MIMOS IoT-Based Smart Forest Monitoring and Surveillance System

A state-of-the-art wireless system and ICT network which includes visual capabilities for surveillance. This initiative can assist and accelerate decision making, provide useful evidence and promote close cooperation between people and provide early warning detection to alert authorities of suspicious behaviour in and around important access points to forest complexes and protected areas.

Overview

This system aims to enhance anti-poaching efforts at protected areas through the use of real-time camera surveillance with analytics capabilities. The objective of the system is to prevent unauthorised access and to alert authorities of trespassing and suspicious behaviour that contravenes the National Forestry Act and the Wildlife Conservation Act. The system can be separated into two parts: physical infrastructure and software applications. Infrastructure is solar-powered hardware that consist of camera with video analytics capabilities as well as network equipment, and software is an application that enable monitoring by authorities and relevant stakeholders is to be installed in end users' smart devices.

Features

IoT-based Smart Forest Monitoring and Surveillance System comprises the following features:

- **Camera Surveillance**
  Surveillance centre point for security or systematic monitoring and tracking visitor or animal movements on real-time basis.
- **Trespassing Detection**
  Trespassing of an object will be detected via analytic surveillance camera.
- **Alert System**
  Sirens will be triggered as alert system if trespassing object is detected.
- **Report Generation**
  User is able to retrieve and download raw data for data analysis and future improvement.
- **User Notification**
  Accumulated trespassing count will be displayed in the mobile application.

Technology Benefits

The main impacts of the IoT-based Smart Forest Monitoring and Surveillance System are:

- **Reduction in Human Intervention**
  Provides immediate notification via mobile application.
- **Connectivity in Unconnected Areas**
  Provides infrastructure in remote area through LoraWan connectivity.
- **Enhanced Security**
  Provides remote monitoring via mobile application of any activities at the identified area.
- **Flora and Fauna Protection**
  Safeguards the flora and fauna in forest reserved areas.

Technology Summary

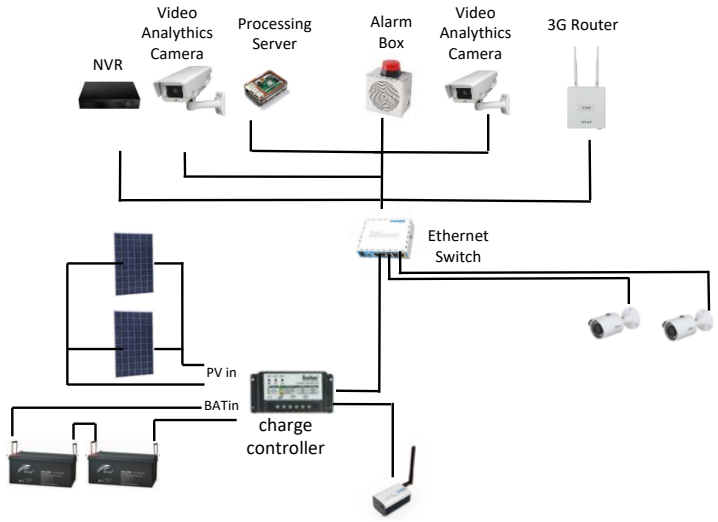
IoT-Based Smart Forest Monitoring and Surveillance System
Monitoring and surveillance system for remote monitoring application
Industries: Forestry, Government

Features

- Camera surveillance
- Trespassing detection
- Alert system
- Report generation
- User notification

Technology Benefits

- Reduction in human intervention
- Connectivity in unconnected areas
- Enhanced security
- Flora and fauna protection



MIMOS IoT-Based Smart Forest Monitoring and Surveillance System (system diagram)

System Components	
Typical Specification	
Power supply	Solar system with 12VDC battery powered
Detection technology	Mi-SP for Video Analytic
IP Surveillance Camera	IP Surveillance Camera
Gateway connectivity	Minimum 3G broadband
System Processor	Intel NUC
Network Video Recorder	Storage capacity 3TB
OS for Android device (Mobile Application)	Android version 5 to 9