CLAIMS

WHAT IS CLAIMED IS:

1. A method for multiple carrier communication, comprising:

employing a processor executing computer executable instructions stored on a computer readable storage medium to implement following acts:

receiving an anchor carrier;

detecting a grant carried on the anchor carrier that assigns resources on another carrier; and

utilizing the assigned resources on the another carrier in accordance with the detected grant.

2. The method of claim 1, further comprising:

detecting a common system information on the anchor carrier; and

acquiring the another carrier by using the common system information.

3. The method of claim 1, further comprising:

receiving a dedicated information on the anchor carrier; and

acquiring the another carrier by using the dedicated information.

4. The method of claim 1, further comprising receiving the anchor carrier that assigns resources for a group of non-anchor carriers.

5. The method of claim 1, further comprising:

receiving one of a plurality of anchor carriers, each anchor carrier for assigning resources on a group of carriers.

6. The method of claim 1, further comprising:

receiving a non-anchor carrier; and

detecting a grant carried on the non-anchor carrier that assigns resources on the non-anchor carrier.

7. The method of claim 6, further comprising receiving a non-anchor carrier that was previously received as the anchor carrier subsequent to the another carrier no longer requiring assignment of resources.

8. The method of claim 1, further comprising:

initiating single carrier communication by synchronizing to the anchor carrier; and

detecting a grant on the anchor carrier for a single carrier configured user equipment.

9. The method of claim 8, further comprising:

synchronizing to primary and secondary synchronization signals of the anchor carrier;

detecting master information block on a Physical Broadcast Channel informing system bandwidth, Physical Hybrid Automatic Repeat Request Indicator Channel (PHICH) configuration, system frame number; and

detecting system information blocks on downlink shared channel (DL-SCH) for resources on the anchor carrier.

10. The method of claim 8, further comprising detecting the grant on the anchor carrier for the single carrier configured user equipment by executing a redirection message to another carrier by intra-cell inter-frequency handover.

11. The method of claim 1, further comprising detecting system information blocks on the anchor carrier for utilizing the another carrier comprising carrier location, carrier bandwidth, carrier uplink or downlink designation, carrier pairing, and a new control region.

12. The method of claim 1, further comprising:

receiving an uplink grant on the anchor carrier; and

determining an implicit pairing to an uplink carrier.

13. The method of claim 1, further comprising:

receiving an uplink grant on the anchor carrier; and

detecting an explicitly identified uplink carrier.

14. The method of claim 1, further comprising:

receiving an uplink grant on the anchor carrier;

transmitting an uplink carrier transmission on an uplink carrier in accordance with a resource assignment of the uplink grant; and

receiving an acknowledgement of receipt of the uplink carrier transmission on the anchor carrier that sent the uplink grant.

15. The method of claim 14, further comprising:

receiving an uplink grant on the anchor carrier that assigns resources on a plurality of uplink carriers;

transmitting an uplink carrier transmissions on the plurality of uplink carriers in accordance respectively with a resource assignment of the uplink grant; and

16. The method of claim 15, further comprising:

accessing a mapping of acknowledgements to multiple carriers;

interpreting the acknowledgement for each uplink carrier transmission utilizing the mapping; and

retransmitting the uplink carrier transmission determined to have been unsuccessfully transmitted.

17. The method of claim 1, further comprising transmitting channel quality indicator (CQI) feedback for multiple downlink carriers on an uplink anchor carrier.

18. The method of claim 17, further comprising detecting CQI feedback configuration by detecting an additional system information block on the anchor carrier.

19. The method of claim 17, further comprising detecting CQI feedback configuration by detecting resource radio control (RRC) signaling.

20. The method of claim 1, further comprising:

reporting channel quality indicator (CQI) feedback conveying interference jamming receipt of the another carrier, and

receiving a grant assigning resources on a carrier not jammed by the interference.

21. The method of claim 19, further comprising receiving the grant that assigns resources on a carrier not jammed by the interference subsequent to a transmit power control change by either a serving node or an interfering node for multiple carrier reuse.

22. The method of claim 1, further comprising:

receiving interference jamming receipt of the anchor carrier;

acquiring the another carrier comprising a non-anchor carrier; and

detecting a grant carried on the non-anchor carrier that assigns resources on the non-anchor carrier.

23. A computer program product for multiple carrier communication, comprising:

at least one computer readable storage medium storing computer executable instructions that when executed by at least one processor implement components comprising:

a first set of instructions for causing a computer to receive an anchor carrier;

a second set of instructions for causing the computer to detect a grant carried on the anchor carrier that assigns resources on another carrier; and

a third set of instructions for causing the computer to utilize the assigned resources on the another carrier in accordance with the detected grant.

24. An apparatus for multiple carrier communication, comprising:

at least one processor;

at least one computer readable storage medium storing computer executable instructions that when executed by the at least one processor implement components comprising:

means for receiving an anchor carrier;

means for detecting a grant carried on the anchor carrier that assigns resources on another carrier; and

means for utilizing the assigned resources on the another carrier in accordance with the detected grant.

25. An apparatus for multiple carrier communication, comprising:

a transmitter;

a receiver for receiving an anchor carrier; and

a computing platform for detecting a grant carried on the anchor carrier that assigns resources on another carrier and for utilizing the assigned resources via the transmitter or receiver on the another carrier in accordance with the detected grant.

26. The apparatus of claim 25, wherein the computing platform is further for detecting common system information on the anchor carrier; and

the receiver is further for acquiring the another carrier by using the common system information.

