



Fair Mac Protocol for Achieving Proportional Fairness in Multirate WSN

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Condition: New. Publisher/Verlag: LAP Lambert Academic Publishing | In a multirate environment, slow nodes occupy the channel for longer time than fast nodes and thus the total throughput will be reduced. In this research, we study the problem of fairness in multirate wireless sensor networks. To improve the fairness, we are proposing a new protocol, FMAC (Fair MAC protocol) that is based on IEEE 802.11 MAC protocol to achieve proportional fairness between different nodes. FMAC protocol utilizes the idle slots of time and reduces the number of collisions and retransmissions, and thus reducing the energy consumption, which is very critical in wireless sensor networks. The experimental results show that transmissions become faster with less collisions and power consumption when applying FMAC, while the aggregated throughput and proportional fairness are increased. The detailed performance evaluation and comparisons are provided using the simulation. | Format: Paperback | Language/Sprache: english | 60 pp.



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