

CLAIMS

1. A method of wireless communication, comprising:
measuring, by a first device, a condition of a wireless channel;
generating at least one channel side information feedback message that provides information on a relationship of a set of parameters based on the measured condition of the wireless channel, the set of parameters comprising a data rate parameter, an error probability parameter, and at least one of a deadline parameter or a transmission link parameter; wherein at least a first parameter of the set of parameters is input to the first device and at least a second parameter of the set of parameters is output conditioned on at least the first parameter; and
transmitting the at least one channel side information feedback message to a second device, the at least one channel side information feedback message comprising at least the first parameter and at least the second parameter.
2. The method of claim 1, wherein generating the at least one channel side information feedback message comprises:
estimating a value of each parameter in a first subset of the set of parameters based on a given value for each parameter in a remaining subset of the set of parameters.
3. The method of claim 2, further comprising:
receiving over the wireless channel the given value for at least one parameter of the remaining subset.
4. The method of claim 2, further comprising:
determining, by the first device, the given value for at least one parameter of the remaining subset.
5. The method of claim 2, wherein the at least one channel side information feedback message comprises an estimated value of at least one parameter of the first subset.
6. The method of claim 2, wherein the first subset comprises the data rate parameter and the remaining subset comprises the error probability parameter, the deadline parameter, and the transmission link parameter.

7. The method of claim 2, wherein the first subset comprises the error probability parameter and the remaining subset comprises the data rate parameter, the deadline parameter, and the transmission link parameter.

8. The method of claim 2, wherein the first subset comprises the deadline parameter and the remaining subset comprises the error probability parameter, the data rate parameter, and the transmission link parameter.

9. The method of claim 2, wherein the first subset comprises the transmission link parameter and the remaining subset comprises the error probability parameter, the deadline parameter, and the data rate parameter.

10. The method of claim 2, wherein the first subset comprises the data rate parameter and the transmission link parameter, and the remaining subset comprises the error probability parameter and the deadline parameter.

11. The method of claim 2, wherein the first subset comprises the data rate parameter, the deadline parameter, and the transmission link parameter, and the remaining subset comprises the error probability parameter.

12. The method of claim 2, wherein the remaining subset comprises the deadline parameter and a value of at least one parameter of the first subset is estimated for a plurality of different given values of the deadline parameter.

13. The method of claim 2, wherein the first subset comprises the error probability parameter and the value of the error probability parameter is estimated based on a plurality of different radio links.

14. The method of claim 13, further comprising:
selecting the plurality of different radio links as a subset of all possible radio links.

15. The method of claim 13, wherein the error probability parameter is based on simultaneous transmission over the plurality of different radio links.

16. The method of claim 1, wherein the deadline parameter corresponds to a latency associated with a single retransmission of a signal.

17. A device for wireless communication, comprising:
means for measuring a condition of a wireless channel;
means for generating at least one channel side information feedback message that provides information on a relationship of a set of parameters based on the measured condition of the wireless channel, the set of parameters comprising a data rate parameter, an error probability parameter, and at least one of a deadline parameter or a transmission link parameter; wherein at least a first parameter of the set of parameters is input to the device and at least a second parameter of the set of parameters is output conditioned on at least the first parameter; and
means for transmitting the at least one channel side information feedback message to another device, the at least one channel side information feedback message comprising at least the first parameter and at least the second parameter.

18. The device of claim 17, wherein the means for generating the at least one channel side information feedback message comprises:

means for estimating a value of each parameter in a first subset of the set of parameters based on a given value for each parameter in a remaining subset of the set of parameters.

19. The device of claim 18, further comprising:
means for receiving over the wireless channel the given value for at least one parameter of the remaining subset.

20. The device of claim 18, further comprising:
means for determining the given value for at least one parameter of the remaining subset.

21. The device of claim 18, wherein the at least one channel side information feedback message comprises an estimated value of at least one parameter of the first subset.

22. The device of claim 18, wherein the first subset comprises the data rate parameter and the remaining subset comprises the error probability parameter, the deadline parameter, and the transmission link parameter.