27. The apparatus of claim 25, wherein the receiver is further for receiving dedicated information on the anchor carrier, and for acquiring the another carrier by using the dedicated information.

28. The apparatus of claim 25, wherein the receiver is further for receiving the anchor carrier that assigns resources for a group of non-anchor carriers.

29. The apparatus of claim 25, wherein the receiver is further for receiving one of a plurality of anchor carriers, each anchor carrier for assigning resources on a group of carriers.

30. The apparatus of claim 25, wherein the receiver is further for receiving a non-anchor carrier; and

the computing platform is further for detecting a grant carried on the non-anchor carrier that assigns resources on the non-anchor carrier.

31. The apparatus of claim 30, wherein the receiver is further for receiving the non-anchor carrier that was previously received as the anchor carrier subsequent to the another carrier no longer requiring assignment of resources.

32. The apparatus of claim 25, wherein the transmitter is further for initiating single carrier communication by synchronizing to the anchor carrier; and

the computing platform is further for detecting a grant on the anchor carrier for a single carrier configured user equipment.

33. The apparatus of claim 32, wherein the receiver is further for synchronizing to primary and secondary synchronization signals of the anchor carrier; and

the computing platform is further for detecting master information block on a Physical Broadcast Channel informing system bandwidth, Physical Hybrid Automatic Repeat Request Indicator Channel (PHICH) configuration, system frame number, and for detecting system information blocks on downlink shared channel (DL-SCH) for resources on the anchor carrier.

34. The apparatus of claim 32, wherein the computing platform is further for detecting the grant on the anchor carrier for the single carrier configured user equipment by executing a redirection message to another carrier by intra-cell inter-frequency handover.

35. The apparatus of claim 25, wherein the computing platform is further for detecting system information blocks on the anchor carrier for utilizing the another carrier comprising carrier location, carrier bandwidth, carrier uplink or downlink designation, carrier pairing, and a new control region.

36. The apparatus of claim 25, wherein the receiver is further for receiving an uplink grant on the anchor carrier; and

the computing platform is further for determining an implicit pairing to an uplink carrier.

37. The apparatus of claim 25, wherein the receiver is further for receiving an uplink grant on the anchor carrier; and

the computing platform is further for detecting an explicitly identified uplink carrier.

38. The apparatus of claim 25, wherein the receiver is further for receiving an uplink grant on the anchor carrier;

the transmitter is further for transmitting an uplink carrier transmission on an uplink carrier in accordance with a resource assignment of the uplink grant; and

the receiver is further for receiving acknowledgement of receipt of the uplink carrier transmission on the anchor carrier that sent the uplink grant.

39. The apparatus of claim 38, wherein the receiver is further for receiving an uplink grant on the anchor carrier that assigns resources on a plurality of uplink carriers;

the transmitter is further transmitting uplink carrier transmissions on the plurality of uplink carriers in accordance respectively with a resource assignment of the uplink grant; and

40. The apparatus of claim 39, wherein the computing platform is further for accessing a mapping of acknowledgements to multiple carriers, and for interpreting the acknowledgement for each uplink carrier transmission utilizing the mapping, and for retransmitting the uplink carrier transmission determined to have been unsuccessfully transmitted.

41. The apparatus of claim 25, wherein the transmitter is further for transmitting channel quality indicator (CQI) feedback for multiple downlink carriers on an uplink anchor carrier.

42. The apparatus of claim 41, wherein the computing platform is further for detecting CQI feedback configuration by detecting an additional system information block on the anchor carrier.

43. The apparatus of claim 41, wherein the computing platform is further for detecting CQI feedback configuration by detecting resource radio control (RRC) signaling.

44. The apparatus of claim 25, wherein the transmitter is further for reporting channel quality indicator (CQI) feedback conveying interference jamming receipt of the another carrier; and

the receiver is further for receiving a grant assigning resources on a carrier not jammed by the interference.

45. The apparatus of claim 44, wherein the receiver is further for receiving the grant assigning resources on the carrier not jammed by the interference subsequent to a transmit power control change by either a serving node or an interfering node for multiple carrier reuse.

46. The apparatus of claim 25, wherein the receiver is further for receiving interference jamming receipt of the anchor carrier and for acquiring the another carrier comprising a non-anchor carrier; and

the computing platform is further for detecting a grant carried on the non-anchor carrier that assigns resources on the non-anchor carrier.

47. A method for multiple carrier communication, comprising:

employing a processor executing computer executable instructions stored on a computer readable storage medium to implement following acts:

scheduling resources for an anchor carrier and another carrier;

transmitting a grant on the anchor carrier that assigns resources on the another carrier; and

communicating with a recipient that utilizes the assigned resources on the another carrier in accordance with the grant.

48. The method of claim 47, further comprising:

determining common system information for acquiring the another carrier; and

transmitting the common system information on the anchor carrier.

49. The method of claim 47, further comprising:

determining dedicated information for acquiring the another carrier; and

transmitting the dedicated information on the anchor carrier.

50. The method of claim 47, further comprising transmitting the anchor carrier that assigns resources for a group of non-anchor carriers.

51. The method of claim 47, further comprising transmitting one of a plurality of anchor carriers, each anchor carrier that assigns resources on a group of carriers.

52. The method of claim 47, further comprising transmitting a grant on the non-anchor carrier that assigns resources on the non-anchor carrier.

