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A Scalable Zigbee WPAN for waterflow Telemetry

Water and Sewerage service providers in Africa have encountered challenges in proficient collection of water billing data from customer's meters. This necessitates the need to implement a proper data collection mechanism that can be implemented remotely, effortlessly, and accurately. A Zigbee WPAN-to-WAN solution for water meter data collection is thus a viable solution. The objective was to design, implement and evaluate a scalable Zigbee Mesh WPAN model for remote water meter reading. This paper presents a model, prototype and project for a water meter sensor network based on IEEE 802.15.4 Zigbee standard. The resulting WPAN network allowed collection of data logged from the water meter sensors in real time remotely and accurately. The PPDIOO lifestyle approach was used to develop the model, prototype and guided project set-up. The model, prototype and project developed in this study will serve to inform the development of Zigbee water meter networks with data collected consumed by third party software solution providers for purposes of analyzing, organizing and reporting.

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