

CLAIMS

1. A method of wireless communications, comprising:
obtaining a first radio frequency (RF) technology and mode value, a second RF technology and mode value, and one or more RF specific parameters associated with a remote near field communication (NFC) device during an activation phase of a communication link using a first NFC RF technology, wherein the one or more RF specific parameters and the first NFC RF technology are based on the first RF technology and mode value; and
configuring communications to be supported by a second NFC RF technology for use during a data exchange phase of the communication link, wherein the second NFC RF technology is based on the second RF technology and mode value.
2. The method of claim 1, wherein the configuring comprises:
determining the start of the data exchange phase; and
enabling the communications supported using the second NFC RF technology.
3. The method of claim 2, wherein the obtaining further comprises obtaining a data exchange phase transmit bit rate and a data exchange phase receive bit rate, and wherein the data exchange phase transmit bit rate and the data exchange phase receive bit rate are associated with the second RF technology and mode value and are used during the data exchange phase.
4. The method of claim 1, wherein the remote NFC device includes one selected from among a remote NFC tag, a reader device, a writer device, a NFC card, and a remote peer target device.
5. The method of claim 1, wherein the second NFC RF technology supports different data rate communications than the first NFC RF technology.
6. The method of claim 1, wherein each of the first and second RF technologies includes one selected from among a NFC-A technology, a NFC-B technology, and a NFC-F technology.

7. The method of claim 1, further comprising:
estimating a time duration to transfer a data package of a first size based on a data rate associated with the second NFC RF technology.
8. The method of claim 7, further comprising:
prompting with an option to proceed with the data package transfer based on the estimated time duration; and
receiving a response from the user indicating whether to proceed with the data package transfer.
9. The method of claim 1, further comprising generating a RF activate notification message including the obtained values and parameters.
10. The method of claim 1, wherein each of the first and second NFC RF Technologies uses a communication link, wherein the communication link is one link among a Passive communication link and an Active communication link.
11. The method of claim 10, further comprising:
estimating an available coverage range for the second NFC RF technology based on the communication link in use by the second NFC RF technology.
12. The method of claim 11, further comprising:
prompting with a notification indicating a potential change in the communication link and a change in the estimated available coverage range associated with the change.
13. A computer program product, comprising:
a computer-readable medium comprising code for causing a computer to:
obtain a first radio frequency (RF) technology and mode value, a second RF technology and mode value, and one or more RF specific parameters associated with a remote near field communication (NFC) device during an activation phase of a communication link using a first NFC RF technology, wherein the one or more RF specific parameters and the first NFC RF technology are based on the first RF technology and mode value; and

configure communications to be supported by a second NFC RF technology for use during a data exchange phase of the communication link, wherein the second NFC RF technology is based on the second RF technology and mode value.

14. The computer program product of claim 13, wherein the computer-readable medium further comprises code for causing the computer to:

determine the start of the data exchange phase; and
enable the communications supported using the second NFC RF technology.

15. The computer program product of claim 14, wherein the computer-readable medium further comprises code for causing the computer to:

obtain a data exchange phase transmit bit rate and a data exchange phase receive bit rate, and wherein the data exchange phase transmit bit rate and the data exchange phase receive bit rate are associated with the second RF technology and mode value and are used during the data exchange phase.

16. The computer program product of claim 13, wherein the remote NFC device includes one selected from among a remote NFC tag, a reader device, a writer device, a NFC card, and a remote peer target device.

17. The computer program product of claim 13, wherein the second NFC RF technology supports different data rate communications than the first NFC RF technology.

18. The computer program product of claim 13, wherein each of the first and second RF technologies includes one selected from among a NFC-A technology, a NFC-B technology, and a NFC-F technology.

19. The computer program product of claim 13, wherein the computer-readable medium further comprises code for causing the computer to:

estimate a time duration to transfer a data package of a first size based on a data rate associated with the second NFC RF technology.

20. The computer program product of claim 19, wherein the computer-readable medium further comprises code for causing the computer to:

prompt with an option to proceed with the data package transfer based on the estimated time duration; and

receive a response from the user indicating whether to proceed with the data package transfer.

21. The computer program product of claim 20, wherein the computer-readable medium further comprises code for causing the computer to:

generate a RF activate notification message including the obtained values and parameters.

22. The computer program product of claim 13, wherein the communication link is on link among a Passive communication link and an Active communication link.

23. The computer program product of claim 22, wherein the computer-readable medium further comprises code for causing the computer to:

estimate an available coverage range for the second NFC RF technology based on the communication link in use by the second NFC RF technology.

24. The computer program product of claim 23, wherein the computer-readable medium further comprises code for causing the computer to:

prompt with a notification indicating a potential change in the communication link and a change in the estimated available coverage range associate with the change.

