Design of Energy Harvesting Protocol for Relay Mobile Node in WLAN

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Abstract— **In this paper, we propose the balanced time power switching based relaying (TPSR) protocol for energy harvesting enabled mobile node in WLAN called energy harvesting cooperative networks (EHCN). Specifically, we develop outage and throughput performance characterizations in term of energy harvesting efficient factor in the proposed scheme. It is shown that the optimal throughput of the EHCN is critically dependent on the threshold signal-to-noise (SNR) value. The tightness of our proposed protocol is determined through Monte Carlo simulation results. Finally, our results provide useful guidelines for design of the energy harvesting enabled WLAN.**

Keywords—energy harvesting cooperative networks, amplify-and-forward, time power switching based relaying, throughput, WLAN.

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