Abstract

The conflict between humans and elephants has been reported as a serious socio-economic problem in various regions in India and across the world. The cause, effects and reduction of such conflict, are a rapidly expanding areas of research across the world among the conservationists, scientists and technologists. On the other hand, presently Wireless Sensor Network (WSN) based systems are widely used as an effective warning system against different
hazard scenarios e.g.; fire, tsunami etc. Such WSN based system can also be effective to generate an early warning against the presence of elephant and thus can prevent potential conflict scenario so such system design and implementation is high on demand. Under present work, a WSN based indigenously designed, low cost, accurate Automated System for Remote Elephant Tracking (ASRET) has been proposed and studied with technical details. Proposed ASRET system will be having sensor nodes, gate-way node and a central processing unit (base station) with a warning unit for successful prediction and warning generation. Under present study, the algorithm of the central processing unit for the proposed system has been developed and software implemented with MATLAB Simulink. Simulated outcomes show that such system will be very much effective to generate a valuable early warning against the elephant presence at the conflict zone and will be helpful in preventing potential collateral damage.

References


Geoff V Merrett and Yen Kheng Tan (Editor), Wireless Sensor Networks: Application - Centric Design, Publisher: InTech, Chapters published December 14, 2010 under CC BY-NC-SA

Index Terms

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Keywords

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