Project Design Phase-I

Date	27 September 2022
Team ID	PNT2022TMID33319
Project Name	Project - IoT Based Safety Gadget for Child Safety Monitoring & Notification

Proposed Solution

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	More families are now spending time on work and social duties, hence away from their children. This causes increased concerns towards their safety and whereabouts, and has made keeping a track of their activities quite challenging. A momentary lack in parental supervision should be combated with an appropriate IT solution in context. Therefore, it is necessary for the proposed system to alert the parents when the child walks too far away and/or outside the “circle of safety” when they are away.
2.	Idea / Solution description	This research demonstrates Smart IoT device for child safety and tracking helping the parents to locate and monitor their children. If any abnormal values are read by the sensor then an SMS is sent to the parents mobile and an MMS indicating an image captured by the serial camera is also sent. The future scope of the work is to implement the IoT device which ensures the complete solution for child safety problems.
3.	Novelty / Uniqueness	Real Time Tracking Tracking system is used so that the child’s location and activities can be tracked and reported to the parent’s device. In this function the parents can mark the safe zone for their children. The button is discrete which means it has no marking. The location history will help to track the child's activity so that the area won't be updated. This feature is one of the important features as battery life should be long lasting.

4.	Social Impact / Customer Satisfaction	Monitoring customer satisfaction allows early identification of problems relating to the quality, performance and functionality of the product or services and unmet customer expectations.
5.	Business Model (Revenue Model)	The revenue model helps to find children by tracking and monitoring by parents(customer) strategies such as to track the location, environmental situation and some response from the child by sensors and Therefore adding additional features by customer feedback. According to that, the revenue will be decided.
6.	Scalability of the Solution	If any abnormal readings are detected by the sensor, then an SMS and phone call is triggered to the parents mobile. Also, updated to the parental app through the cloud. The system is equipped with GSM and GPS modules for sending and receiving calls, SMS between safety gadgets and parental phones. The system also consists of a Wi-Fi module used to implement IoT and send all the monitored parameters to the cloud for android app monitoring on the parental phone. More precisely, our protocol reduces the computation and communication overhead of the existing infrastructures to support better scalability.