block, the physical broadcast portion of the synchronization signal block comprising the indication of the parameter.

15. The method of claim 14, wherein the indication of the parameter is common across each synchronization signal block of the plurality of synchronization signal blocks.

16. A method for wireless communication at a user equipment (UE), comprising:

receiving a system information comprising a bitmap indicating a subset of synchronization signal blocks transmitted from a set of synchronization signal blocks, the

system information signal further indicating a maximum number of synchronization signal blocks available for use, wherein the maximum number of synchronization signal blocks available for use is greater than a total number of synchronization signal blocks in the set of synchronization signal blocks;

configuring rate matching based at least in part on the subset of synchronization signal blocks indicated by the bitmap and the indicated maximum number of synchronization signal blocks available for use; and

receiving a physical downlink shared channel transmission based at least in part on the rate matching.

17. The method of claim 16, wherein configuring rate matching comprises:

repeating a pattern in the bitmap for the subset of synchronization signal blocks within the set of synchronization signal blocks and for synchronization signal blocks occurring after the subset of synchronization signal blocks and within the maximum number of synchronization signal blocks available for use.

18. The method of claim 16, wherein receiving the system information comprises:

receiving a previous physical downlink shared channel transmission comprising the system information; and

decoding the system information to identify the bitmap, wherein rate matching is not performed on the previous physical downlink shared channel.

19. The method of claim 16, wherein the physical downlink shared channel transmission is received during a same discovery period in which the maximum number of synchronization signal blocks available for use may be transmitted.

20. A method for wireless communication at a base station, comprising:

transmitting a system information comprising a bitmap indicating a subset of synchronization signal blocks transmitted from a set of synchronization signal blocks, the system information further indicating a maximum number of synchronization signal blocks available for use, wherein the maximum number of synchronization signal blocks available for use is greater than a total number of synchronization signal blocks in the set of synchronization signal blocks;

configuring rate matching based at least in part on the subset of synchronization signal blocks indicated by the bitmap and the indicated maximum number of synchronization

signal blocks available for use; and

performing a physical downlink shared channel transmission based at least in part on the rate matching.

21. The method of claim 20, further comprising:

repeating a pattern in the bitmap for transmitting the subset of synchronization signal blocks within the set of synchronization signal blocks and for a plurality of additional synchronization signal blocks transmitted after the subset of synchronization signal blocks and within the maximum number of synchronization signal blocks available for use.

22. The method of claim 20, wherein transmitting the system information comprises:

performing a previous physical downlink shared channel transmission comprising the system information.

23. An apparatus for wireless communication at a user equipment (UE), comprising:

~~means for receiving~~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:

receive, from a base station, a synchronization signal block of a set of quasi-collocated synchronization signal blocks, the synchronization signal block comprising an indication of a parameter indicating information associated with a plurality of downlink control channel locations corresponding to the set of quasi-collocated synchronization signal blocks;

~~means for determining~~determine, based at least in part on the parameter, the plurality of downlink control channel locations corresponding to the set of quasi-collocated synchronization signal blocks;

~~means for receiving~~receive a downlink grant for a system information based at least in part on monitoring one or more downlink control channel locations of the plurality of downlink control channel locations;

~~means for receiving~~receive the system information based at least in part on the downlink grant; and

~~means for establishing~~establish a connection with the base station based at least in part on the synchronization signal block and the received system information.

24. The apparatus of claim 23, wherein the parameter comprises an indication of offset between successive synchronization signal blocks within the set of quasi-collocated synchronization signal blocks.

25. The apparatus of claim 23, wherein the ~~means for receiving~~instructions to receive the synchronization signal block ~~further comprise~~are executable by the processor to cause the apparatus to:

~~means for receiving~~receive a physical broadcast channel portion of the synchronization signal block, the physical broadcast channel portion of the synchronization signal block comprising the indication of the parameter.

26. The apparatus of claim 25, wherein the ~~means for receiving~~instructions to receive the physical broadcast channel portion of the synchronization block ~~further comprise~~are executable by the processor to cause the apparatus to:

~~means for performing~~perform soft combining across a plurality of synchronization signal blocks.

27. The apparatus of claim 26, wherein the indication of the parameter is common across each synchronization signal block of the plurality of synchronization signal blocks.

28. The apparatus of claim 23, wherein the instructions are further ~~comprising~~executable by the processor to cause the apparatus to:

~~means for determining~~determine indices of each synchronization signal block of the set of quasi-collocated synchronization signal blocks,

wherein determining the plurality of downlink control channel locations is based at least in part on the determined index of each synchronization signal block of the set of quasi-collocated synchronization signal blocks.

29. The apparatus of claim 23, wherein determining the plurality of downlink control channel locations is based at least in part on a frame in which the synchronization signal block is received and the parameter indicated in the synchronization signal block.

30. The apparatus of claim 23, wherein the ~~means for receiving~~instructions to

receive the downlink grant ~~further comprise~~are executable by the processor to cause the apparatus to:

~~means for monitoring~~monitor each downlink control channel location of the plurality of downlink control channel locations.

