

WONGSATHON PATHONSUWAN : WIRELESS SENSOR NETWORK
FOR LOW POWER RADIO FREQUENCY DETECTION SYSTEM.

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Ph.D., 117 PP.

RF MEASURING SENSOR/LORA WAN/LOW-POWER RADIO FREQUENCY
/TRANSCEIVER DETECTION SYSTEM.

Nowadays, the frequency that does not require a license has a rapidly increasing rate of the tendency to be used, which may cause radio interference. It affects the surrounding wireless devices to malfunction or severe radio interference and may cause the wireless devices to stop working. In case of severe interference which the surrounding wireless devices cannot be used will be requested to be examined for devices that emit interference. The examiner has to specify the precise location of the interference device to examine and solve the exact problem. If examiner can't identify the location that cause a delay of detecting devices that emit interference. Therefore, having a highly accurate noise detector would provide quick and efficient troubleshooting solutions that led to this research. The research presents Wireless Sensor Network for Low Power Radio Frequency Detection System. Which uses an antenna and the spectrum signal analyzer to detect the target frequency or the interference.

In addition, a microcontroller is used to control the RF Switch to selectively read the data via a spectrum analyzer or Wi-Fi receiver. Then a microcontroller also serves to transmit the position, the direction of the antenna and the results of the

measurements to the database. Moreover, this method can measure the signal and specify the position of the interference precisely.



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Student's Signature _____

Advisor's Signature _____

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