

End-To-End Fully-Informed Network Nodes Associated with 433 MHz Outdoor Propagation Environment

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Abstract

This paper focuses on an end-to-end fully-informed network in a 433 MHz outdoor propagation environment with the intention of studying data flow in a network. This is motivated by the fact that, in a transmission where minimizing delay is critical, maintaining transmission time is influenced by a dataflow. As a result, 433 MHz propagation transmitter is used to analyzed the dataflow within its transmission session. This is meant to answer two questions: "how does transmission delay affect early detection of network failure within this antenna?" and "how quickly is it necessary to recover from a network failure within this antenna?" As a result, a fully informed end-to-end network was designed and built. An experimental analysis of data transmission over a network was carried out. The experimental results show that the antenna height and distance between transmitter and receiver have

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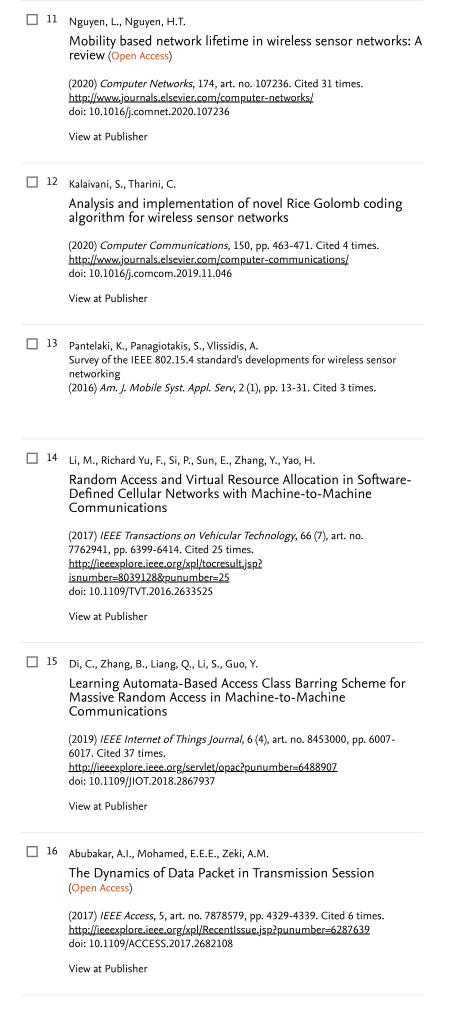
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the greatest impact on transmission success. Furthermore, above 50 metres, high rate bandwidths have a negative effect on data integrity and total dysfunctionality. The finding can be concluded that in an end-to-end fully-informed network with this specific antenna, data flow greater than 8 KB (at both 57600 bps and 115200 bps) has a disadvantage in the network. However, transmission over 80 metres is the most stable and maintains network data integrity at (9600 bps). © 2022 University of Bahrain. All rights reserved.

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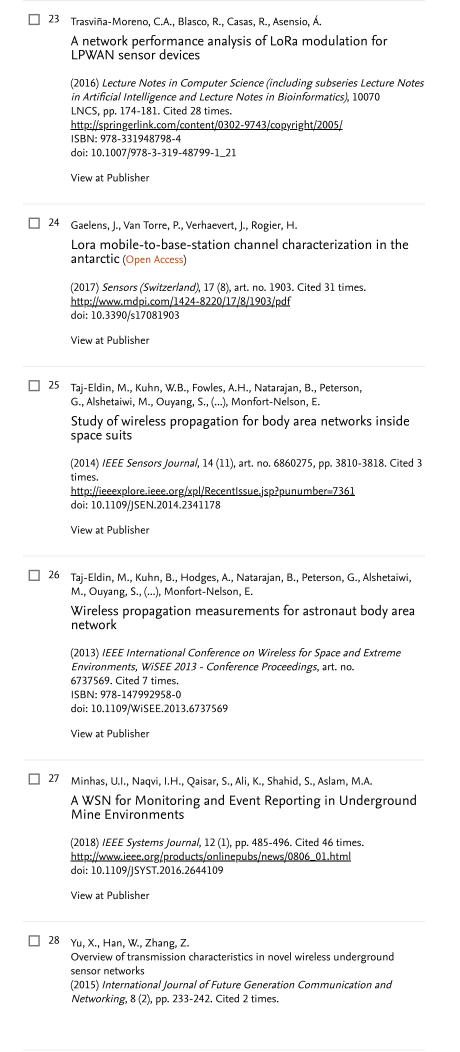
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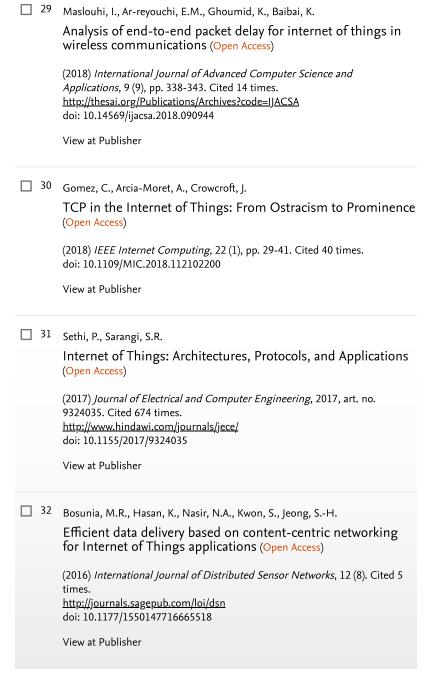






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