53. The method of claim 52, further comprising:

determining that no scheduling is necessary for non-anchor carriers; and

transmitting a non-anchor carrier that was previously transmitted as the anchor carrier.

54. The method of claim 47, further comprising:

receiving an initiation of single carrier communication; and

transmitting a grant on the anchor carrier for a single carrier configured user equipment.

55. The method of claim 54, further comprising:

transmitting primary and secondary synchronization signals on the anchor carrier;

transmitting master information block on a Physical Broadcast Channel informing system bandwidth, Physical Hybrid Automatic Repeat Request Indicator Channel (PHICH) configuration, system frame number; and

transmitting system information blocks on downlink shared channel (DL-SCH) for resources on the anchor carrier on the anchor carrier.

56. The method of claim 54, further comprising transmitting the grant on the anchor carrier for the single carrier configured user equipment by transmitting a redirection message to another carrier by intra-cell inter-frequency handover.

57. The method of claim 47, further comprising transmitting system information blocks on the anchor carrier for utilizing the another carrier comprising carrier location, carrier bandwidth, carrier uplink or downlink designation, carrier pairing, and a new control region.

58. The method of claim 47, further comprising transmitting an uplink grant on the anchor carrier with an implicit pairing to an uplink carrier.

59. The method of claim 47, further comprising transmitting an uplink grant on the anchor carrier with an explicitly identified uplink carrier.

60. The method of claim 47, further comprising:

transmitting an uplink grant on the anchor carrier;

receiving an uplink carrier transmission in accordance with a resource assignment of the uplink grant; and

transmitting acknowledgement of receipt of the uplink carrier transmission on the anchor carrier that sent the uplink grant.

61. The method of claim 60, further comprising:

transmitting an uplink grant on the anchor carrier that assigns resources on a plurality of uplink carriers;

receiving uplink carrier transmissions on the plurality of uplink carriers in accordance respectively with a resource assignment of the uplink grant; and

62. The method of claim 61, further comprising:

accessing a mapping of acknowledgements to multiple carriers;

transmitting the acknowledgement for each uplink carrier transmission utilizing the mapping; and

receiving retransmission of the uplink carrier transmission that was not acknowledged as successfully received.

63. The method of claim 47, further comprising receiving channel quality indicator (CQI) feedback for multiple downlink carriers on an uplink anchor carrier.

64. The method of claim 63, further comprising transmitting CQI feedback configuration by an additional system information block on the anchor carrier.

65. The method of claim 63, further comprising transmitting CQI feedback configuration by resource radio control (RRC) signaling.

66. The method of claim 63, further comprising:

receiving channel quality indicator (CQI) feedback conveying interference jamming receipt of the another carrier; and

transmitting a grant assigning resources on a carrier not jammed by the interference.

67. The method of claim 66, further comprising:

selecting an anchor carrier that does not interfere with a neighboring anchor carrier for multiple carrier reuse.

68. The method of claim 66, further comprising adjusting transmit power of the anchor carrier to avoid interfering with the neighboring anchor carrier.

69. The method of claim 66, further comprising requesting adjustment of transmit power of the neighboring anchor carrier by backhaul communication.

70. The method of claim 66, further comprising:

transmitting the anchor carrier that is being jammed by interference;

transmitting the another carrier comprising a non-anchor carrier; and

transmitting a grant on the non-anchor carrier that assigns resources on the non-anchor carrier.

71. A computer program product for multiple carrier communication, comprising:

at least one computer readable storage medium storing computer executable instructions that when executed by at least one processor implement components comprising:

a first set of instructions for causing a computer to schedule resources for an anchor carrier and another carrier;

a second set of instructions for causing the computer to transmit a grant on the anchor carrier that assigns resources on the another carrier; and

a third set of instructions for causing the computer to communicate with a recipient that utilizes the assigned resources on the another carrier in accordance with the grant.

72. An apparatus for multiple carrier communication, comprising:

at least one processor;

at least one computer readable storage medium storing computer executable instructions that when executed by the at least one processor implement components comprising:

means for scheduling resources for an anchor carrier and another carrier;

means for transmitting a grant on the anchor carrier that assigns resources on the another carrier; and

means for communicating with a recipient that utilizes the assigned resources on the another carrier in accordance with the grant.

73. An apparatus for multiple carrier communication, comprising:

a receiver;

a scheduler for scheduling resources for an anchor carrier and another carrier;

a transmitter for transmitting a grant on the anchor carrier that assigns resources on the another carrier; and

a receiver for communicating with a recipient that utilizes the assigned resources on the another carrier in accordance with the grant.

74. The apparatus of claim 73, wherein the scheduler is further for determining common system information for acquiring the another carrier; and

the transmitter is further for transmitting the common system information on the anchor carrier.

75. The apparatus of claim 73, wherein the scheduler is further for determining dedicated information for acquiring the another carrier; and

the transmitter is further for transmitting the dedicated information on the anchor carrier.

76. The apparatus of claim 73, wherein the transmitter is further for transmitting the anchor carrier that assigns resources for a group of non-anchor carriers.

77. The apparatus of claim 73, wherein the transmitter is further for transmitting one of a plurality of anchor carriers, each anchor carrier for assigning resources on a group of carriers.

78. The apparatus of claim 73, wherein the transmitter is further for transmitting a grant on the non-anchor carrier that assigns resources on the non-anchor carrier.

