

CLAIMS

1. A method of wireless communication, comprising:
 - receiving at least one cell identifier, each cell identifier corresponding to a cell from which interference should be canceled;
 - removing, from a received signal, interference received from cells corresponding to one or more of the at least one cell identifier; and
 - transmitting a report, the report comprising a quality measurement of the received signal without the interference.
2. The method of claim 1, wherein the quality measurement is a received signal received quality (RSRQ) measurement and the report is a radio resource management (RRM) report.
3. The method of claim 1, further comprising receiving configuration information, the configuration information identifying a first set of resources for quality measurement and communication;
 - wherein the quality measurement corresponds to a measurement of the first set of resources in the received signal.
4. The method of claim 3, further comprising receiving second configuration information, the second configuration information identifying a second set of resources for quality measurement;
 - wherein the report further comprises a second quality measurement corresponding to the second set of resources in the received signal.
5. The method of claim 4, wherein the second set of resources is not configured for communication.
6. The method of claim 1, wherein the interference comprises at least one of cell-specific reference signals (CRS), a physical downlink shared channel (PDSCH), a physical downlink control channel (PDCCH), or a physical control format indicator channel (PCFICH).

7. The method of claim 6, further comprising receiving information comprising at least one of a radio network temporary identifier (RNTI) for each radio network from which the PDCCH/PCFICH is received, a control channel element (CCE) aggregation level, and a relative power ratio between resource elements (REs) used for the PDCCH/PCFICH and REs used for reference signals;

wherein the interference is removed from the received signal based on the received information, and the interference comprises at least one of the PDCCH or the PCFICH.

8. The method of claim 1, further comprising transmitting a second report comprising a quality measurement of the received signal with the interference.

9. The method of claim 1, further comprising:

receiving at least one synchronization signal from a cell corresponding to one of the at least one cell identifier;

removing interference corresponding to an additionally received synchronization signal from the received at least one synchronization signal; and

detecting the cell based on the at least one synchronization signal without the interference corresponding to the additionally received synchronization signal.

10. The method of claim 1, further comprising detecting a cell corresponding to one of the at least one cell identifier based on positioning reference signals (PRS).

11. The method of claim 1, further comprising:

receiving a physical broadcast channel (PBCH) from a cell corresponding to one of the at least one cell identifier;

removing interference of an additionally received PBCH from the received PBCH in order to detect the cell; and

detecting the cell based on the PBCH without the interference of the additionally received PBCH.

12. The method of claim 1, further comprising detecting a cell corresponding to one of the at least one cell identifier based on a physical broadcast channel (PBCH) of a neighbor cell received from a serving cell.

13. A method of wireless communication, comprising:

transmitting at least one cell identifier to a user equipment (UE), each cell identifier corresponding to a cell whose transmitted signal is identified for interference cancellation;

transmitting a signal to the UE;

receiving a report comprising a quality measurement of the transmitted signal;

and

determining whether the UE is capable of canceling interference based on whether the quality measurement of the transmitted signal corresponds to the transmitted signal without interference.

14. The method of claim 13, further comprising determining whether to serve the UE based on whether the UE is capable of canceling the interference.

15. The method of claim 13, wherein the quality measurement is a received signal received quality (RSRQ) measurement and the report is a radio resource management (RRM) report.

16. The method of claim 13, further comprising configuring the UE to communicate through a first set of resources, wherein the quality measurement corresponds to signals transmitted in the first set of resources.

17. The method of claim 16, further comprising configuring the UE to provide the quality measurement for a second set of resources, the UE being unconfigured to communicate over the second set of resources, and wherein the quality measurement further corresponds to signals transmitted over the second set of resources.

18. The method of claim 13, wherein the interference comprises at least one of cell-specific reference signals (CRS), a physical downlink shared channel (PDSCH), a

physical downlink control channel (PDCCH), or a physical control format indicator channel (PCFICH).

19. The method of claim 18, wherein the interference comprises at least one of the PDCCH or the PCFICH; and

the method further comprising transmitting information comprising at least one of a radio network temporary identifier (RNTI) for each radio network from which the PDCCH/PCFICH is received by the UE, a control channel element (CCE) aggregation level, and a relative power ratio between resource elements (REs) used for the PDCCH/PCFICH and REs used for reference signals.