31. The apparatus of claim 23, wherein the ~~means for receiving~~instructions to receive the downlink grant ~~further comprise~~are executable by the processor to cause the apparatus to:

~~means for determining~~determine that no downlink control information was detected during a first instance of the plurality of downlink control channel locations; and

~~means for monitoring~~monitor, based at least in part on the parameter, a second instance of the plurality of downlink control channel locations to detect the downlink grant.

32. The apparatus of claim 23, wherein the downlink control channel locations of the plurality of downlink control channel locations comprise type 0 physical downlink control channel common search spaces.

33. An apparatus for wireless communication at a base station, comprising:

~~means for transmitting~~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:

transmit a plurality of synchronization signal blocks, the plurality of synchronization signal blocks comprising a set of quasi-collocated synchronization signal blocks, wherein each synchronization signal block of the plurality of synchronization signal blocks comprises an indication of a parameter indicating information associated with a plurality of downlink control channel locations corresponding to the set of quasi-collocated synchronization signal blocks;

~~means for transmitting~~transmit, based at least in part on the parameter, a downlink grant for a system information over the plurality of downlink control channel locations corresponding to the set of quasi-collocated synchronization signal blocks;

~~means for transmitting~~transmit the system information according to the grant; and

~~means for establishing~~establish a connection with a user equipment based at least in part on the synchronization signal block and the system information.

34. The apparatus of claim 33, wherein the parameter comprises an indication of an offset between successive synchronization signal blocks within the set of quasi-collocated synchronization signal blocks.

35. The apparatus of claim 33, wherein the ~~means for transmitting~~instructions to transmit the plurality of synchronization signal blocks ~~further comprise~~are executable by the processor to cause the apparatus to:

~~means for transmitting~~transmit a physical broadcast channel portion of the synchronization signal block, the physical broadcast portion of the synchronization signal block comprising the indication of the parameter.

36. The apparatus of claim 35, wherein the indication of the parameter is common across each synchronization signal block of the plurality of synchronization signal blocks.

37. An apparatus for wireless communication at a user equipment (UE), comprising:

~~means for receiving~~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:

receive a system information comprising a bitmap indicating a subset of synchronization signal blocks transmitted from a set of synchronization signal blocks, the system information signal further indicating a maximum number of synchronization signal blocks available for use, wherein the maximum number of synchronization signal blocks available for use is greater than a total number of synchronization signal blocks in the set of synchronization signal blocks;

~~means for configuring~~configure rate matching based at least in part on the subset of synchronization signal blocks indicated by the bitmap and the indicated maximum number of synchronization signal blocks available for use; and

~~means for receiving~~receive a physical downlink shared channel transmission based at least in part on the rate matching.

38. The apparatus of claim 37, wherein the ~~means for configuring~~instructions to configure rate matching ~~further comprise~~are executable by the processor to cause the

apparatus to:

means for repeatingrepeat a pattern in the bitmap for the subset of synchronization signal blocks within the set of synchronization signal blocks and for synchronization signal blocks occurring after the subset of synchronization signal blocks and within the maximum number of synchronization signal blocks available for use.

39. The apparatus of claim 37, wherein the means for receivinginstructions to receive the system information further comprisare executable by the processor to cause the apparatus to:

means for receivingreceive a previous physical downlink shared channel transmission comprising the system information; and

means for decodingdecode the system information to identify the bitmap, wherein rate matching is not performed on the previous physical downlink shared channel.

40. The apparatus of claim 37, wherein the physical downlink shared channel transmission is received during a same discovery period in which the maximum number of synchronization signal blocks available for use may be transmitted.

41. An apparatus for wireless communication at a base station, comprising:

means for transmittinga processor,

memory in electronic communication with the processor; and

instructions stored in the memory and executable by the processor to cause the apparatus to:

transmit a system information comprising a bitmap indicating a subset of synchronization signal blocks transmitted from a set of synchronization signal blocks, the system information further indicating a maximum number of synchronization signal blocks available for use, wherein the maximum number of synchronization signal blocks available for use is greater than a total number of synchronization signal blocks in the set of synchronization signal blocks;

means for configuringconfigure rate matching based at least in part on the subset of synchronization signal blocks indicated by the bitmap and the indicated maximum number of synchronization signal blocks available for use; and

means for performingperform a physical downlink shared channel transmission based at least in part on the rate matching.

42. The apparatus of claim 41, wherein the instructions are further ~~comprising~~executable by the processor to cause the apparatus to:

~~means for repeating~~repeat a pattern in the bitmap for transmitting the subset of synchronization signal blocks within the set of synchronization signal blocks and for a plurality of additional synchronization signal blocks transmitted after the subset of synchronization signal blocks and within the maximum number of synchronization signal blocks available for use.

43. The apparatus of claim 41, wherein the ~~means for transmitting~~instructions to transmit the system information ~~further comprise~~are executable by the processor to cause the apparatus to:

~~means for performing~~perform a previous physical downlink shared channel transmission comprising the system information.