79. The apparatus of claim 78, wherein the scheduler is further for determining that no scheduling is necessary for non-anchor carriers; and

the transmitter is further for transmitting a non-anchor carrier that was previously transmitted as the anchor carrier.

80. The apparatus of claim 73, wherein the receiver is further for receiving an initiation of single carrier communication; and

the transmitter is further for transmitting a grant on the anchor carrier for a single carrier configured user equipment.

81. The apparatus of claim 80, wherein the transmitter is further for transmitting primary and secondary synchronization signals on the anchor carrier, for transmitting master information block on a Physical Broadcast Channel informing system bandwidth, Physical Hybrid Automatic Repeat Request Indicator Channel (PHICH) configuration, system frame number, and transmitting system information blocks on downlink shared channel (DL-SCH) for resources on the anchor carrier on the anchor carrier.

82. The apparatus of claim 80, wherein the transmitter is further for transmitting the grant on the anchor carrier for the single carrier configured user equipment by transmitting a redirection message to another carrier by intra-cell inter-frequency handover.

83. The apparatus of claim 73, wherein the transmitter is further for transmitting system information blocks on the anchor carrier for utilizing the another

carrier comprising carrier location, carrier bandwidth, carrier uplink or downlink designation, carrier pairing, and a new control region.

84. The apparatus of claim 73, wherein the transmitter is further for transmitting an uplink grant on the anchor carrier with an implicit pairing to an uplink carrier.

85. The apparatus of claim 73, wherein the transmitter is further for transmitting an uplink grant on the anchor carrier with an explicitly identified uplink carrier.

86. The apparatus of claim 73, wherein the transmitter is further for transmitting an uplink grant on the anchor carrier;

the receiver is further for receiving an uplink carrier in accordance with a resource assignment of the uplink grant; and

the transmitter is further for transmitting acknowledgement of receipt of an uplink carrier transmission on the anchor carrier that sent the uplink grant.

87. The apparatus of claim 86, further comprising:

transmitting an uplink grant on the anchor carrier that assigns resources on a plurality of uplink carriers;

receiving uplink carrier transmissions on the plurality of uplink carriers in accordance respectively with a resource assignment of the uplink grant; and

88. The apparatus of claim 87, further comprising:

accessing a mapping of acknowledgements to multiple carriers;

transmitting the acknowledgement for each uplink carrier transmission utilizing the mapping; and

receiving retransmission of an uplink carrier transmission that was not acknowledged as successfully received.

89. The apparatus of claim 73, further comprising receiving channel quality indicator (CQI) feedback for multiple downlink carriers on an uplink anchor carrier.

90. The apparatus of claim 89, further comprising transmitting CQI feedback configuration by an additional system information block on the anchor carrier.

91. The apparatus of claim 89, further comprising transmitting CQI feedback configuration by resource radio control (RRC) signaling.

92. The apparatus of claim 73, further comprising:

receiving channel quality indicator (CQI) feedback conveying interference jamming receipt of the another carrier; and

transmitting a grant assigning resources on a carrier not jammed by the interference.

93. The apparatus of claim 92, further comprising:

selecting an anchor carrier that does not interfere with a neighboring anchor carrier for multiple carrier reuse.

94. The apparatus of claim 92, further comprising adjusting transmit power of the anchor carrier to avoid interfering with the neighboring anchor carrier.

95. The apparatus of claim 92, further comprising requesting adjustment of transmit power of the neighboring anchor carrier by backhaul communication.

96. The apparatus of claim 92, further comprising:

transmitting the anchor carrier that is being jammed by interference;

transmitting the another carrier comprising a non-anchor carrier; and

transmitting a grant on the non-anchor carrier that assigns resources on the non-anchor carrier.

97. A method for coordinating carrier transmission between nodes, comprising:

employing a processor executing computer executable instructions stored on a computer readable storage medium to implement following acts:

transmitting a first carrier to provide wireless service to a first user equipment (UE) while a neighboring cell transmits a second carrier to provide wireless service to a second UE; and

coordinating with the neighboring cell so that the first and second UE receive respective carrier without jamming interference from a respective other carrier.

98. The method of claim 97, further comprising coordinating selection of non-interference frequency bands for a first and second carriers.

99. The method of claim 97, further comprising:

transmitting a non-anchor carrier scheduled by the first carrier as an anchor carrier, wherein the non-anchor carrier comprises an interfering frequency band with the second carrier of the neighboring cell; and

reducing transmit power of the non-anchor carrier to avoid jamming interference.

100. The method of claim 97, wherein the neighboring cell transmits an anchor carrier that schedules the second carrier as an anchor carrier, wherein the non-anchor carrier comprises an interfering frequency band with the first carrier, the method further comprising coordinating reduction of transmit power of the non-anchor carrier to avoid jamming interference.

101. The method of claim 97, wherein a non-cooperating cell transmits a third carrier that creates jamming interference to the first carrier, the method further comprising:

transmitting a non-anchor carrier at a frequency band not interfered with by the third carrier; and

scheduling resources for the non-anchor carrier via the non-anchor carrier.

102. A computer program product for coordinating carrier transmission between nodes, comprising:

at least one computer readable storage medium storing computer executable instructions that when executed by at least one processor implement components comprising:

a first set of instructions for causing a computer to transmit a first carrier to provide wireless service to a first user equipment (UE) while a neighboring cell transmits a second carrier to provide wireless service to a second UE; and

a second set of instructions for causing the computer to coordinate with the neighboring cell so that the first and second UE receive respective carrier without jamming interference from the other carrier.

