An Innovative Approach For Women And Children's Security Based Location Tracking System

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Abstract:

As the threats for Women and children increasing day by day we are proposing a system that works on the controversy of children and women security using IoT. The proposed system intends to a device wireless technique in the form of embedded device namely Arduino for women that will serve the purpose of alerts and way of communicating with secure channels and it captures the image using electronic camera. There are many android applications for women safety but they as not as much as efficient. So to solve this issue of women safety we develop a wireless sensor kit which is easy to use and which is efficient to provide help to that victim. so when the victim press kits button, our application will capture the photo, collect users information to send notification to registered phone numbers with link of captured image. This saves the time and that victim get help without loss of time. Also in the case of Children security the system proposes a speed monitoring and location tracking facilities using GPS, GPRS, GSM. The system consists of bus unit. The bus unit which is used to detect the path of Bus by using GPS.Weather the bus is travelling on its day to day route and also it monitors the overspeeding of bus.

**Keywords**: Arduino, GPS/GSM/GPRS, Google Map, Sensors, Vehicle Tracking.

1. INTRODUCTION

Visual object tracking has been very important to a number of computer vision applications to name a few like surveillance system and gesture recognition robotics, and motion recognition. Progress in the online learning, imaging transformations, and object detection have lead to increase in the approach of tracking by detection. The object to be targeted is identified by the user in the first frame and then is described by a set of features it has. A set of feature describes their background. Another binary classifier then separates target from background in the successive frames. The changes in appearance has to be handled and the classifier could be updated incrementally over time span for it. Visual object recognition is also difficult for the computation. The Problem faced is of each object in the world casts a number of 2-D images on the retina. The lighting, object position and backgrounds change as per the position. Of viewer Object tracking means following of the trajectory of the object in the image frames sequence. For this object should be represented first. For representation of object appearance based methods could be used. After the representation of the object it is to be detected and then the object tracking can be done. Objects suspicious behaviour can be detected and tracked in surveillance system with the help of visual object tracking. In monitoring object tracking is used in traffic flow to track the vehicles and monitor the flow of the traffic for avoiding any jams. Video compression is also an applications of object tracking. Video object tracking can be applied in banks, residential areas, parking, malls for the monitoring activities. Object tracking can also be used for hand gesture recognition in the human-computer interaction applications. It is not easy to project 3D world into 2D image. Information may be lost in this process. Tracking purpose can be implemented using various methods. The effect of

noise and the changing illumination conditions of the object of interest affects object tracking. Tracking of object can be difficult due to articulated object nature. A major problem faced in object tracking can be occlusion. Motion of object may be complex , there may be real time processing requirements for tracking. Thus proper method must be chosen according to where object tracking is used. In this paper we discuss different techniques used in object tracking.

2. RELATED WORK

In this paper,The Internet of Things (IoT) , wearable devices, where embedded devices are loaded with sensors which collect information from surroundings. Then the information is processed and relayed to remote locations for analysis. Albeit looking harmless, these nascent technologies raise security and privacy concerns. They arise the question of the possibility and effects of compromising such devices. They discuss common design practices and their implications on security and privacy concentrating on the design flow of IoT and wearable devices. Two representatives from each category, the Google Nest Thermostat and the Nike+ Fuelband, cab be selected as examples on how current industry practices of security as an afterthought affect the resulting device and the potential consequences to the user's security. They then discuss design flow enhancements, through which security mechanisms can efficiently be added into device, vastly differing from traditional practices.
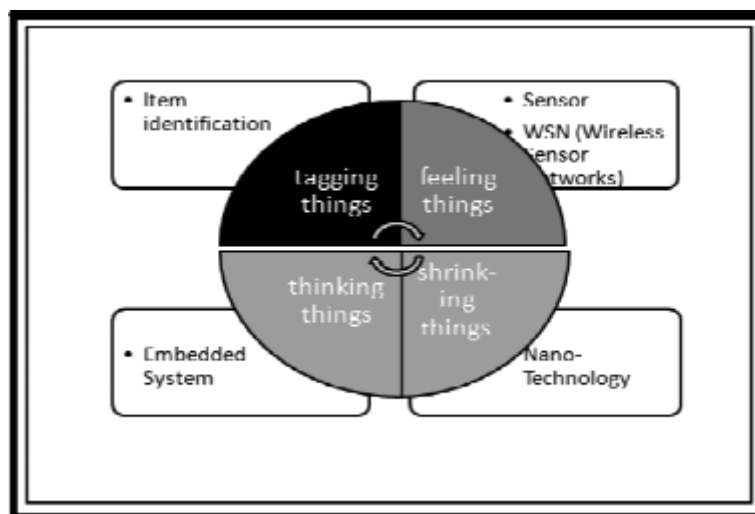
Fig.1.General figure