25. An apparatus for communication, comprising:

means for obtaining a first radio frequency (RF) technology and mode value, a second RF technology and mode value, and one or more RF specific parameters associated with a remote near field communication (NFC) device during an activation phase of a communication link using a first NFC RF technology, wherein the one or more RF specific parameters and the first NFC RF technology are based on the first RF technology and mode value; and

means for configuring communications to be supported by a second NFC RF technology for use during a data exchange phase of the communication link, wherein the second NFC RF technology is based on the second RF technology and mode value.

26. The apparatus of claim 25, wherein the means for configuring comprises:
means for determining the start of the data exchange phase; and
means for enabling the communications supported using the second NFC RF technology.

27. The apparatus of claim 26, wherein the means for obtaining further comprises means for obtaining a data exchange phase transmit bit rate and a data exchange phase receive bit rate, and wherein the data exchange phase transmit bit rate and the data exchange phase receive bit rate are associated with the second RF technology and mode value and are used during the data exchange phase.

28. The apparatus of claim 25, wherein the remote NFC device includes one selected from among a remote NFC tag, a reader device, a writer device, a NFC card, and a remote peer target device.

29. The apparatus of claim 25, wherein the second NFC RF technology supports different data rate communications than the first NFC RF technology.

30. The apparatus of claim 25, wherein each of the first and second RF technologies includes one selected from among a NFC-A technology, a NFC-B technology, and a NFC-F technology.

31. The apparatus of claim 25, further comprising:
means for estimating a time duration to transfer a data package of a first size based on a data rate associated with the second NFC RF technology.

32. The apparatus of claim 31, further comprising:
means for prompting with an option to proceed with the data package transfer based on the estimated time duration; and

means for receiving a response from the user indicating whether to proceed with the data package transfer.

33. The apparatus of claim 25, further comprising means for generating a RF activate notification message including the obtained values and parameters.

34. The apparatus of claim 25, wherein the communication link is one link among a Passive communication link and an Active communication link.

35. The apparatus of claim 34, further comprising:
means for estimating an available coverage range for the second NFC RF technology based on the communication link in use by the second NFC RF technology.

36. The apparatus of claim 35, further comprising:
means for prompting with a notification indicating a potential change in the communication link and a change in the estimated available coverage range associate with the change.

37. An apparatus for communication, comprising:
a NFC controller configured to:
obtain a first radio frequency (RF) technology and mode value, a second RF technology and mode value, and one or more RF specific parameters associated with a remote near field communication (NFC) device during an activation phase of a communication link using a first NFC RF technology, wherein the one or more RF specific parameters and the first NFC RF technology are based on the first RF technology and mode value; and
configure communications to be supported by a second NFC RF technology for use during a data exchange phase of the communication link, wherein the second NFC RF technology is based on the second RF technology and mode value.

38. The apparatus of claim 37, wherein the NFC controller is configured to:
determine the start of the data exchange phase; and
enable the communications supported using the second NFC RF technology.

39. The apparatus of claim 38, wherein the NFC controller is further configured to obtain a data exchange phase transmit bit rate and a data exchange phase receive bit rate, and wherein the data exchange phase transmit bit rate and the data exchange phase receive bit rate are associated with the second RF technology and mode value and are used during the data exchange phase.

40. The apparatus of claim 37, wherein the remote NFC device includes one selected from among a remote NFC tag, a reader device, a writer device, a NFC card, and a remote peer target device.

41. The apparatus of claim 37, wherein the second NFC RF technology supports different data rate communications than the first NFC RF technology.

42. The apparatus of claim 47, wherein each of the first and second RF technologies includes one selected from among a NFC-A technology, a NFC-B technology, and a NFC-F technology.

43. The apparatus of claim 37, wherein the NFC controller is further configured to:
estimate a time duration to transfer a data package of a first size based on a data rate associated with the second NFC RF technology.

44. The apparatus of claim 43, wherein the NFC controller is further configured to:
prompt with an option to proceed with the data package transfer based on the estimated time duration; and
receive a response from the user indicating whether to proceed with the data package transfer.

45. The apparatus of claim 37, wherein the NFC controller is further configured to generate a RF activate notification message including the obtained values and parameters.

46. The apparatus of claim 37, wherein the communication link is one link among a Passive communication link and an Active communication link.

47. The apparatus of claim 46, wherein the NFC controller is further configured to:
estimate an available coverage range for the second NFC RF technology based
on the communication link in use by the second NFC RF technology.
48. The apparatus of claim 47, further comprising a user interface configured to:
prompt with a notification indicating a potential change in the communication
link and a change in the estimated available coverage range associate with the change.

