Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Original) A method for data transmission over first and second media that overlap in frequency, comprising:

computing one or more time division multiple access (TDMA) time-slot channels to be shared between the first and second media for data transmission;

allocating one or more time-slot channels to the first medium for data transmission;

allocating one or more of the remaining time-slot channels to the second medium for data transmission; and

dynamically adjusting a number of time-slot channels assigned to one of the first and second media during the data transmission to remain within limits of a desired level of service.

2.   (Original) The method of claim 1, wherein at least one of the first and second media conforms to an 802.11 specification.

3.   (Original) The method of claim 1, wherein at least one of the first and second media conforms to a Bluetooth specification.

4.   (Original) The method of claim 1, further comprising determining the desired level of service for one of the first and second media during the data transmission.

5.   (Original) The method of claim 1, wherein the dynamic adjusting comprises:

determining available time-slot resources;

detecting the medium that fails to meet said desired level of service;

allocating the medium to a configuration having additional time slots; and

transmitting a channel assignment message including information on the allocated configuration with the additional time slots.

6.   (Original) The method of claim 5, further comprising instructing transceivers for the first and second media to communicate only in their previously presentedly allocated time-slots.

7.   (Original) A method for data transmission over first and second media that overlap in frequency, comprising:

selecting one of the first and second media as a common medium;

instructing transceivers for the first and second media to communicate only through the common medium; and

retrying a packet transmitted through the common medium at a lower rate if the packet is not acknowledged after transmission at a first rate.

8.   (Original) The method of claim 7, wherein at least one of the first and second media conforms to an 802.11 specification.

9.   (Original) The method of claim 7, wherein at least one of the first and second media conforms to a Bluetooth specification.

10.   (Original) The method of claim 7, wherein the packet is initially transmitted at the highest rate supported by both media.

11.   (Original) An apparatus comprising:

a processor;

a first transceiver coupled to the processor to communicate via a first medium;

a second transceiver coupled to the processor to communicate via a second medium, wherein at least one of the first transceiver and the second transceiver is to retry transmission of a packet at a lower rate if a prior transmission of the packet is not acknowledged; and

a circuit to dynamically allocate time-slot channels to one of the first medium and the second medium based upon a desired level of service.

12.   (Original) The apparatus of claim 11, wherein the processor comprises an integrated circuit having a reconfigurable processor core that includes a plurality of digital signal processors (DSPs).

13.   (Original) The apparatus of claim 12, wherein the integrated circuit further comprises a router coupled to the reconfigurable processor core.

14.   (Original) The apparatus of claim 13, wherein the router is configured to bond a plurality of cellular frequency channels and at least one short-range wireless channel.

15.   (Original) The apparatus of claim 11, wherein the circuit is to select one of the first medium and the second medium as a common medium for data transmission.

16.   (Original) The method of claim 1, further comprising instructing transceivers for the first and second media to communicate only in their allocated time-slot channels.