23. The device of claim 18, wherein the first subset comprises the error probability parameter and the remaining subset comprises the data rate parameter, the deadline parameter, and the transmission link parameter.

24. The device of claim 18, wherein the first subset comprises the deadline parameter and the remaining subset comprises the error probability parameter, the data rate parameter, and the transmission link parameter.

25. The device of claim 18, wherein the first subset comprises the transmission link parameter and the remaining subset comprises the error probability parameter, the deadline parameter, and the data rate parameter.

26. The device of claim 18, wherein the first subset comprises the data rate parameter and the transmission link parameter, and the remaining subset comprises the error probability parameter and the deadline parameter.

27. The device of claim 18, wherein the first subset comprises the data rate parameter, the deadline parameter, and the transmission link parameter, and the remaining subset comprises the error probability parameter.

28. The device of claim 18, wherein the remaining subset comprises the deadline parameter and a value of at least one parameter of the first subset is estimated for a plurality of different given values of the deadline parameter.

29. The device of claim 18, wherein the first subset comprises the error probability parameter and the value of the error probability parameter is estimated based on a plurality of different radio links.

30. The device of claim 29, further comprising:
means for selecting the plurality of different radio links as a subset of all possible radio links.

31. The device of claim 29, wherein the error probability parameter is based on simultaneous transmission over the plurality of different radio links.

32. The device of claim 17, wherein the deadline parameter corresponds to a latency associated with a single retransmission of a signal.

33. A device for wireless communication, comprising a processor, memory in electronic communication with the processor, and instructions stored in the memory, the instructions being executable by the processor to:

measure a condition of a wireless channel;

generate at least one channel side information feedback message that provides information on a relationship of a set of parameters based on the measured condition of the wireless channel, the set of parameters comprising a data rate parameter, an error probability parameter, and at least one of a deadline parameter or a transmission link parameter; wherein at least a first parameter of the set of parameters is input to the device and at least a second parameter of the set of parameters is output conditioned on at least the first parameter; and

transmit the at least one channel side information feedback message to another device, the at least one channel side information feedback message comprising at least the first parameter and at least the second parameter.

34. The device of claim 33, wherein the instructions executable by the processor to generate the at least one channel side information feedback message comprise instructions executable by the processor to:

estimate a value of each parameter in a first subset of the set of parameters based on a given value for each parameter in a remaining subset of the set of parameters.

35. The device of claim 34, wherein the instructions are executable by the processor to:

receive over the wireless channel the given value for at least one parameter of the remaining subset.

36. The device of claim 34, wherein the instructions are executable by the processor to:

determining the given value for at least one parameter of the remaining subset.

37. The device of claim 34, wherein the at least one channel side information feedback message comprises an estimated value of at least one parameter of the first subset.

38. The device of claim 34, wherein the first subset comprises the data rate parameter and the remaining subset comprises the error probability parameter, the deadline parameter, and the transmission link parameter.

39. The device of claim 34, wherein the first subset comprises the data rate parameter and the transmission link parameter, and the remaining subset comprises the error probability parameter and the deadline parameter.

40. The device of claim 33, wherein the deadline parameter corresponds to a latency associated with a single retransmission of a signal.

41. A non-transitory computer-readable medium for wireless communication storing instructions executable by a processor to cause a device to:

measure a condition of a wireless channel;

generate at least one channel side information feedback message that provides information on a relationship of a set of parameters based on the measured condition of the wireless channel, the set of parameters comprising a data rate parameter, an error probability parameter, and at least one of a deadline parameter or a transmission link parameter; wherein at least a first parameter of the set of parameters is input to the device and at least a second parameter of the set of parameters is output conditioned on at least the first parameter; and

transmit the at least one channel side information feedback message to another device, the at least one channel side information feedback message comprising at least the first parameter and at least the second parameter.

42. The computer-readable medium of claim 41, wherein the instructions executable by the processor to cause the device to generate the at least one channel side information feedback message comprise instructions executable by the processor to cause the device to:

estimate a value of each parameter in a first subset of the set of parameters based on a given value for each parameter in a remaining subset of the set of parameters.

