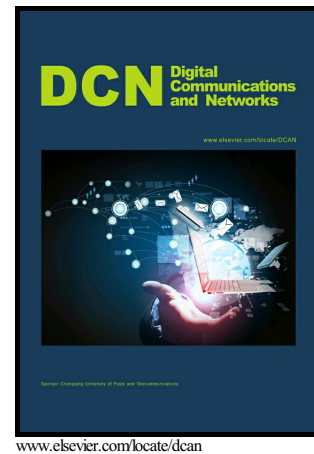


Author's Accepted Manuscript

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PII: S2352-8648(16)30096-7
DOI: <http://dx.doi.org/10.1016/j.dcan.2016.10.008>
Reference: DCAN67

To appear in: *Digital Communications and Networks*

Received date: 27 July 2015
Revised date: 23 July 2016
Accepted date: 31 October 2016

Cite this article as: Anuradha Pughat and Vidushi Sharma, Performance Analysis of an Improved Dynamic Power Management Model in Wireless Sensor Node
Digital Communications and Networks
<http://dx.doi.org/10.1016/j.dcan.2016.10.008>

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Performance Analysis of an Improved Dynamic Power Management Model in Wireless Sensor Node

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Abstract—

The energy consumption in the wireless sensor networks is a very critical issue which requires an immediate attention for the sake of growing demand of billion dollar market in future. The dynamic power management (DPM) technique is found a devise way of controlling and saving the energy usage in a sensor node. Previously, researchers have proposed lifetime improving stochastic models for wireless sensor networks and limited work has been found in the wireless sensor node. This paper proposes an analyser based Semi-Markov model for DPM in the event-driven sensor node. The power consumption comparison with previously proposed models without analyser shows analyser as a significant contributor to lifetime improvement. The improved model is more power efficient, presents how the DPM model observes the input event arrival and power states of the sensor node components, and then dynamically manages the power consumption of the overall system. Further, to observe the effect of event arrival, missed events, waiting

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