**ABSTRACT**

We plan to build an automated IOT-based system for a more effective solution. Trees are to be monitored and marked using RFID tagging system along with acceleration and vibration sensors which can detect if the miscreants try to damage or cut down the tree.

The benefit of using active RF tagging method and wireless networks to monitor the plant is that customised RF tags with sensors can have a longer range and less costlier than GPS-based tracking. The tag will be designed to transmit data once in every hour to an external database which can be accessed through the mobile app.

Key Points

1.automated system for longer

lasting solution

2.use RFID and IOT for monitoring and tracking

3.use active RF tagging method and wireless networks to

solve these issues.

4.Customised RF tag with sensors

5. long read range

6. more sensor integration and less cost than GPS-based tracking

7. read range up to 500 metres and more than two sensors can be

added for triggering applications.

8. The tag is

designed to transmit data regularly say, once in every hour.

9. server will send alert information to the concerned authorities

10. To monitor

the regular status of the forest range from the remote office, dynamic web

page and database is used. In case of emergency, the alert information is

transmitted through GSM/GPRS modem as SMS

11. low cost, integration of sensors, long read range, design of proper base station,

link station, data collection centre and alert system.

12. cellular

structure and frequency planning to give better coverage

13. acceleration sensors and vibration sensors are used

14. Activity

and inactivity sensing detects the presence or absence of motion and whether

the acceleration on any axis exceeds a user-set level

15. Reader antenna is placed in hexagon

center to collect the data.

16. RF

reader, Microcontroller and XBee

17. send SMS to stored numbers through GSM modem. Eg. SIM 300 GSM

18. Hexagonal cell structure is used for placing antenna tower.

19. low cost optimized solution

20. less manpower