103. An apparatus for coordinating carrier transmission between nodes, comprising:

at least one processor;

at least one computer readable storage medium storing computer executable instructions that when executed by the at least one processor implement components comprising:

means for transmitting a first carrier to provide wireless service to a first user equipment (UE) while a neighboring cell transmits a second carrier to provide wireless service to a second UE; and

means for coordinating with the neighboring cell so that the first and second UE receive respective carrier without jamming interference from the other carrier.

104. An apparatus for coordinating carrier transmission between nodes, comprising:

a receiver;

a transmitter for transmitting a first carrier to provide wireless service to a first user equipment (UE) while a neighboring cell transmits a second carrier to provide wireless service to a second UE; and

a scheduler for coordinating with the neighboring cell so that the first and second UE receive respective carrier without jamming interference from the other carrier.

105. The apparatus of claim 104, wherein the scheduler is further for coordinating selection of non-interference frequency bands for a first and second carriers.

106. The apparatus of claim 104, wherein the transmitter is further for transmitting a non-anchor carrier scheduled by the first carrier as an anchor carrier, wherein the non-anchor carrier comprises an interfering frequency band with the second carrier of the neighboring cell and for reducing transmit power of the non-anchor carrier to avoid jamming interference.

107. The apparatus of claim 104, wherein the neighboring cell transmits an anchor carrier that schedules the second carrier as an anchor carrier, wherein the non-anchor carrier comprises an interfering frequency band with the first carrier, the scheduler is further for coordinating reduction of transmit power of the non-anchor carrier to avoid jamming interference.

108. The apparatus of claim 104, wherein a non-cooperating cell transmits a third carrier that creates jamming interference to the first carrier, the transmitter is further for transmitting a non-anchor carrier at a frequency band not interfered with by the third carrier; and

the scheduler is further for scheduling resources for the non-anchor carrier via the non-anchor carrier.

CLAIMS

1. A method for multiple carrier wireless communication, comprising:

receiving an anchor carrier;

detecting an uplink grant carried on the anchor carrier that assigns resources for a group of uplink non-anchor carriers;

utilizing the assigned resources by transmitting uplink carrier transmissions on the group of uplink non-anchor carriers in accordance with the detected grant;

receiving an acknowledgement of receipt of the uplink carrier transmissions on the anchor carrier that sent the uplink grant;

accessing a mapping of acknowledgements to multiple carriers;

interpreting the acknowledgement for each uplink carrier transmission utilizing the mapping; and

retransmitting at least one of the uplink carrier transmissions, wherein the at least one of the uplink carrier transmissions is determined to have been unsuccessfully transmitted.

2. The method of claim 1, further comprising:

detecting a common system information on the anchor carrier; and

acquiring at least one of the uplink non-anchor carriers by using the common system information.

3. The method of claim 1, further comprising:

receiving a dedicated information on the anchor carrier; and

acquiring at least one of the uplink non-anchor carriers by using the dedicated information.

4. The method of claim 1, further comprising:

receiving one of a plurality of anchor carriers, each anchor carrier for assigning resources on a group of carriers.

5. The method of claim 1, further comprising:

receiving a non-anchor carrier; and

detecting a grant carried on the non-anchor carrier that assigns resources on the non-anchor carrier.

6. The method of claim 1, further comprising receiving a non-anchor carrier that was previously received as the anchor carrier subsequent to another carrier no longer requiring assignment of resources.

7. The method of claim 1, further comprising:

initiating single carrier communication by synchronizing to the anchor carrier; and

detecting a grant on the anchor carrier for a single carrier configured user equipment.

8. The method of claim 7, further comprising:

synchronizing to primary and secondary synchronization signals of the anchor carrier; detecting a master information block on a Physical Broadcast Channel for identifying system bandwidth, Physical Hybrid Automatic Repeat Request Indicator Channel (PHICH) configuration, and system frame number; and

detecting system information blocks on a downlink shared channel (DL-SCH) for resources on the anchor carrier.

9. The method of claim 7, further comprising detecting the grant on the anchor carrier for the single carrier configured user equipment by executing a redirection message to another carrier by intra-cell inter-frequency handover.

10. The method of claim 1, further comprising detecting system information blocks on the anchor carrier for utilizing the another carrier comprising carrier location, carrier bandwidth, carrier uplink or downlink designation, carrier pairing, and a new control region.

11. The method of claim 1, further comprising:

determining an implicit pairing to an uplink carrier.

12. The method of claim 1, further comprising:

detecting an explicitly identified uplink carrier.

13. The method of claim 1, further comprising transmitting channel quality indicator (CQI) feedback for multiple downlink carriers on an uplink anchor carrier.

14. The method of claim 13, further comprising detecting CQI feedback configuration by detecting an additional system information block on the anchor carrier.

15. The method of claim 13, further comprising detecting CQI feedback configuration by detecting resource radio control (RRC) signaling.

16. The method of claim 1, further comprising:

reporting channel quality indicator (CQI) feedback conveying interference jamming receipt of another carrier; and

receiving a grant assigning resources on a carrier not jammed by the interference.

17. The method of claim 16, further comprising receiving the grant that assigns resources on the carrier not jammed by the interference subsequent to a transmit power control change by either a serving node or an interfering node for multiple carrier reuse.