20. The method of claim 13, further comprising receiving a second report comprising a quality measurement of the transmitted signal with the interference.

21. A method of wireless communication, comprising:

receiving information comprising at least one of a radio network temporary identifier (RNTI) for each radio network from which at least one of a physical downlink control channel (PDCCH) or a physical control format indicator channel (PCFICH) is received, a control channel element (CCE) aggregation level, and a relative power ratio between resource elements (REs) used for said at least one of the PDCCH or the PCFICH and REs used for reference signals;

receiving interference from at least one of said each radio network from which at least one of the PDCCH or the PCFICH is received; and

canceling the interference in a received signal based on the information.

22. An apparatus for wireless communication, comprising:

means for receiving at least one cell identifier, each cell identifier corresponding to a cell from which interference should be canceled;

means for removing, from a received signal, interference received from cells corresponding to one or more of the at least one cell identifier; and

means for transmitting a report, the report comprising a quality measurement of the received signal without the interference.

23. The apparatus of claim 22, wherein the quality measurement is a received signal received quality (RSRQ) measurement and the report is a radio resource management (RRM) report.

24. The apparatus of claim 22, further comprising means for receiving configuration information, the configuration information identifying a first set of resources for quality measurement and communication;

wherein the quality measurement corresponds to a measurement of the first set of resources in the received signal.

25. The apparatus of claim 24, further comprising means for receiving second configuration information, the second configuration information identifying a second set of resources for quality measurement;

wherein the report further comprises a second quality measurement corresponding to the second set of resources in the received signal.

26. The apparatus of claim 25, wherein the second set of resources is not configured for communication.

27. The apparatus of claim 22, wherein the interference comprises at least one of cell-specific reference signals (CRS), a physical downlink shared channel (PDSCH), a physical downlink control channel (PDCCH), or a physical control format indicator channel (PCFICH).

28. The apparatus of claim 27, further comprising means for receiving information comprising at least one of a radio network temporary identifier (RNTI) for each radio network from which the PDCCH/PCFICH is received, a control channel element (CCE) aggregation level, and a relative power ratio between resource elements (REs) used for the PDCCH/PCFICH and REs used for reference signals;

wherein the interference is removed from the received signal based on the received information, and the interference comprises at least one of the PDCCH or the PCFICH.

29. The apparatus of claim 22, further comprising means for transmitting a second report comprising a quality measurement of the received signal with the interference.

30. The apparatus of claim 22, further comprising:

means for receiving at least one synchronization signal from a cell corresponding to one of the at least one cell identifier;

means for removing interference corresponding to an additionally received synchronization signal from the received at least one synchronization signal; and

means for detecting the cell based on the at least one synchronization signal without the interference corresponding to the additionally received synchronization signal.

31. The apparatus of claim 22, further comprising means for detecting a cell corresponding to one of the at least one cell identifier based on positioning reference signals (PRS).

32. The apparatus of claim 22, further comprising:

means for receiving a physical broadcast channel (PBCH) from a cell corresponding to one of the at least one cell identifier;

means for removing interference of an additionally received PBCH from the received PBCH in order to detect the cell; and

means for detecting the cell based on the PBCH without the interference of the additionally received PBCH.

33. The apparatus of claim 22, further comprising means for detecting a cell corresponding to one of the at least one cell identifier based on a physical broadcast channel (PBCH) of a neighbor cell received from a serving cell.

34. An apparatus for wireless communication, comprising:

means for transmitting at least one cell identifier to a user equipment (UE), each cell identifier corresponding to a cell whose transmitted signal is identified for interference cancellation;

means for transmitting a signal to the UE;

means for receiving a report comprising a quality measurement of the transmitted signal; and

means for determining whether the UE is capable of canceling interference based on whether the quality measurement of the transmitted signal corresponds to the transmitted signal without interference.

35. The apparatus of claim 34, further comprising means for determining whether to serve the UE based on whether the UE is capable of canceling the interference.

36. The apparatus of claim 34, wherein the quality measurement is a received signal received quality (RSRQ) measurement and the report is a radio resource management (RRM) report.

