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BOAT CONTROL & BORDER SAFETY USING IOT

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ABSTRACT

The aim of the project is to help the fisherman to identify our Indian border in the while fishing. By using microcontroller the specific tasks used to identify the Lankan border. The project helps to known our border limit of the navy. The project consists of control room and receiver. The control room is placed at Indian area. The receiver is placed at the boat. The control room transmits the signal to boat. The boat receives the signal. When the boat is nearing the border line (near by 500m) receiver the signal indication to the boat then control room to display the details of the boat. Due to any reason the boat very near by the border against to the control room transmit the indication signal in previous projects fisherman can cross the border the boat automatically stopped. This problem overcome by this project to before crossing the border (nearby 500) the fisherman can get Indication signal. Suppose the other counties boat cross our border the signal will be received the control .The control room to aslant the navy force and safe the border.

I. INTRODUCTION

In this project used to wireless technology. It is send the indication signal to the boat control room collect the details to that particular boat suppose the boat crossing the border both the Indian and Lankan border can get the detail about that boat. From Tamil Nadu about 18,000 boats of different kinds conduct fishing along the India-Sri Lanka maritime border. But by accidentally crossing the border without knowledge, they get shot by the Lankan navy. This leads to loss in the both humans as well as their economic incomes. We have developed a system which eliminates such problems and saves the lives of the fishermen.

II. OBJECTIVE

In this project fisherman can identify our Indian board in the sea are while fisherman also indentify unwanted. Action in our country with help of IOT & GPS. In this project we can avoid unnecessary shooting and death. In this way we can achieve good relationship between the counties.

III. EXISTING SYSTEM

It is interfaced with GPS, GSM and a spy camera. The user must register the emergency numbers. This is an android app which provides all facilities but it has a disadvantage that if the mobile phone of the victim is thrown away by the opposing person, this model cannot be used efficiently. To overcome these disadvantages we propose a model. The system consists of GPS module attached to a button in the vehicle. In case of emergency, the switch attached to the GPS can be pressed. The GPS that is used here is Tectonic.FM1100. The

boundary points are marked above. These points should be stored in microcontroller and IOT. The computations done in microcontroller with these points. Thus vessel crossing the border is being calculated.

When any problem occurs the employee travelling in the vehicle presses the switch attached to the GPS. GSM module attached to this GPS and switch is used to send the message to a special team of the organization. Although this system seems to be efficient, at times there are some drawbacks because the drivers may not be trustworthy.

IV. MARITIME BOUNDARY BETWEEN INDIA AND SRI LANKA

He boundary points are marked above. These points should be stored in microcontroller. The computations done in microcontroller with the splints. Thus vessel crossing the border is being calculated.

V. WORKING PLAN

In June month we can plan that project and discuses that project. In July month analysis that project and how to Use that project in society. In August month circuit board connection discuses with our guide and material collection micro controller, transmitter, receiver, GSM, GPS. In September to implement our project**.** Microcontroller receives the data from the GPS receiver through UART. The data received contains many details along with latitude and longitude. The latitude and Longitude of the current position is separated from the detailed data from GPS. The current positions are compared with already stored latitude and longitude of countries boundary locations.

5.1. BOAT POSITION AND NAVIGATION SYSTEM CONTAINS

- Layer1: Green LED indication
- Layer2: Red LED indication
- Layer3: Alarm indication
- Layer4: control room monitoring

5.2. BLOCK DIAGRAM

Fig.1

Fig.2

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VI.HARDWARE SPECIFICATIONS

AVR family microcontroller Wi-Fi Modem

- LED's
- LCD Display
- 12V transformer
- Ultrasonic sensors
- Resistors
- Capacitors
- Diodes

VII.SOFTWARE SPECIFICATIONS

- Arduino Compiler,
- IOT Gecko,
- MC Programming Language

VIII. COMPENSATION

Rotates the signal to represent correction of phase and Doppler error on the link. This block simply corrects using the same values as the Phase / Frequency Offset block. $50 per year. In Reach SE by Delores is a pocket-size communicator that can send 160-character text messages using a Bluetooth-enabled Smart phone.

The free Earth mate app turns a tablet or Smartphone into a navigation instrument pinpointing your location on a chart or map. With the Map share feature, others can "ping" you and "see" your position. Your safety is enhanced with interactive SOS, which allows you to carry on a dialog with rescuers during an emergency. Airtime plans are priced from $15 to $99 per month.

IX. FREQUENCY RANGE

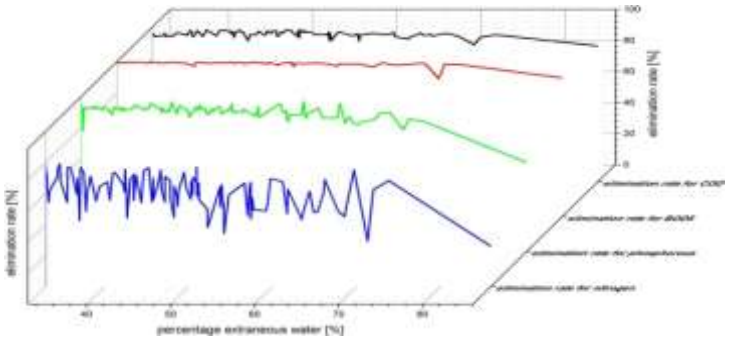

Fig.3

X. GPS ACCURACY

The accuracy of GPS depends on the type of receiver. Most hand-held GPS units have about 20m accuracy. Other types of Receivers Sea Method called Differential GPS (DGPS) to obtain much higher accuracy.DGP require an additional receiver fixed at a known location nearby. Observations made by the stationary receiver are used to correct positions recorded by the roving units, producing an accuracy greater than 1metre.

The proposed system uses a GPS receiver which receives signal from the satellite and gives the current position of the boat. The proposed system is used to detect the border of the country through the specified longitude and latitude of the position, not only between Sri Lanka and India but all over the world.

The particular layer level i.e. border can be predefined and this can be stored in microcontroller memory. The current value is compared with predefined values and if these values are same, immediately the particular operation will be done i.e., the microcontroller Gives instruction to the alarm to buzzer.

XI. APPLICATION

- We can use this device also as bomb detector
- Location of any lost vehicle could be found
- Accuracy determination of location
- Maintenance cost is low
- Easily replaceable

XII. CONCLUSION

Thus the fishermen can easily identify the national sea borders and therefore prevents them from entering their area. Thus saving their lives and providing good relationship with the neighboring countries. Also, the piracy of ship. Can be easily brought under control.

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