18. The method of claim 1, further comprising:

receiving interference jamming receipt of the anchor carrier;

acquiring another carrier comprising a non-anchor carrier; and

detecting a grant carried on the non-anchor carrier that assigns resources on the non-anchor carrier.

19. A computer program product for multiple carrier communication, comprising:

at least one computer readable, non-transitory, storage medium storing computer executable instructions that when executed by at least one processor implement components comprising:

a first set of instructions for causing a computer to receive an anchor carrier;

a second set of instructions for causing the computer to detect an uplink grant carried on the anchor carrier that assigns resources for a group of uplink non-anchor carriers;

a third set of instructions for causing the computer to utilize the assigned resources by transmitting uplink carrier transmissions on the group of uplink non-anchor carriers in accordance with the detected grant;

a fourth set of instructions for causing the computer to receive an acknowledgement of receipt of the uplink carrier transmissions on the anchor carrier that sent the uplink grant;

a fifth set of instructions for causing the computer to access a mapping of acknowledgements to multiple carriers;

a sixth set of instructions for causing the computer to interpret the acknowledgement for each uplink carrier transmission utilizing the mapping; and

a seventh set of instructions for causing the computer to retransmit at least one of the uplink carrier transmissions, wherein the at least one of the uplink carrier transmissions is determined to have been unsuccessfully transmitted.

20. An apparatus for multiple carrier communication, comprising:

at least one processor;

at least one computer readable storage medium storing computer executable instructions that when executed by the at least one processor implement components comprising:

means for receiving an anchor carrier;

means for detecting an uplink grant carried on the anchor carrier that assigns resources for a group on uplink non-anchor carriers;

means for utilizing the assigned resources by transmitting uplink carrier transmissions on the group of uplink non-anchor carriers in accordance with the detected grant;

means for receiving an acknowledgement of receipt of the uplink carrier transmissions on the anchor carrier that sent the uplink grant;

means for accessing a mapping of acknowledgements to multiple carriers;

means for interpreting the acknowledgement for each uplink carrier transmission utilizing the mapping; and

means for retransmitting at least one of the uplink carrier transmissions, wherein the at least one of the uplink carrier transmissions is determined to have been unsuccessfully transmitted.

21. An apparatus for multiple carrier wireless communication, comprising:

a transmitter;

a receiver for receiving an anchor carrier; and

a computing platform for detecting an uplink grant carried on the anchor carrier that assigns resources for a group of uplink non-anchor carriers and

for utilizing the assigned resources via the transmitter by transmitting uplink carrier transmissions on the group of uplink non-anchor carriers in accordance with the detected grant,

the receiver is further for receiving an acknowledgement of receipt of the uplink carrier transmissions on the anchor carrier that sent the uplink grant,

the computing platform is further for accessing a mapping of acknowledgements to multiple carriers and interpreting the acknowledgement for each uplink carrier transmission utilizing the mapping, and

the transmitter is further for retransmitting at least one of the uplink carrier transmissions, wherein the at least one of the uplink carrier transmissions is determined to have been unsuccessfully transmitted.

22. The apparatus of claim 21, wherein the computing platform is further for detecting common system information on the anchor carrier; and

the receiver is further for acquiring at least one of the uplink non-anchor carriers by using the common system information.

23. The apparatus of claim 21, wherein the receiver is further for receiving dedicated information on the anchor carrier, and for acquiring at least one of the uplink non-anchor carriers by using the dedicated information.

24. The apparatus of claim 21, wherein the receiver is further for receiving one of a plurality of anchor carriers, each of the plurality of anchor carriers for assigning resources on a group of carriers.

25. The apparatus of claim 21, wherein the receiver is further for receiving a non-anchor carrier; and

the computing platform is further for detecting a grant carried on the non-anchor carrier that assigns resources on the non-anchor carrier.

26. The apparatus of claim 21, wherein the receiver is further for receiving a non-anchor carrier that was previously received as the anchor carrier subsequent to another carrier no longer requiring assignment of resources.

27. The apparatus of claim 21, wherein the transmitter is further for initiating single carrier communication by synchronizing to the anchor carrier; and

the computing platform is further for detecting a grant on the anchor carrier for a single carrier configured user equipment.

28. The apparatus of claim 27, wherein the receiver is further for synchronizing to primary and secondary synchronization signals of the anchor carrier; and

the computing platform is further for detecting master information block on a Physical Broadcast Channel for identifying system bandwidth, Physical Hybrid Automatic Repeat Request Indicator Channel (PHICH) configuration, and system frame number, and for detecting system information blocks on a downlink shared channel (DL-SCH) for resources on the anchor carrier.

29. The apparatus of claim 27, wherein the computing platform is further for detecting the grant on the anchor carrier for the single carrier configured user equipment by executing a redirection message to another carrier by intra-cell inter-frequency handover.

30. The apparatus of claim 21, wherein the computing platform is further for detecting system information blocks on the anchor carrier for utilizing another carrier comprising carrier location, carrier bandwidth, carrier uplink or downlink designation, carrier pairing, and a new control region.

31. The apparatus of claim 21, wherein
the computing platform is further for determining an implicit pairing to the uplink carrier.

32. The apparatus of claim 21, wherein
the computing platform is further for detecting an explicitly identified uplink carrier.

33. The apparatus of claim 21, wherein the transmitter is further for transmitting channel quality indicator (CQI) feedback for multiple downlink carriers on an uplink anchor carrier.

34. The apparatus of claim 33, wherein the computing platform is further for detecting CQI feedback configuration by detecting an additional system information block on the anchor carrier.