37. The apparatus of claim 34, further comprising means for configuring the UE to communicate through a first set of resources, wherein the quality measurement corresponds to signals transmitted in the first set of resources.

38. The apparatus of claim 37, further comprising means for configuring the UE to provide the quality measurement for a second set of resources, the UE being unconfigured to communicate over the second set of resources, and wherein the quality measurement further corresponds to signals transmitted over the second set of resources.

39. The apparatus of claim 34, wherein the interference comprises at least one of cell-specific reference signals (CRS), a physical downlink shared channel (PDSCH), a physical downlink control channel (PDCCH), or a physical control format indicator channel (PCFICH).

40. The apparatus of claim 39, wherein the interference comprises at least one of the PDCCH or the PCFICH; and

the apparatus further comprises means for transmitting information comprising at least one of a radio network temporary identifier (RNTI) for each radio network from which the PDCCH/PCFICH is received by the UE, a control channel element (CCE) aggregation level, and a relative power ratio between resource elements (REs) used for the PDCCH/PCFICH and REs used for reference signals.

41. The apparatus of claim 34, further comprising means for receiving a second report comprising a quality measurement of the transmitted signal with the interference.

42. An apparatus for wireless communication, comprising:

means for receiving information comprising at least one of a radio network temporary identifier (RNTI) for each radio network from which at least one of a physical downlink control channel (PDCCH) or a physical control format indicator channel (PCFICH) is received, a control channel element (CCE) aggregation level, and a relative power ratio between resource elements (REs) used for said at least one of the PDCCH or the PCFICH and REs used for reference signals;

means for receiving interference from at least one of said each radio network from which at least one of the PDCCH or the PCFICH is received; and

means for canceling the interference in a received signal based on the information.

43. An apparatus for wireless communication, comprising:

a processing system configured to:

receive at least one cell identifier, each cell identifier corresponding to a cell from which interference should be canceled;

remove, from a received signal, interference received from cells corresponding to one or more of the at least one cell identifier; and

transmit a report, the report comprising a quality measurement of the received signal without the interference.

44. The apparatus of claim 43, wherein the quality measurement is a received signal received quality (RSRQ) measurement and the report is a radio resource management (RRM) report.

45. The apparatus of claim 43, wherein the processing system is further configured to receive configuration information, the configuration information identifying a first set of resources for quality measurement and communication;

wherein the quality measurement corresponds to a measurement of the first set of resources in the received signal.

46. The apparatus of claim 45, wherein the processing system is further configured to receive second configuration information, the second configuration information identifying a second set of resources for quality measurement;

wherein the report further comprises a second quality measurement corresponding to the second set of resources in the received signal.

47. The apparatus of claim 46, wherein the second set of resources is not configured for communication.

48. The apparatus of claim 43, wherein the interference comprises at least one of cell-specific reference signals (CRS), a physical downlink shared channel (PDSCH), a physical downlink control channel (PDCCH), or a physical control format indicator channel (PCFICH).

49. The apparatus of claim 48, wherein the processing system is further configured to receive information comprising at least one of a radio network temporary identifier (RNTI) for each radio network from which the PDCCH/PCFICH is received, a control channel element (CCE) aggregation level, and a relative power ratio between resource elements (REs) used for the PDCCH/PCFICH and REs used for reference signals;

wherein the interference is removed from the received signal based on the received information, and the interference comprises at least one of the PDCCH or the PCFICH.

50. The apparatus of claim 43, wherein the processing system is further configured to transmit a second report comprising a quality measurement of the received signal with the interference.

51. The apparatus of claim 43, wherein the processing system is further configured to:

- receive at least one synchronization signal from a cell corresponding to one of the at least one cell identifier;
- remove interference corresponding to an additionally received synchronization signal from the received at least one synchronization signal; and
- detect the cell based on the at least one synchronization signal without the interference corresponding to the additionally received synchronization signal.

52. The apparatus of claim 43, wherein the processing system is further configured to detect a cell corresponding to one of the at least one cell identifier based on positioning reference signals (PRS).

53. The apparatus of claim 43, wherein the processing system is further configured to:

- receive a physical broadcast channel (PBCH) from a cell corresponding to one of the at least one cell identifier;
- remove interference of an additionally received PBCH from the received PBCH in order to detect the cell; and
- detect the cell based on the PBCH without the interference of the additionally received PBCH.