This paper highlights some of the opportunities presented by the rise of the so-called Internet of Things and the wearable technology in particular, and encourages policy makers to allow these technologies to develop. The Internet of Things and wearable tech challenges existing social, economic, and legal norms. These technologies raise variety of privacy and safety concerns. Disputes arise over technical standards, system interoperability, and access to the adequate spectrum to facilitate wireless networking. Those issues are not dealt with here. Then alternative to top-down regulation is to deal with these concerns creatively as they develop using combination of educational efforts, technological empowerment tools, social norms, public and watchdog pressure, industry best practices and self-regulation, transparency, and targeted enforcement of existing legal standards (especially torts) as needed. This paper concludes by outlining these solutions. The Internet of Things (IoT) is a concept which is outcome of the merged field of computer science and electronics. IoT describes how everyday life objects will interact and communicate with other objects over the internet. In IoT objects are equipped with microcontroller and sensor devices and various software application and suitable

protocol stack enable them to talk to other objects. The objects in IoT can be any "thing" such as people, devices, animal, building, vehicle or any physical thing which is part of our daily life. IoT is everything-to-everything communication. In general IoT can be described as a combination of Sensors, Connectivity and People & Processes. IoT combines smart devices with smart services to create compound applications for example intelligent transportation, smart cities, smart healthcare, smart home, smart building, digital farm, smart agricultural etc. IoT delivers on demand real-time services and assists in saving time, resources and even manpower. This comprehensive literature review explores the impact of IoT technology in several fields.

3. PROPOSED SYSTEM

The essential idea of the Internet of Things (IoT) has been around for nearly two decades, and has attracted many researchers and industries because of its great estimated impact in improving our daily lives and society. When things like household appliances are connected to a network, they can work together in cooperation to provide the ideal service as a whole, not as a collection of independently working devices. This is useful for many of the real-world applications and services, and one would for example apply it to build a smart residence; windows can be closed automatically when the air conditioner is turned on, or can be opened for oxygen when the gas oven is turned on. We're entering a new era of computing technology that many are calling the Internet of Things (IoT). A server is a computer program or a machine that waits for requests from other machines or software (clients) and responds to them. A server typically processes data. The purpose of a server is to share data or hardware and software resources among clients. This architecture is called the client–server model. The clients may run on the same computer or may connect to the server over a network.

4. ANALYSIS

Access point provides the interface to a mobile network. In their solution they presumed that Bluetooth fixed infrastructures are expected to be installed in offices, homes and public areas which are not the case nowadays. The implementation of mobile indoor applications that delivers maps and linked database information to indoor wireless devices such as mobile, phones and PDAs. Users would then interact with the web pages on their phones while viewing floor plans around their current location, searching for an office or a classroom.

Fig.2.Model

Machine to machine, machine to infrastructure, machine to environment, the Internet of Everything, the Internet of Intelligent Things, intelligent systems-call it what you want, but it's happening, and its potential is huge. Depending on who you talk to, the Internet of Things (IoT) is defined in different ways, and it encompasses many aspects of life-from connected homes and cities to connected cars and roads (yes, roads) to devices that track an individual's behavior and use the data collected for "push" services. Some mention one trillion Internet-connected devices by 2025 and define mobile phones as the "eyes and ears" of the applications connecting all of those connected "things." Depending on the context.

Fig.3.Cloud Output

Others give examples that are less phone-centric, speak of a class of devices that do not exist today or point to Google's augmented-reality smart glasses as an indication of things to come. Various GPS-based tracking systems have been successfully deployed and utilized in various applications such as fleet and vehicle location identification, and in route guidance. Recently, systems that integrate GPS and GSM technologies with Google earth to provide real-time data have also been proposed. However, for indoors and closed environments. GPS systems fall short and it becomes difficult to acquire the necessary satellites for accurate position computation. Some of the alternate techniques that are proposed for indoor location tracking include the integration of Bluetooth technology with 3G networks. The proposed solution suggests that Bluetooth terminals can exchange information with each other and then a Bluetooth.

CONCLUSION

As we know that many tracking devices are available in market. But those are very expensive. Here we are using low cost, high performance and accurate GSM and GPS modules for this project. So final outcome is comparatively low cost solution and performance of device is accurate and reliable. One more advance feature, SOS will work successful and it will very useful in critical or emergency situation. Easily parents can see current location through web version.

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