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Comparative Analysis of Digital Filters for Received Signal Strength Indicator (Conference Paper)

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Abstract

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Increasing demand in Internet of Things applications has drawn researchers to explore deeper into alternative methods that provide efficiency in terms of application, energy, cost and etc. One of the techniques proposed by the current trend is the use of Received Signal Strength Indicator value for different Internet of Things applications. It is imperative to investigate the digital signal filter for the Received Signal Strength Indicator readings to interpret it into a more reliable data. A comparative analysis of three different types of digital filters is discussed in this paper which are Simple Moving Average filter, Alpha Trimmed Mean filter and Kalman filter. There are three criteria used to observe the performance of the digital filters which are noise reduction, data proximity and delays. Based on the criteria, the choice of digital signal processing filter can be determined in accordance with its implementations. Hence, this paper portrays the possibilities of Received Signal Strength Indicator in different Internet of Things applications given a proper choice of digital signal processing filter. © 2018 IEEE.

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