54. The apparatus of claim 43, wherein the processing system is further configured to detect a cell corresponding to one of the at least one cell identifier based on a physical broadcast channel (PBCH) of a neighbor cell received from a serving cell.

55. An apparatus for wireless communication, comprising:

a processing system configured to:

transmit at least one cell identifier to a user equipment (UE), each cell identifier corresponding to a cell whose transmitted signal is identified for interference cancellation;

transmit a signal to the UE;

receive a report comprising a quality measurement of the transmitted signal; and

determine whether the UE is capable of canceling interference based on whether the quality measurement of the transmitted signal corresponds to the transmitted signal without interference.

56. The apparatus of claim 55, wherein the processing system is further configured to determine whether to serve the UE based on whether the UE is capable of canceling the interference.

57. The apparatus of claim 55, wherein the quality measurement is a received signal received quality (RSRQ) measurement and the report is a radio resource management (RRM) report.

58. The apparatus of claim 55, wherein the processing system is further configured to configure the UE to communicate through a first set of resources, wherein the quality measurement corresponds to signals transmitted in the first set of resources.

59. The apparatus of claim 58, wherein the processing system is further configured to configure the UE to provide the quality measurement for a second set of resources, the UE being unconfigured to communicate over the second set of resources, and wherein the quality measurement further corresponds to signals transmitted over the second set of resources.

60. The apparatus of claim 55, wherein the interference comprises at least one of cell-specific reference signals (CRS), a physical downlink shared channel (PDSCH), a physical downlink control channel (PDCCH), or a physical control format indicator channel (PCFICH).

61. The apparatus of claim 60, wherein the interference comprises at least one of the PDCCH or the PCFICH; and

the processing system is further configured to transmit information comprising at least one of a radio network temporary identifier (RNTI) for each radio network from which the PDCCH/PCFICH is received by the UE, a control channel element (CCE) aggregation level, and a relative power ratio between resource elements (REs) used for the PDCCH/PCFICH and REs used for reference signals.

62. The apparatus of claim 55, wherein the processing system is further configured to receive a second report comprising a quality measurement of the transmitted signal with the interference.

63. An apparatus for wireless communication, comprising:

a processing system configured to:

receive information comprising at least one of a radio network temporary identifier (RNTI) for each radio network from which at least one of a physical downlink control channel (PDCCH) or a physical control format indicator channel (PCFICH) is received, a control channel element (CCE) aggregation level, and a relative power ratio between resource elements (REs) used for said at least one of the PDCCH or the PCFICH and REs used for reference signals;

receive interference from at least one of said each radio network from which at least one of the PDCCH or the PCFICH is received; and

cancel the interference in a received signal based on the information.

64. A computer program product, comprising:

a computer-readable medium comprising code for:

receiving at least one cell identifier, each cell identifier corresponding to a cell from which interference should be canceled;

removing, from a received signal, interference received from cells corresponding to one or more of the at least one cell identifier; and

transmitting a report, the report comprising a quality measurement of the received signal without the interference.

65. A computer program product, comprising:

a computer-readable medium comprising code for:

transmitting at least one cell identifier to a user equipment (UE), each cell identifier corresponding to a cell whose transmitted signal is identified for interference cancellation;

transmitting a signal to the UE;

receiving a report comprising a quality measurement of the transmitted signal;

and

determining whether the UE is capable of canceling interference based on whether the quality measurement of the transmitted signal corresponds to the transmitted signal without interference.

66. A computer program product, comprising:

a computer-readable medium comprising code for:

receiving information comprising at least one of a radio network temporary identifier (RNTI) for each radio network from which at least one of a physical downlink control channel (PDCCH) or a physical control format indicator channel (PCFICH) is received, a control channel element (CCE) aggregation level, and a relative power ratio between resource elements (REs) used for said at least one of the PDCCH or the PCFICH and REs used for reference signals;

receiving interference from at least one of said each radio network from which at least one of the PDCCH or the PCFICH is received; and

canceling the interference in a received signal based on the information.