43. The computer-readable medium of claim 42, wherein the instructions are executable by the processor to cause the device to:

receive over the wireless channel the given value for at least one parameter of the remaining subset.

44. A method of wireless communication, comprising:

transmitting a wireless signal to a device over a wireless channel; and

receiving from the device at least one channel side information feedback message that provides information on a relationship of a set of parameters based on a measured condition of the wireless channel, the set of parameters comprising a data rate parameter, an error probability parameter, and at least one of a deadline parameter or a transmission link parameter; wherein at least a first parameter of the set of parameters is input to the device and at least a second parameter of the set of parameters is output conditioned on at least the first parameter, and the at least one channel side information feedback message comprises at least the first parameter and at least the second parameter.

45. The method of claim 44, wherein the at least one channel side information feedback message comprises an estimated value of each parameter in a first subset of the set of parameters based on a given value for each parameter in a remaining subset of the set of parameters.

46. The method of claim 45, further comprising:

transmitting to the device an indication of at least one of the first subset or the remaining subset.

47. The method of claim 45, further comprising:

transmitting to the device the given value for at least one parameter of the remaining subset.

48. The method of claim 45, wherein the at least one channel side information feedback message comprises an estimated value of at least one parameter of the first subset.

49. The method of claim 45, wherein the first subset comprises the data rate parameter and the remaining subset comprises the error probability parameter, the deadline parameter, and the transmission link parameter.

50. The method of claim 45, wherein the first subset comprises the error probability parameter and the remaining subset comprises the data rate parameter, the deadline parameter, and the transmission link parameter.

51. The method of claim 45, wherein the first subset comprises the deadline parameter and the remaining subset comprises the error probability parameter, the data rate parameter, and the transmission link parameter.

52. The method of claim 45, wherein the first subset comprises the transmission link parameter and the remaining subset comprises the error probability parameter, the deadline parameter, and the data rate parameter.

53. The method of claim 45, wherein the first subset comprises the data rate parameter and the transmission link parameter, and the remaining subset comprises the error probability parameter and the deadline parameter.

54. The method of claim 45, wherein the first subset comprises the data rate parameter, the deadline parameter, and the transmission link parameter, and the remaining subset comprises the error probability parameter.

55. The method of claim 45, wherein the remaining subset comprises the deadline parameter and a value of at least one parameter of the first subset is estimated for a plurality of different given values of the deadline parameter.

56. The method of claim 45, wherein the first subset comprises the error probability parameter and a value of the error probability parameter is estimated based on a plurality of different radio links.

57. The method of claim 56, wherein the plurality of different radio links is a subset of all possible radio links.

58. The method of claim 56, wherein the error probability parameter is based on simultaneous transmission over the plurality of different radio links.

59. The method of claim 44, wherein the deadline parameter corresponds to a latency associated with a single retransmission of a signal.

60. A device for wireless communication, comprising:
means for transmitting a wireless signal to another device over a wireless channel;
and

means for receiving from the other device at least one channel side information feedback message that provides information on a relationship of a set of parameters based on a measured condition of the wireless channel, the set of parameters comprising a data rate parameter, an error probability parameter, and at least one of a deadline parameter or a transmission link parameter; wherein at least a first parameter of the set of parameters is input to the other device and at least a second parameter of the set of parameters is output conditioned on at least the first parameter, and the at least one channel side information feedback message comprises at least the first parameter and at least the second parameter.

61. The device of claim 60, wherein the at least one channel side information feedback message comprises an estimated value of each parameter in a first subset of the set of parameters based on a given value for each parameter in a remaining subset of the set of parameters.

62. The device of claim 61, further comprising:
means for transmitting to the other device an indication of at least one of the first subset or the remaining subset.

63. The device of claim 61, further comprising:
means for transmitting to the other device the given value for at least one parameter of the remaining subset.

64. The device of claim 61, wherein the at least one channel side information feedback message comprises an estimated value of at least one parameter of the first subset.

65. The device of claim 61, wherein the first subset comprises the data rate parameter and the remaining subset comprises the error probability parameter, the deadline parameter, and the transmission link parameter.

66. The device of claim 61, wherein the first subset comprises the error probability parameter and the remaining subset comprises the data rate parameter, the deadline parameter, and the transmission link parameter.

