Abstract

A new reliable protocol called Enhanced Power Control MAC Protocol for Wireless Ad- Hoc Networks (EPCMAC) is proposed in this project work. The key concept of this EPCMAC protocol is to improve the throughput, transport capacity and to save energy by sending all the packets with optimal transmit power. This communication approach promises improved throughput and delay performance by effective use of spatial diversity in wireless ad hoc networks. Also, the power of the data packets is periodically raised to a suitable level but not to the maximum so that it will avoid interference and unnecessary contention between nodes. Throughput enhancement of a wireless ad hoc networking at the MAC layer is achieved through spatial reuse of the channel by allowing concurrent transmissions as much as possible among neighboring nodes. Simulation results show that a considerable gain in throughput as well as high reduction in energy consumption can be obtained by EPCMAC protocol compared to the existing protocols.
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Index Terms

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