CLAIMS

1. A method of wireless communication, comprising:
 - receiving first configuration information identifying a first set of resources for quality measurement;
 - receiving second configuration information, from a serving base station, including a list of cell identifiers, each cell identifier identifying a neighbor base station from which interference should be canceled, wherein the interference comprises at least one of a physical downlink control channel (PDCCH) or a physical control format indicator channel (PCFICH);
 - receiving, from the serving base station, information comprising at least one of
 - a radio network temporary identifier (RNTI) for each radio network from which the PDCCH or PCFICH is received,
 - a control channel element (CCE) aggregation level, or
 - a relative power ratio between resource elements (REs) used for the PDCCH or PCFICH and REs used for reference signals;
 - removing, from a received signal, interference received from neighbor base stations identified in the list of cell identifiers, wherein the interference is removed from the received signal based on the received information; and
 - transmitting a report, the report comprising a quality measurement of the received signal without the interference.
2. The method of claim 1, wherein the quality measurement is a received signal received quality (RSRQ) measurement and the report is a radio resource management (RRM) report.
3. The method of claim 1,
 - wherein the quality measurement corresponds to a measurement of the first set of resources in the received signal.
4. The method of claim 3, further comprising receiving additional configuration information, the additional configuration information identifying a second set of resources for quality measurement;

wherein the report further comprises a second quality measurement corresponding to the second set of resources in the received signal.

5. The method of claim 4, wherein the second set of resources is not configured for communication.

6. The method of claim 1, further comprising transmitting a second report comprising a quality measurement of the received signal with the interference.

7. A method of wireless communication, comprising:
receiving first configuration information identifying a first set of resources for quality measurement;
receiving second configuration information, from a serving base station, including a list of cell identifiers, each cell identifier identifying a neighbor base station from which interference should be canceled;
receiving a signal, including at least one synchronization signal from a cell corresponding to one of the at least one cell identifier;
removing interference corresponding to an additionally received synchronization signal from the at least one synchronization signal; and
transmitting a report, the report comprising a quality measurement of the at least one synchronization signal without the interference.

8. The method of claim 1, further comprising detecting a cell corresponding to one of the at least one cell identifier based on positioning reference signals (PRS).

9. A method of wireless communication, comprising:
receiving first configuration information identifying a first set of resources for quality measurement;
receiving second configuration information, from a serving base station, including a list of cell identifiers, each cell identifier identifying a neighbor base station from which interference should be canceled;

receiving a physical broadcast channel (PBCH) from a cell corresponding to one of the list of cell identifiers;

removing interference of an additionally received PBCH from the received PBCH; and

transmitting a report, the report comprising a quality measurement of the PBCH without the interference.

10. The method of claim 1, further comprising detecting a cell corresponding to one of the at least one cell identifier based on a physical broadcast channel (PBCH) of a neighbor cell.

11. A method of wireless communication, comprising:

transmitting first configuration information identifying a first set of resources for quality measurement;

transmitting second configuration information, from a serving base station, including a list of cell identifiers to a user equipment (UE), each cell identifier identifying a neighbor base station whose transmitted signal is identified for interference cancellation, wherein the interference comprises at least one of a physical downlink control channel (PDCCH) or a physical control format indicator channel (PCFICH);

transmitting a signal to the UE;

transmitting, from the serving base station, information comprising at least one of

a radio network temporary identifier (RNTI) for each radio network from which the PDCCH or PCFICH is received by the UE,

a control channel element (CCE) aggregation level, or

a relative power ratio between resource elements (REs) used for the PDCCH or PCFICH and REs used for reference signals;

receiving a report comprising a quality measurement of the transmitted signal; and

determining whether the UE is capable of canceling interference based on whether the quality measurement of the transmitted signal corresponds to the transmitted signal without interference.

12. The method of claim 11, further comprising determining whether to serve the UE based on whether the UE is capable of canceling the interference.

