

ABSTRACT

CSMA/CD WIRELESS LAN

A wireless carrier sense multiple access/collision detection (CSMA/CD) communication system (1) is disclosed which includes a repeater station (R; 10) and a plurality of terminal stations (E, F, G; 30). A wireless uplink communication channel (Fu) provides for one-way communications between each terminal station and the repeater station and a wireless downlink communication channel (Fd) provides for one-way communications between the repeater station and each of the terminal station. The uplink and downlink communication channels operate at different transmission wavelengths. A bit pattern (18) received by the repeater station via the uplink channel is retransmitted via the downlink channel. A collision detection arrangement (48) is provided within each terminal station for comparing a bit pattern (38) transmitted from that terminal station via the uplink channel with a bit pattern (46) received from the repeater station via the downlink channel, to determine if the terminal station has unambiguous access to communications within the system.

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