SAPTHAGIRI COLLEGE OF ENGINEERING

14/5, Chikkasandra, Hesaraghatta Main Road, Bangalore-560057

Department of Computer Science and Engineering

Certificate

Certified that the project work entitled **"ZIGBEE BASED SMARTPHONE PROXIMITY ABSENCE ALERT SYSTEM"** carried out by **ANKITA BHARATI (1SG13CS016), DEEPESH JHA (1SG13CS038), PRAGYA (1SG13CS071), RAJEEV KUMAR (1SG12CS087),** bonafide students of this institute, in partial fulfillment for the award of **Bachelor of Engineering** in **Computer Science and Engineering** of **Visvesvaraya Technological University, Belgaum** during the academic year **2016-17.** It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the said degree.

Signature of the Guide	Signature of the HOD	Signature of the Principal
Prof. Kavitha G	**Dr. Prashanth C. M**	**Dr. Aswatha Kumar M**
Assistant Professor	Professor & Head	Principal

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ABSTRACT

The design, implementation and evaluation of a ZigBee based cell phone anti-lost and anti-theft measure is presented. The cell phone owner is given an audio or a visual alert at the very instant of the lost event and cell phone deduces the fact that it is away from its owner and executes the safety measures. This is realized by equipping the cell phone with a low-power ZigBee Reader and tagging the owner with a passive ZigBee token to determine a private space around him, which spans within 2-10 feet. Our system works on automatic, timed or accelerometer based thresholds. Our salient contribution is a twofold probing scheme - a duty cycle approach that economizes battery overhead, mitigates false alarms and scans the tag for multiple times by leveraging the interrogation time and power. We argue that though our design is costly in power budget, it is highly economical on battery energy because of short interrogation cycles.