13. The method of claim 11, wherein the quality measurement is a received signal received quality (RSRQ) measurement and the report is a radio resource management (RRM) report.
14. The method of claim 11, further comprising configuring the UE to communicate through the first set of resources.
15. The method of claim 14, further comprising configuring the UE to provide the quality measurement for the second set of resources, the UE being unconfigured to communicate over the second set of resources, and wherein the quality measurement further corresponds to signals transmitted over the second set of resources.
16. The method of claim 11, further comprising receiving a second report comprising a quality measurement of the transmitted signal with the interference.
17. An apparatus for wireless communication, comprising:
 - means for receiving first configuration information identifying a first set of resources for quality measurement;
 - means for receiving second configuration information, from a serving base station, including a list of cell identifiers, each cell identifier identifying a neighbor base station from which interference should be canceled, wherein the interference comprises at least one of a physical downlink control channel (PDCCH) or a physical control format indicator channel (PCFICH);
 - means for receiving, from the serving base station, information comprising at least one of
 - a radio network temporary identifier (RNTI) for each radio network from which the PDCCH or PCFICH is received,
 - a control channel element (CCE) aggregation level, or
 - a relative power ratio between resource elements (REs) used for the PDCCH or PCFICH and REs used for reference signals;

means for removing, from a received signal, interference received from neighbor base stations identified in the list of cell identifiers, wherein the interference is removed from the received signal based on the received information; and

means for transmitting a report, the report comprising a quality measurement of the received signal without the interference.

18. The apparatus of claim 17, wherein the quality measurement is a received signal received quality (RSRQ) measurement and the report is a radio resource management (RRM) report.

19. The apparatus of claim 17,
wherein the quality measurement corresponds to a measurement of the first set of resources in the received signal.

20. The apparatus of claim 19, the second configuration information identifying a second set of resources for quality measurement;
wherein the report further comprises a second quality measurement corresponding to the second set of resources in the received signal.

21. The apparatus of claim 20, wherein the second set of resources is not configured for communication.

22. The apparatus of claim 17, further comprising means for transmitting a second report comprising a quality measurement of the received signal with the interference.

23. An apparatus for wireless communication, comprising:
means for receiving first configuration information identifying a first set of resources for quality measurement;
means for receiving second configuration information, from a serving base station, including a list of cell identifiers, each cell identifier identifying a neighbor base station from which interference should be canceled;

means for receiving at least one synchronization signal from a cell corresponding to one of the at least one cell identifier;

means for removing interference corresponding to an additionally received synchronization signal from the at least one synchronization signal; and

means for transmitting a report, the report comprising a quality measurement of the at least one synchronization signal without the interference.

24. The apparatus of claim 17, further comprising means for detecting a cell corresponding to one of the at least one cell identifier based on positioning reference signals (PRS).

25. An apparatus for wireless communication, comprising:

means for receiving first configuration information identifying a first set of resources for quality measurement;

means for receiving second configuration information, from a serving base station, including a list of cell identifiers, each cell identifier identifying a neighbor base station from which interference should be canceled;

means for receiving a physical broadcast channel (PBCH) from a cell corresponding to one of the list of cell identifiers;

means for removing interference of an additionally received PBCH from the PBCH; and

means for transmitting a report, the report comprising a quality measurement of the PBCH without the interference.

26. The apparatus of claim 17, further comprising means for detecting a cell corresponding to one of the at least one cell identifier based on a physical broadcast channel (PBCH) of a neighbor cell.

27. An apparatus for wireless communication, comprising:

means for transmitting first configuration information identifying a first set of resources for quality measurement;

means for transmitting second configuration information, from a serving base station, including a list of cell identifiers to a user equipment (UE), each cell identifier identifying a

neighbor base station whose transmitted signal is identified for interference cancellation, wherein the interference comprises at least one of a physical downlink control channel (PDCCH) or a physical control format indicator channel (PCFICH);

means for transmitting a signal to the UE;

means for transmitting, from the serving base station, information comprising at least one of

a radio network temporary identifier (RNTI) for each radio network from which the PDCCH or PCFICH is received by the UE,

a control channel element (CCE) aggregation level, or

a relative power ratio between resource elements (REs) used for the PDCCH or PCFICH and REs used for reference signals;

means for receiving a report comprising a quality measurement of the transmitted signal;

and

means for determining whether the UE is capable of canceling interference based on whether the quality measurement of the transmitted signal corresponds to the transmitted signal without interference.

28. The apparatus of claim 27, further comprising means for determining whether to serve the UE based on whether the UE is capable of canceling the interference.

