

Performance analysis of sigfox deployment

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ABSTRACT

Low-power wide area network (LPWAN) has become a promising communication technology as alternative solutions on long range communications, low power consumption and low cost that overcome the problems faced by traditional communications. An example of LPWAN technology is Sigfox that uses a zero generation (0G) technology. However, there is not many literatures discussed on this technology especially on its applications. The objective of this paper is to study the coverage of Sigfox in Malaysia by tracing its network coverage using a Sigfox module that is integrated with an Arduino microprocessor. In this paper, we reported the experiments performed on real device and field test as well as observed the performance of the proposed technology. This system was tested using two different Sigfox development module which has device ID 4126D0 and 3E3D05. Two locations were selected to observe the connectivity of the Sigfox network. The results showed Sigfox deployment gave impact on a coastal location compared to urban area. Based on this finding, Sigfox is expected to have an improvised performance in the future especially applications in rural and coastal areas.

KEYWORDS

Lpwan; Sigfox; Arduino Uno; Performance; Real Deployment

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