Cooperative Wireless Transmission for Smart Neighbor Area Networks

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Abstract— Smart Grid Network (SGN) has recently received a great deal of attention and attracted a considerable amount of research. In fact, (SGN) becomes an alternative source of power since it provide efficiency and reliability power consumption. Thus, SG architecture include several communication scheme to ensure the best transmission of power and satisfy the consumer's requirement. To reach these ambition, the transmission must be established at time and without error. In the traditional transmission, every consumer transmit the power demand using a TDMA mechanism which prolong the delay. In this paper, the purpose is to suggest a model that can quickly transmit the power demand and achieve a good performance in terms of delay. The scheme is called Cooperative Wireless Transmission for Smart Neighbor Area Network (CWT). The cooperative means that all consumers can participate and coordinate between them to transmit the total power. So, The first purpose is to gather the total power of all consumers simultaneously and rapidly, the second one is to evaluate the performance of CWT in terms of Cooperative Symbol Error Rate (CSER) and Estimated Power (EP). All results are presented using numerical simulations.

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