35. The apparatus of claim 33, wherein the computing platform is further for detecting CQI feedback configuration by detecting resource radio control (RRC) signaling.

36. The apparatus of claim 21, wherein the transmitter is further for reporting channel quality indicator (CQI) feedback conveying interference jamming receipt of another carrier; and
the receiver is further for receiving a grant assigning resources on a carrier not jammed by the interference.

37. The apparatus of claim 36, wherein the receiver is further for receiving the grant assigning resources on the carrier not jammed by the interference subsequent to a transmit power control change by either a serving node or an interfering node for multiple carrier reuse.

38. The apparatus of claim 21, wherein the receiver is further for receiving interference jamming receipt of the anchor carrier and for acquiring another carrier comprising a non-anchor carrier; and

the computing platform is further for detecting a grant carried on the non-anchor carrier that assigns resources on the non-anchor carrier.

39. A method for multiple carrier wireless communication, comprising:

scheduling resources for an anchor carrier and a group of non-anchor uplink carriers;

transmitting an uplink grant on the anchor carrier that assigns resources for the group of non-anchor uplink carriers;

communicating with a recipient that utilizes the assigned resources to transmit uplink carrier transmissions on the group of non-anchor uplink carriers in accordance with the grant;

accessing a mapping of acknowledgements to multiple carriers;

transmitting an acknowledgement of receipt of the uplink carrier transmissions on the anchor carrier that sent the uplink grant; and

receiving retransmission of at least one of the uplink carrier transmissions if the at least one of the uplink carrier transmissions was not acknowledged as successfully received.

40. The method of claim 39, further comprising:

determining common system information for acquiring at least one of the non-anchor carriers; and transmitting the common system information on the anchor carrier.

41. The method of claim 39, further comprising:

determining dedicated information for acquiring at least one of the non-anchor carriers; and

transmitting the dedicated information on the anchor carrier.

42. The method of claim 39, further comprising transmitting one of a plurality of anchor carriers, each anchor carrier for assigning resources on a group of carriers.

43. The method of claim 39, further comprising transmitting a grant on a non-anchor carrier that assigns resources on the non-anchor carrier.

44. The method of claim 43, further comprising:

determining that no scheduling is necessary for non-anchor carriers; and transmitting a non-anchor carrier that was previously transmitted as the anchor carrier.

45. The method of claim 39, further comprising:

receiving an initiation of single carrier communication; and

transmitting a grant on the anchor carrier for a single carrier configured user equipment.

46. The method of claim 45, further comprising:

transmitting primary and secondary synchronization signals on the anchor carrier;

transmitting master information block on a Physical Broadcast Channel for identifying system bandwidth, Physical Hybrid Automatic Repeat Request Indicator Channel (PHICH) configuration, and system frame number; and

transmitting system information blocks on a downlink shared channel (DL-SCH) for resources on the anchor carrier.

47. The method of claim 45, further comprising transmitting the grant on the anchor carrier for the single carrier configured user equipment by transmitting a redirection message to another carrier by intra-cell inter-frequency handover.

48. The method of claim 39, further comprising transmitting system information blocks on the anchor carrier for utilizing the another carrier comprising carrier location, carrier bandwidth, carrier uplink or downlink designation, carrier pairing, and a new control region.

49. The method of claim 39, further comprising transmitting the uplink grant on the anchor carrier with an implicit pairing to an uplink carrier.

50. The method of claim 39, further comprising transmitting the uplink grant on the anchor carrier with an explicitly identified uplink carrier.

51. The method of claim 39, further comprising receiving channel quality indicator (CQI) feedback for multiple downlink carriers on an uplink anchor carrier.

52. The method of claim 51, further comprising transmitting CQI feedback configuration by an additional system information block on the anchor carrier.

53. The method of claim 51, further comprising transmitting CQI feedback configuration by resource radio control (RRC) signaling.

54. The method of claim 51, further comprising:

receiving channel quality indicator (CQI) feedback conveying interference jamming receipt of the another carrier; and

transmitting a grant assigning resources on a carrier not jammed by the interference.

55. The method of claim 54, further comprising:

selecting an anchor carrier that does not interfere with a neighboring anchor carrier for multiple carrier reuse.

56. The method of claim 55, further comprising adjusting transmit power of the anchor carrier to avoid interfering with the neighboring anchor carrier.

57. The method of claim 55, further comprising requesting adjustment of transmit power of the neighboring anchor carrier by backhaul communication.

58. The method of claim 54, further comprising:

transmitting the anchor carrier that is being jammed by interference;

transmitting another carrier comprising a non-anchor carrier; and

transmitting a grant on the non-anchor carrier that assigns resources on the non-anchor carrier.

59. A computer program product for multiple carrier wireless communication, comprising:

at least one computer readable, non-transitory, storage medium storing computer executable instructions that when executed by at least one processor implement components comprising:

a first set of instructions for causing a computer to schedule resources for an anchor carrier and a group of non-anchor uplink carriers;

a second set of instructions for causing the computer to transmit an uplink grant on the anchor carrier that assigns resources for the group of non-anchor uplink carriers;

a third set of instructions for causing the computer to communicate with a recipient that utilizes the assigned resources to transmit uplink carrier transmissions on the group of non-anchor uplink carriers in accordance with the grant;

a fourth set of instructions for causing the computer to access a mapping of acknowledgements to multiple carriers;

a fifth set of instructions for causing the computer to transmit an acknowledgement of receipt of the uplink carrier transmissions on the anchor carrier that sent the uplink grant; and

a sixth set of instructions for causing the computer to receive retransmission of at least one of the uplink carrier transmissions if the at least one of the uplink carrier transmissions was not acknowledged as successfully received.