29. The apparatus of claim 27, wherein the quality measurement is a received signal received quality (RSRQ) measurement and the report is a radio resource management (RRM) report.

30. The apparatus of claim 27, further comprising means for configuring the UE to communicate through the first set of resources.

31. The apparatus of claim 30, further comprising means for configuring the UE to provide the quality measurement for the second set of resources, the UE being unconfigured to communicate over the second set of resources, and wherein the quality measurement further corresponds to signals transmitted over the second set of resources.

32. The apparatus of claim 27, further comprising means for receiving a second report comprising a quality measurement of the transmitted signal with the interference.
33. An apparatus for wireless communication, comprising:
a memory;
at least one processor coupled to the memory, and configured to:
 receive first configuration information identifying a first set of resources for quality measurement;
 receive second configuration information, from a serving base station, including a list of cell identifiers, each cell identifier identifying a neighbor base station from which interference should be canceled, wherein the interference comprises at least one of a physical downlink control channel (PDCCH) or a physical control format indicator channel (PCFICH);
 receive, from the serving base station, information comprising at least one of
 a radio network temporary identifier (RNTI) for each radio network from which the PDCCH or PCFICH is received,
 a control channel element (CCE) aggregation level, or
 a relative power ratio between resource elements (REs) used for the PDCCH or PCFICH and REs used for reference signals;
 remove, from a received signal, interference received from neighbor base stations identified in the list of cell identifiers, wherein the interference is removed from the received signal based on the received information; and
 transmit a report, the report comprising a quality measurement of the received signal without the interference.
34. The apparatus of claim 33, wherein the quality measurement is a received signal received quality (RSRQ) measurement and the report is a radio resource management (RRM) report.
35. The apparatus of claim 33,
 wherein the quality measurement corresponds to a measurement of the first set of resources in the received signal.

36. The apparatus of claim 35, the second configuration information identifying a second set of resources for quality measurement;
wherein the report further comprises a second quality measurement corresponding to the second set of resources in the received signal.
37. The apparatus of claim 36, wherein the second set of resources is not configured for communication.
38. The apparatus of claim 33, wherein the processing system is further configured to transmit a second report comprising a quality measurement of the received signal with the interference.
39. An apparatus for wireless communication, comprising:
a memory; and
at least one processor coupled to said memory, and configured to:
receive first configuration information identifying a first set of resources for quality measurement;
receive second configuration information, from a serving base station, including a list of cell identifiers, each cell identifier identifying a neighbor base station from which interference should be canceled;
receive at least one synchronization signal from a cell corresponding to one of the at least one cell identifier;
remove interference corresponding to an additionally received synchronization signal from the at least one synchronization signal; and
transmit a report, the report comprising a quality measurement of the at least one synchronization signal without the interference.
40. The apparatus of claim 33, wherein the processing system is further configured to detect a cell corresponding to one of the at least one cell identifier based on positioning reference signals (PRS).

41. An apparatus for wireless communication, comprising:
 - a memory; and
 - at least one processor coupled to said memory, and configured to:
 - receive first configuration information identifying a first set of resources for quality measurement;
 - receive second configuration information, from a serving base station, including a list of cell identifiers, each cell identifier identifying a neighbor base station from which interference should be canceled;
 - receive a physical broadcast channel (PBCH) from a cell corresponding to one of the list of cell identifiers;
 - remove interference of an additionally received PBCH from the PBCH; and
 - transmit a report, the report comprising a quality measurement of the PBCH signal without the interference.
42. The apparatus of claim 33, wherein the processing system is further configured to detect a cell corresponding to one of the at least one cell identifier based on a physical broadcast channel (PBCH) of a neighbor cell.
43. An apparatus for wireless communication, comprising:
 - a memory; and
 - at least one processor coupled to said memory, and configured to:
 - transmit first configuration information identifying a first set of resources for quality measurement;
 - transmit second configuration information, from a serving base station, including a list of cell identifiers to a user equipment (UE), each cell identifier identifying a neighbor base station whose transmitted signal is identified for interference cancellation, wherein the interference comprises at least one of a physical downlink control channel (PDCCH) or a physical control format indicator channel (PCFICH);
 - transmit a signal to the UE;
 - transmit, from the serving base station, information comprising at least one of

a radio network temporary identifier (RNTI) for each radio network from which the PDCCH OR PCFICH is received by the UE,
 a control channel element (CCE) aggregation level, or
 a relative power ratio between resource elements (REs) used for the PDCCH OR PCFICH and REs used for reference signals;
 receive a report comprising a quality measurement of the transmitted signal; and
 determine whether the UE is capable of canceling interference based on whether the quality measurement of the transmitted signal corresponds to the transmitted signal without interference.

