

Arduino Based Drone Delivery System controlled by Android Application

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ABSTRACT: This system focus on how to connect the target site and deliver the object properly and safely. This system blinds a web application and an android mobile application. It provides remote exploration services. Remote exploration system has been developed using web server, database and an Android mobile phone which support GPS functionality. User sends commands through browser which maps to the server.

Keywords: GPS, Android mobile phone, GSM, Arduino, RFD technology, SMS log.

1 INTRODUCTION:

Drones, formally known as Unmanned Arial Vehicle (UAV). Essentially, Drone is an aircraft without human pilot aboard a flying robot. GSM provides good infrastructure for communication in different countries. It provides a way to receive signals capture by machines. GSM can be used along with Arduino for interfacing hardware. GPS provides location and time information in all weather conditions, anywhere on or near the earth. It helps to find the precise location of a person. It allows us to find the phone's location. Android is an open source Linux based operating system designed mainly for smart phones and tablets Arduino is development environment for writing Arduino software. It is open source platform used for developing interactive objects. The Arduino takes input from variety of switches or sensor and controlling a variety of lights, motors and other application. We can access and retrieve data from our mobile phone even if it is not next to us .Data which could be fetched from the phone include contacts, call logs, SMS logs and current location of the mobile. User can access and perform operations through a java platform.

2 APPLICATION:

Drone has many applications, in military operations, in natural calamities, for domestic use. Unmanned Aircraft Systems (UAS) are useful in battlefield.

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Now these advanced tools are starting to provide the same benefits closer to home. Whether helping to protect the public, monitor wildlife, manage resources or advance research, small UAS provide person with real-time situational awareness, enabling better decision-making. Better decision-making saves lives and protects property. Drone Delivery System used in military operations to transport various gadgets or military appliances to different places. This system is very useful in conditions when human presence not available.

3 LITERATURE REVIEW:

In [1] we have seen the behavior-based approach to formation maneuvers for groups of mobile robots. The paper presents three formation control strategies. The first strategy uses relative position information configured in a bidirectional ring topology to maintain the formation. The second strategy injects interrupt damping via passivity Techniques. The third strategy accounts for actuator saturation.

In [2] this paper describes the use of GSM [Global system for mobile communication].Arduino is an open-source physical Computing platform based on a simple I/O board, and a development environment for writing Arduino software. In [3] this paper GPS tracking through the location of the campus is located. In [4] this paper only one swarm leader robot has the information of the reference trajectory. Then, each robot receives Information from one intermediary leader only. In this paper there is a leader robot which is followed by a

grouped of Robots which work in control with it .The leader gives the control to the other robot to work according to it and it works. It follows all the rules and regulations given by the leader and starts working according to it.in this there is a group Formation of all the robots which is control by the leader. All the action which are performed are done on the basics of leaders Actions. Here the leader plays an important role for handling all the actives taking place by the other grouped robots. In [5] this paper shows the communication between the client and server through transferring of information by the robot. This paper combines the use of web application and the hardware. In this robot is control by the web application. In the client send the data to the server and server sends the responses to those messages. This communication is then using the GPS location tracking process.

4 PROBLEM DEFINITION:

In this framework we are going to assemble an automaton which will help people to get object starting with one spot then onto the next. The automaton will get the item from one co-ordinate individual and convey that question target co-ordinate individual. Ramble Delivery System exhibits the transportation of item from one spot to target. In this framework android application is utilization for target recognition. Utilizing versatile number entered as a part of android application current area of target individual is finding with the assistance of GPS Technology.

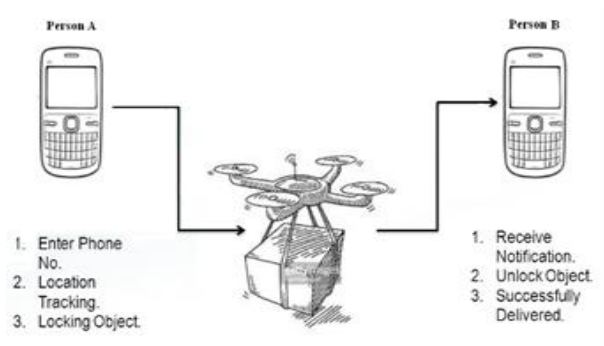


Fig. 1. GPS Technology.

5 PROPOSED METHODOLOGY:

In this system there are two users namely sender and receiver. Both sides have an Android Application in their mobile phones. This system will work in following manner,

[A] At Sender Side

Firstly, sender will enter the mobile number of receiver. After this, using GPS Technology location of entered mobile number i.e. receiver tracking is take place. Then object will be delivered to receiver.

[B] At Receiver Side

This system will recognize the receiver using Face Recognition System. Successfully delivered the object.

6 REFERENCES:

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