

A review on performances evaluation of low power wide area networks technology 2019

ABSTRACT

Low Power Wide Area Networks technology is considered as a new technology which enables a long-range communication where it targets the low power applications. There are many available solutions for Low Power Wide Area Networks technology in the market which among them are LoRa from Semtech and NB-IoT from 3GPP. This paper provides a review of the performances evaluation for Low Power Wide Area Networks Technology. It is shown that the parameters of PHY layer such as frequency, bandwidth, transmit power, spreading factor and code rate able to affect the performances of Low Power Wide Area Networks. Meanwhile, the received signal strength indicator and number of successful received packets data are the common performance parameter studied. In addition, the performance also conducted in the various location either in line-of-sight or not such as outdoor, indoor and underground.

Keyword: LPWAN; LoRa; LoRawan; Sigfox; Semtech