60. An apparatus for multiple carrier wireless communication, comprising:

at least one processor;

at least one computer readable storage medium storing computer executable instructions that when executed by the at least one processor implement components comprising:

means for scheduling resources for an anchor carrier and a group of non-anchor uplink carriers;

means for transmitting an uplink grant on the anchor carrier that assigns resources for the group of non-anchor uplink carriers;

means for communicating with a recipient that utilizes the assigned resources to transmit uplink carrier transmissions on the group of non-anchor uplink carriers in accordance with the grant;

means for accessing a mapping of acknowledgements to multiple carriers;

means for transmitting an acknowledgement of receipt of the uplink carrier transmissions on the anchor carrier that sent the uplink grant; and

means for receiving retransmission of at least one of the uplink carrier transmissions if the at least one of the uplink carrier transmissions was not acknowledged as successfully received.

61. An apparatus for multiple carrier communication, comprising:

a scheduler for scheduling resources for an anchor carrier and a group of non-anchor uplink carriers;

a transmitter for transmitting a grant on the anchor carrier that assigns resources for the group of non-anchor uplink carriers; and

a receiver for communicating with a recipient that utilizes the assigned resources on the group of non-anchor uplink carriers in accordance with the grant;

accessing a mapping of acknowledgements to multiple carriers;

transmitting an acknowledgement of receipt of the uplink carrier transmissions on the anchor carrier that sent the uplink grant; and

receiving retransmission of at least one of the uplink carrier transmissions if the at least one of the uplink carrier transmissions was not acknowledged as successfully received.

62. The apparatus of claim 61, wherein the scheduler is further for determining common system information for acquiring at least one of the non-anchor uplink carriers; and
the transmitter is further for transmitting the common system information on the anchor carrier.

63. The apparatus of claim 61, wherein the scheduler is further for determining dedicated information for acquiring at least one of the non-anchor uplink carriers; and
the transmitter is further for transmitting the dedicated information on the anchor carrier.

64. The apparatus of claim 61, wherein the transmitter is further for transmitting one of a plurality of anchor carriers, each anchor carrier for assigning resources on a group of carriers.

65. The apparatus of claim 61, wherein the transmitter is further for transmitting a grant on a non-anchor carrier that assigns resources on the non-anchor carrier.

66. The apparatus of claim 65, wherein the scheduler is further for determining that no scheduling is necessary for non-anchor carriers; and

the transmitter is further for transmitting a non-anchor carrier that was previously transmitted as the anchor carrier.

67. The apparatus of claim 61, wherein the receiver is further for receiving an initiation of single carrier communication; and

the transmitter is further for transmitting a grant on the anchor carrier for a single carrier configured user equipment.

68. The apparatus of claim 67, wherein the transmitter is further for transmitting primary and secondary synchronization signals on the anchor carrier, for transmitting master information block on a Physical Broadcast Channel for identifying system bandwidth, Physical Hybrid Automatic Repeat Request Indicator Channel (PHICH) configuration, and system frame number, and transmitting system information blocks on downlink shared channel (DL-SCH) for resources on the anchor carrier.

69. The apparatus of claim 67, wherein the transmitter is further for transmitting the grant on the anchor carrier for the single carrier configured user equipment by transmitting a redirection message to another carrier by intra-cell inter-frequency handover.

70. The apparatus of claim 61, wherein the transmitter is further for transmitting system information blocks on the anchor carrier for utilizing at least one of the non-anchor uplink carriers comprising carrier location, carrier bandwidth, carrier uplink or downlink designation, carrier pairing, and a new control region.

71. The apparatus of claim 61, wherein the transmitter is further for transmitting the uplink grant on the anchor carrier with an implicit pairing to an uplink carrier.

72. The apparatus of claim 61, wherein the transmitter is further for transmitting the uplink grant on the anchor carrier with an explicitly identified uplink carrier.

73. The apparatus of claim 61, further comprising receiving channel quality indicator (CQI) feedback for multiple downlink carriers on an uplink anchor carrier.

74. The apparatus of claim 73, further comprising transmitting CQI feedback configuration by an additional system information block on the anchor carrier.

75. The apparatus of claim 73, further comprising transmitting CQI feedback configuration by resource radio control (RRC) signaling.

76. The apparatus of claim 61, further comprising:

receiving channel quality indicator (CQI) feedback conveying interference jamming receipt of another carrier; and

transmitting a grant assigning resources on a carrier not jammed by the interference.

77. The apparatus of claim 76, further comprising:

selecting an anchor carrier that does not interfere with a neighboring anchor carrier for multiple carrier reuse.

78. The apparatus of claim 77, further comprising adjusting transmit power of the anchor carrier to avoid interfering with the neighboring anchor carrier.

79. The apparatus of claim 77, further comprising requesting adjustment of transmit power of the neighboring anchor carrier by backhaul communication.

80. The apparatus of claim 76, further comprising:

transmitting the anchor carrier that is being jammed by interference;

transmitting another carrier comprising a non-anchor carrier; and

transmitting a grant on the non-anchor carrier that assigns resources on the non-anchor carrier.