67. The device of claim 61, wherein the first subset comprises the deadline parameter and the remaining subset comprises the error probability parameter, the data rate parameter, and the transmission link parameter.

68. The device of claim 61, wherein the first subset comprises the transmission link parameter and the remaining subset comprises the error probability parameter, the deadline parameter, and the data rate parameter.

69. The device of claim 61, wherein the first subset comprises the data rate parameter and the transmission link parameter, and the remaining subset comprises the error probability parameter and the deadline parameter.

70. The device of claim 61, wherein the first subset comprises the data rate parameter, the deadline parameter, and the transmission link parameter, and the remaining subset comprises the error probability parameter.

71. The device of claim 61, wherein the remaining subset comprises the deadline parameter and a value of at least one parameter of the first subset is estimated for a plurality of different given values of the deadline parameter.

72. The device of claim 61, wherein the first subset comprises the error probability parameter and a value of the error probability parameter is estimated based on a plurality of different radio links.

73. The device of claim 72, wherein the plurality of different radio links is a subset of all possible radio links.

74. The device of claim 72, wherein the error probability parameter is based on simultaneous transmission over the plurality of different radio links.

75. The device of claim 60, wherein the deadline parameter corresponds to a latency associated with a single retransmission of a signal.

76. A device for wireless communication, comprising a processor, memory in electronic communication with the processor, and instructions stored in the memory, the instructions being executable by the processor to:

transmit a wireless signal to another device over a wireless channel; and

receive from the other device at least one channel side information feedback message that provides information on a relationship of a set of parameters based on a measured condition of the wireless channel, the set of parameters comprising a data rate parameter, an error probability parameter, and at least one of a deadline parameter or a transmission link parameter; wherein at least a first parameter of the set of parameters is input to the other device and at least a second parameter of the set of parameters is output conditioned on at least the first parameter, and the at least one channel side information feedback message comprises at least the first parameter and at least the second parameter.

77. The device of claim 76, wherein the at least one channel side information feedback message comprises an estimated value of each parameter in a first subset of the set of parameters based on a given value for each parameter in a remaining subset of the set of parameters.

78. The device of claim 77, wherein the instructions are executable by the processor to:

transmit to the other device an indication of at least one of the first subset or the remaining subset.

79. The device of claim 77, wherein the instructions are executable by the processor to:

transmit to the other device the given value for at least one parameter of the remaining subset.

80. The device of claim 77, wherein the at least one channel side information feedback message comprises an estimated value of at least one parameter of the first subset.

81. The device of claim 77, wherein the first subset comprises the data rate parameter and the remaining subset comprises the error probability parameter, the deadline parameter, and the transmission link parameter.

82. The device of claim 77, wherein the first subset comprises the data rate parameter and the transmission link parameter, and the remaining subset comprises the error probability parameter and the deadline parameter.

83. The device of claim 76, wherein the deadline parameter corresponds to a latency associated with a single retransmission of a signal.

84. A non-transitory computer-readable medium for wireless communication storing instructions executable by a processor to cause a device to:

transmit a wireless signal to another device over a wireless channel; and

receive from the other device at least one channel side information feedback message that provides information on a relationship of a set of parameters based on a measured condition of the wireless channel, the set of parameters comprising a data rate parameter, an error probability parameter, and at least one of a deadline parameter or a transmission link parameter; wherein at least a first parameter of the set of parameters is input to the other device and at least a second parameter of the set of parameters is output conditioned on at least the first parameter, and the at least one channel side information feedback message comprises at least the first parameter and at least the second parameter.

85. The computer-readable medium of claim 84, wherein the at least one channel side information feedback message comprises an estimated value of each parameter in a first subset of the set of parameters based on a given value for each parameter in a remaining subset of the set of parameters.

86. The computer-readable medium of claim 85, wherein the instructions are executable by the processor to:

transmit to the device an indication of at least one of the first subset or the remaining subset.

87. The computer-readable medium of claim 85, wherein the instructions are executable by the processor to cause the device to:

transmit to the other device the given value for at least one parameter of the remaining subset.