44. The apparatus of claim 43, wherein the processing system is further configured to determine whether to serve the UE based on whether the UE is capable of canceling the interference.

45. The apparatus of claim 43, wherein the quality measurement is a received signal received quality (RSRQ) measurement and the report is a radio resource management (RRM) report.

46. The apparatus of claim 43, wherein the processing system is further configured to configure the UE to communicate through the first set of resources.

47. The apparatus of claim 46, wherein the processing system is further configured to configure the UE to provide the quality measurement for the second set of resources, the UE being unconfigured to communicate over the second set of resources, and wherein the quality measurement further corresponds to signals transmitted over the second set of resources.

48. The apparatus of claim 43, wherein the processing system is further configured to receive a second report comprising a quality measurement of the transmitted signal with the interference.

49. A computer program product stored on a non-transitory computer-readable medium and comprising code for:

receiving first configuration information identifying a first set of resources for quality measurement;

receiving second configuration information, from a serving base station, including a list of cell identifiers, each cell identifier identifying a neighbor base station from which interference should be canceled, wherein the interference comprises at least one of a physical downlink control channel (PDCCH) or a physical control format indicator channel (PCFICH);

receiving, from the serving base station, information comprising at least one of

a radio network temporary identifier (RNTI) for each radio network from which the PDCCH OR PCFICH is received,

a control channel element (CCE) aggregation level, or

a relative power ratio between resource elements (REs) used for the PDCCH OR PCFICH and REs used for reference signals;

removing, from a received signal, interference received from neighbor base stations identified in the list of cell identifiers, wherein the interference is removed from the received signal based on the received information; and

transmitting a report, the report comprising a quality measurement of the received signal without the interference.

50. A computer program product stored on a non-transitory computer-readable medium and comprising code for:

transmitting first configuration information identifying a first set of resources for quality measurement;

transmitting second configuration information, from a serving base station, including a list of cell identifiers to a user equipment (UE), each cell identifier identifying a neighbor base station whose transmitted signal is identified for interference cancellation, wherein the interference comprises at least one of a physical downlink control channel (PDCCH) or a physical control format indicator channel (PCFICH);

transmitting a signal to the UE;

transmitting, from the serving base station, information comprising at least one of

a radio network temporary identifier (RNTI) for each radio network from which the PDCCH or PCFICH is received by the UE,

a control channel element (CCE) aggregation level, or
 a relative power ratio between resource elements (REs) used for the
 PDCCH or PCFICH and REs used for reference signals;
 receiving a report comprising a quality measurement of the transmitted signal; and
 determining whether the UE is capable of canceling interference based on whether the
 quality measurement of the transmitted signal corresponds to the transmitted signal without
 interference.

51. A computer program product stored on a non-transitory computer-readable medium and comprising code for:

receiving first configuration information identifying a first set of resources for quality measurement;
 receiving second configuration information, from a serving base station, including a list of cell identifiers, each cell identifier identifying a neighbor base station from which interference should be canceled;
 receiving at least one synchronization signal from a cell corresponding to one of the list of cell identifiers;
 removing interference corresponding to an additionally received synchronization signal from the at least one synchronization signal; and
 transmitting a report, the report comprising a quality measurement of the at least one synchronization signal without the interference.

52. A computer program product stored on a non-transitory computer-readable medium and comprising code for:

receiving first configuration information identifying a first set of resources for quality measurement;
 receiving second configuration information, from a serving base station, including a list of cell identifiers, each cell identifier identifying a neighbor base station from which interference should be canceled;
 receiving a physical broadcast channel (PBCH) from a cell corresponding to one of the list of cell identifiers;

removing interference of an additionally received PBCH from the PBCH; and
transmitting a report, the report comprising a quality measurement of the PBCH without
the interference.