CLAIMS:

1. A method of wireless communications, comprising:

obtaining a first radio frequency (RF) technology and mode value, a second RF technology and mode value, and one or more RF specific parameters associated with a remote near field communication (NFC) device during an activation phase of a communication link using a first NFC RF technology, wherein the one or more RF specific parameters are based on the first RF technology and mode value;

obtaining a data exchange phase transmit bit rate and a data exchange phase receive bit rate, and wherein the data exchange phase transmit bit rate and the data exchange phase receive bit rate are associated with the second RF technology and mode value and are used during a subsequent data exchange phase of the communication link;

aggregating the obtained first RF technology and mode value, the second RF technology and mode value, the one or more RF specific parameters, the data exchange phase transmit bit rate, and the data exchange phase receive bit rate to generate a single RF activate notification message including the obtained values and parameters;

sending the RF activate notification message; and

configuring communications to be supported by a second NFC RF technology for use during the data exchange phase of the communication link, wherein the second NFC RF technology is based on the second RF technology and mode value.

2. The method of claim 1, wherein the configuring comprises:

determining the start of the data exchange phase; and

enabling the communications supported using the second NFC RF technology.

3. The method of claim 1, wherein the remote NFC device includes one selected from among a remote NFC tag, a reader device, a writer device, a NFC card, and a remote peer target device.
4. The method of claim 1, wherein the second NFC RF technology supports different data rate communications than the first NFC RF technology.
5. The method of claim 1, wherein each of the first and second RF technologies includes one selected from among a NFC-A technology, a NFC-B technology, and a NFC-F technology.
6. The method of claim 1, further comprising:

estimating a time duration to transfer a data package of a first size based on a data rate associated with the second NFC RF technology.
7. The method of claim 6, further comprising:

prompting with an option to proceed with the data package transfer based on the estimated time duration; and

receiving a response from the user indicating whether to proceed with the data package transfer.
8. The method of claim 1, wherein each of the first and second NFC RF Technologies uses a communication link, wherein the communication link is one link among a Passive communication link and an Active communication link.
9. The method of claim 8, further comprising:

estimating an available coverage range for the second NFC RF technology based on the communication link in use by the second NFC RF technology.
10. The method of claim 9, further comprising:

prompting with a notification indicating a potential change in the communication link and a change in the estimated available coverage range associated with the change.

11. A computer program product, comprising:

a computer-readable medium comprising code for causing a computer to:

obtain a first radio frequency (RF) technology and mode value, a second RF technology and mode value, and one or more RF specific parameters associated with a remote near field communication (NFC) device during an activation phase of a communication link using a first NFC RF technology, wherein the one or more RF specific parameters are based on the first RF technology and mode value;

obtain a data exchange phase transmit bit rate and a data exchange phase receive bit rate, and wherein the data exchange phase transmit bit rate and the data exchange phase receive bit rate are associated with the second RF technology and mode value and are used during a subsequent data exchange phase of the communication link;

aggregate the obtained first RF technology and mode value, the second RF technology and mode value, the one or more RF specific parameters, the data exchange phase transmit bit rate, and the data exchange phase receive bit rate to generate a single RF activate notification message including the obtained values and parameters;

send the RF activate notification message; and

configure communications to be supported by a second NFC RF technology for use during the data exchange phase of the communication link, wherein the second NFC RF technology is based on the second RF technology and mode value.

12. The computer program product of claim 11, wherein the computer-readable medium further comprises code for causing the computer to:

determine the start of the data exchange phase; and

enable the communications supported using the second NFC RF technology.

13. The computer program product of claim 11, wherein the remote NFC device includes one selected from among a remote NFC tag, a reader device, a writer device, a NFC card, and a remote peer target device.

14. The computer program product of claim 11, wherein the second NFC RF technology supports different data rate communications than the first NFC RF technology.

15. The computer program product of claim 11, wherein each of the first and second RF technologies includes one selected from among a NFC-A technology, a NFC-B technology, and a NFC-F technology.

16. The computer program product of claim 11, wherein the computer-readable medium further comprises code for causing the computer to:

estimate a time duration to transfer a data package of a first size based on a data rate associated with the second NFC RF technology.

17. The computer program product of claim 16, wherein the computer-readable medium further comprises code for causing the computer to:

prompt with an option to proceed with the data package transfer based on the estimated time duration; and

receive a response from the user indicating whether to proceed with the data package transfer.

18. The computer program product of claim 11, wherein the communication link is on link among a Passive communication link and an Active communication link.

19. The computer program product of claim 18, wherein the computer-readable medium further comprises code for causing the computer to:

estimate an available coverage range for the second NFC RF technology based on the communication link in use by the second NFC RF technology.

20. The computer program product of claim 19, wherein the computer-readable medium further comprises code for causing the computer to:

prompt with a notification indicating a potential change in the communication link and a change in the estimated available coverage range associated with the change.

