

use in communications between the first and second wireless communication transceivers;

for a second predetermined period of time, the second wireless communication transceiver transmitting to the first wireless communication transceiver via the wireless communication link information indicative of the selected frequency band; and

upon expiration of the second predetermined period, the first and second wireless communication transceivers communicating with one another via the wireless communication link using the selected frequency band.

25. The method of claim 24, including the first and second wireless communication transceivers defining said first and second predetermined periods of time during an initial handshake between the first and second wireless communication transceivers.

26. The method of claim 24, wherein said communicating step is performed at a higher data rate than said transmitting steps.

27. A method of choosing a communication parameter for use in wireless communications between wireless communication transceivers, comprising:

identifying within an available frequency bandwidth a plurality of frequency bands which each includes a plurality of available frequency channels between first and second wireless communication transceivers;

obtaining information indicative of fading parameters respectively associated with said frequency channels;

for each of said frequency bands, using the fading parameter information associated with the frequency channels thereof to produce band quality information indicative of frequency channel communication quality within the frequency band; and

based on the band quality information, selecting one of the frequency bands for use in wireless communications between the first and second wireless communication transceivers.

28. The method of claim 27, wherein said obtaining step includes obtaining estimates of fading parameter amplitudes respectively associated with said frequency channels.

29. The method of claim 28, wherein said obtaining step includes obtaining correlation values respectively associated with packets transmitted on the respective frequency channels, and taking the correlation values to be the fading parameter amplitude estimates.

30. The method of claim 28, wherein said using step includes, for each of said frequency bands, summing squares of the fading parameter amplitude estimates associated with the frequency channels in the frequency band to produce a sum for the frequency band, and wherein said selecting step includes selecting the frequency band whose associated sum is the largest of said sums.

31. The method of claim 28, wherein said using step includes, for each of said frequency bands, selecting the smallest of the fading parameter amplitude estimates associated with the frequency channels within the frequency band, and wherein said first-mentioned selecting step includes selecting the frequency band whose smallest fading parameter amplitude estimate is the largest of said smallest fading parameter amplitude estimates.

32. The method of claim 28, wherein said using step includes, for each of said frequency bands, determining the smallest and largest of the fading parameter amplitude estimates associated with the frequency channels of the frequency band and, for each of said frequency bands, summing squares of the fading parameter amplitude estimates associated with the frequency channels of the frequency band to produce a sum for the frequency band, and identifying those frequency bands whose smallest and largest fading parameter amplitude estimates have a predetermined mutual relationship, and wherein said selecting step includes selecting from said identified frequency bands the frequency band whose associated sum is the largest of said sums.

33. The method of claim 32, wherein said identifying step includes identifying every frequency band wherein a ratio of the smallest fading parameter amplitude estimate thereof to the largest fading parameter amplitude estimate thereof exceeds a predetermined threshold value.

34. The method of claim 28, wherein said fading parameter amplitude estimates are correlation values respectively associated with packets transmitted on the respective frequency channels.

35. The method of claim 27, including selecting modulation and channel coding for use in communications between the first and second wireless communication transceivers based on the band quality information associated with the selected frequency band.

36. The method of claim 35, wherein said modulation is one of QPSK, 16-QAM and 8-PSK, and wherein said channel coding has a coding rate that is one of $\frac{1}{3}$, $\frac{1}{2}$, $\frac{2}{3}$, $\frac{3}{4}$, $\frac{4}{5}$, $\frac{5}{6}$ and 1.

37. A wireless communication apparatus, comprising:

an input for receiving information indicative of fading parameters respectively associated with a plurality of frequency channels within an available frequency bandwidth for use in wireless communications with another wireless communication apparatus, said available frequency bandwidth including a plurality of frequency bands which each include a plurality of said frequency channels;

a band quality determiner coupled to said input and operable with respect to each of said frequency bands for using the fading parameter information associated with the frequency channels of said frequency band to produce band quality information indicative of frequency channel communication quality within said frequency band; and

a selector coupled to said band quality determiner for selecting, based on the band quality information, one of the frequency bands for use in wireless communications with said another wireless communication transceiver.

38. The apparatus of claim 37, wherein said fading parameter information includes estimates of fading parameter amplitudes respectively associated with said frequency channels.

39. The apparatus of claim 38, wherein said fading parameter amplitude estimates are correlation values respectively associated with packets transmitted on the respective frequency channels.

40. The apparatus of claim 37, including a mapper coupled to said selector for receiving the band quality