Abstract

MAC layer is key of wireless network. TDMA approach is based on Maximum utilization of frequency spectrum. Packet error is also depending on frequency spectrum. The demands of WLAN Devices day by day increases exponentially and it operates in the specific narrow spectrum of frequency bands and also increase communication parameters programmed and control over Most modern wireless devices. In this paper, simulate and analyze the performance of existing MAC layer protocol and hybrid MAC with TDMA protocol in wireless local Area Network is presented. In this simulation, we present a MAC protocol based on IEEE 802.11g standard in the DCF mode and DCF with TDMA mode which is useful to improve packet collision in traditional wireless networks. In this analysis, improved performance with TDMA base MAC layer is compared without TDMA. We used simulation through using NS-2 Simulator.
- Pravin Ghosekar, Girish Katkar, Dr. Pradip Ghorpade "Mobile Ad-hoc Networks" IJCA Special Issue on MANETs, 2010, page 153-58.
- Rashid saeed, "system design and Implementation of TDMA-based wifi wireless network" International Arab journal of information technology, vol. 9, No. 02, march 2012.
- Rashid A. Saeed, Amran bin Hj Naemat, Azrin bin Aris Ir. Mat Khamis, "Evaluation of the IEEE 802.11p-based TDMA MAC method for Road Side-to-Vehicle Communications" International Journal of Network and Mobile Technologies, VOL 1/ISSUE
2/ NOVEMBER 2010.
- T A Khan, M T Beg, M A Khan, "Evaluation of Back-off Algorithm performance of MAC layer IEEE 802.11WLAN"; International Journal of Engineering and Management Sciences, IJEMS, ISSN 2229-600x, April; 2013

Index Terms

Computer Science

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Keywords

Distributed Coordinator Function (DCF)  Medium access Control (MAC)  Time Division Multiplexing Technique (TDMA).