LoRa: Reported signal parameters to aid rogue sensor detection

SECURE WIRELESS AGILE NETWORKS

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Summary

Given the increasing use of low-cost IoT in safety critical applications, can reported Received Signal Strength Indicator (RSSI) or Signal to Noise and Interference Ratio (SNIR) be used as a reliable marker for rogue device detection? Here, a series of urban LoRaWAN [1] deployments and measurements are analysed to determine the likely distance from an authentic static device region where identification is not possible.

Methodology



Take aways

- Use of RSSI, or SNIR, for rogue sensor operation will have a region (or regions) where detection is not possible.
- Use of full RF fingerprinting [2] will enable more precise detection of cyber intrusion.

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https://www.swan-partnership.ac.uk/

References

[1] LoRa Alliance® <u>https://lora-</u> alliance.org

[2] Manish Nair et al, IMS 2022 Denver, paper WE2C_3, June '22

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