21. An apparatus for communication, comprising:

means for obtaining a first radio frequency (RF) technology and mode value, a second RF technology and mode value, and one or more RF specific parameters associated with a remote near field communication (NFC) device during an activation phase of a communication link using a first NFC RF technology, wherein the one or more RF specific parameters are based on the first RF technology and mode value;

means for obtaining a data exchange phase transmit bit rate and a data exchange phase receive bit rate, and wherein the data exchange phase transmit bit rate and the data exchange phase receive bit rate are associated with the second RF technology and mode value and are used during a subsequent data exchange phase of the communication link;

means for aggregating the obtained first RF technology and mode value, the second RF technology and mode value, the one or more RF specific parameters, the data exchange phase transmit bit rate, and the data exchange phase receive bit rate to generate a single RF activate notification message including the obtained values and parameters;

means for sending the RF activate notification message; and

means for configuring communications to be supported by a second NFC RF technology for use during the data exchange phase of the communication link, wherein the second NFC RF technology is based on the second RF technology and mode value.

22. The apparatus of claim 21, wherein the means for configuring comprises:

means for determining the start of the data exchange phase; and

means for enabling the communications supported using the second NFC RF technology.

23. The apparatus of claim 21, wherein the remote NFC device includes one selected from among a remote NFC tag, a reader device, a writer device, a NFC card, and a remote peer target device.

24. The apparatus of claim 21, wherein the second NFC RF technology supports different data rate communications than the first NFC RF technology.

25. The apparatus of claim 21, wherein each of the first and second RF technologies includes one selected from among a NFC-A technology, a NFC-B technology, and a NFC-F technology.

26. The apparatus of claim 21, further comprising:

means for estimating a time duration to transfer a data package of a first size based on a data rate associated with the second NFC RF technology.

27. The apparatus of claim 26, further comprising:

means for prompting with an option to proceed with the data package transfer based on the estimated time duration; and

means for receiving a response from the user indicating whether to proceed with the data package transfer.

28. The apparatus of claim 21, wherein the communication link is one link among a Passive communication link and an Active communication link.
29. The apparatus of claim 28, further comprising:
- means for estimating an available coverage range for the second NFC RF technology based on the communication link in use by the second NFC RF technology.
30. The apparatus of claim 29, further comprising:
- means for prompting with a notification indicating a potential change in the communication link and a change in the estimated available coverage range associate with the change.
31. An apparatus for communication, comprising:
- a NFC controller configured to:
- obtain a first radio frequency (RF) technology and mode value, a second RF technology and mode value, and one or more RF specific parameters associated with a remote near field communication (NFC) device during an activation phase of a communication link using a first NFC RF technology, wherein the one or more RF specific parameters are based on the first RF technology and mode value;
- obtain a data exchange phase transmit bit rate and a data exchange phase receive bit rate, and wherein the data exchange phase transmit bit rate and the data exchange phase receive bit rate are associated with the second RF technology and mode value and are used during a subsequent data exchange phase of the communication link;
- aggregate the obtained first RF technology and mode value, the second RF technology and mode value, the one or more RF specific parameters, the data exchange phase transmit bit rate, and the data exchange phase receive bit rate to generate a single RF activate notification message including the obtained values and parameters;

send the RF activate notification message; and

configure communications to be supported by a second NFC RF technology for use during the data exchange phase of the communication link, wherein the second NFC RF technology is based on the second RF technology and mode value.

32. The apparatus of claim 31, wherein the NFC controller is configured to:

determine the start of the data exchange phase; and

enable the communications supported using the second NFC RF technology.

33. The apparatus of claim 31, wherein the remote NFC device includes one selected from among a remote NFC tag, a reader device, a writer device, a NFC card, and a remote peer target device.

34. The apparatus of claim 31, wherein the second NFC RF technology supports different data rate communications than the first NFC RF technology.

35. The apparatus of claim 31, wherein each of the first and second RF technologies includes one selected from among a NFC-A technology, a NFC-B technology, and a NFC-F technology.

36. The apparatus of claim 31, wherein the NFC controller is further configured to:

estimate a time duration to transfer a data package of a first size based on a data rate associated with the second NFC RF technology.

37. The apparatus of claim 36, wherein the NFC controller is further configured to:

prompt with an option to proceed with the data package transfer based on the estimated time duration; and

receive a response from the user indicating whether to proceed with the data package transfer.

38. The apparatus of claim 31, wherein the communication link is one link among a Passive communication link and an Active communication link.
39. The apparatus of claim 38, wherein the NFC controller is further configured to:
estimate an available coverage range for the second NFC RF technology based on the communication link in use by the second NFC RF technology.
40. The apparatus of claim 39, further comprising a user interface configured to:
prompt with a notification indicating a potential change in the communication link and a change in the estimated available coverage range associate with the change.