DITRAP SMART PEST VISION

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Abstract New technologies have the potential to transform Pest Control Operator techniques and to reduce environmental impact through a green revolution. Internet of Things (IoT)-based application development platforms have the potential to run Autonomous management tools capable of monitoring real-time events when integrated in interactive innovation models for Image Recognition and Machine Learning methods. Image acquisition nodes are a complex Smart Wireless Networks where they send images to decision-making systems based on data-analysis and data mining of big data sets. This work presents advantages are demonstrated of a powerful tool that applies real-time decisions from data such as pest control strategy actions and selected parameters from pest propagation and environment conditions. Smart Wireless Sensor Network based on image nodes monitoring, bait station monitors, are periodically sampled and when is detected pest movements. Data are processed in a decision-making system based on learning prediction rules to study insects and rodents pest propagation. Our purpose is to show the results when adding a WiFi Mesh network created with a smart topology, is a new concept in Smart Pest Control SPC devices. During our test, all transmitted packet sizes have varied between 42 bps and 1514 bps. Our nodes can be detect rodent presence to start video or get image only in this time, so new information for PCOs can be adding to ERP manager or notifications Apps to follow the pest alerts. The second test was focused on obtaining data during sending commands to modify communication routes searching best route.

Key words Smart Pest control, AI Pest Control, Pest Image Processing