SEA BORDER DETECTION AND PROTECTING FISHERMAN USING RFID AND IoT

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Abstract*: It presents how the protection of innocent fishermen's from the shooting and arresting by the other country navy is possible. An Embedded technology which uses IOT, and microcontroller and RFID can avoid this. There are three boundaries of borders taken Final state boundary will be the border between the two countries and other two borders before that comes under the parental country circumstances. First two border crossing will be monitored by Indian government. The fishermen's are warned by the warning devices such as speaker (a buzzer) and an LCD display while they crossing the first two borders. If warning system fails there is another option. While crossing third border, the motor in the boat turns off automatically. Now Information about the fishermen's will be acknowledged to both the Indian and SriLankan government*

IndexTerms–: RFID Tag,RFID Reader,IOT

I.INTRODUCTION

An enhanced implementation is made in this project in order to enhance the safety of the fishermen. The technologies like Internet on Things and RFID are used. The major process of this project is controlled by the Arduino UNO. The RS232 Communicator is used in order to connect to the IoT .The RFID Tag maintains the information about location of the borders and it is placed in the stable buyos . When the boat reaches the buyos, the RFID reader reads the information that is radiated from the RFID Tag.

The read information is processed through the Arduino UNO and the output from the Arduino UNO is obtained in the IoT web page through the RS232 Communicator. Thus ,this process enhances the safety of the fishermen by detecting the position of the boat that is being monitored by the Navy of the particular country. In case of any emergency the Navy can send any rescue forces to rescue the fishermen in danger.This location and safety informations can be monitored in the allocated IoT web page with the access granted to particular group of people or authorities. Thus an enhanced implementation is made with the IoT and RFID technology.

Embedded processors can be broken into two broad categories. Ordinary Microprocessors (μP) which is used as separate integrated circuits for memory and peripherals. Microcontrollers (μC) which consist of many more peripherals on chip, reducing power consumption, size and cost. In contrast to the personal computer market, many different basic CPU architectures are used, since software is custom-developed for an application and is not a commodity product installed by the end user. The size has to be fit in single chip, thereby the speed of the process is achieved in real time

II.PROPOSED SYSTEM

2.1Block Diagram

The block diagram of the proposed system is shown in Figure.1.The system is based on RFID Tag and RFID reader. The major process of this project is controlled by the Arduino UNO.The RS232 Communication is used inorder to connect to the IoT. The RFID Tag maintains the information about location of the borders and it is placed in the stable buyos.When the boat reaches the buyos, the RFID reader reads the information that is radiated from the RFID Tag.
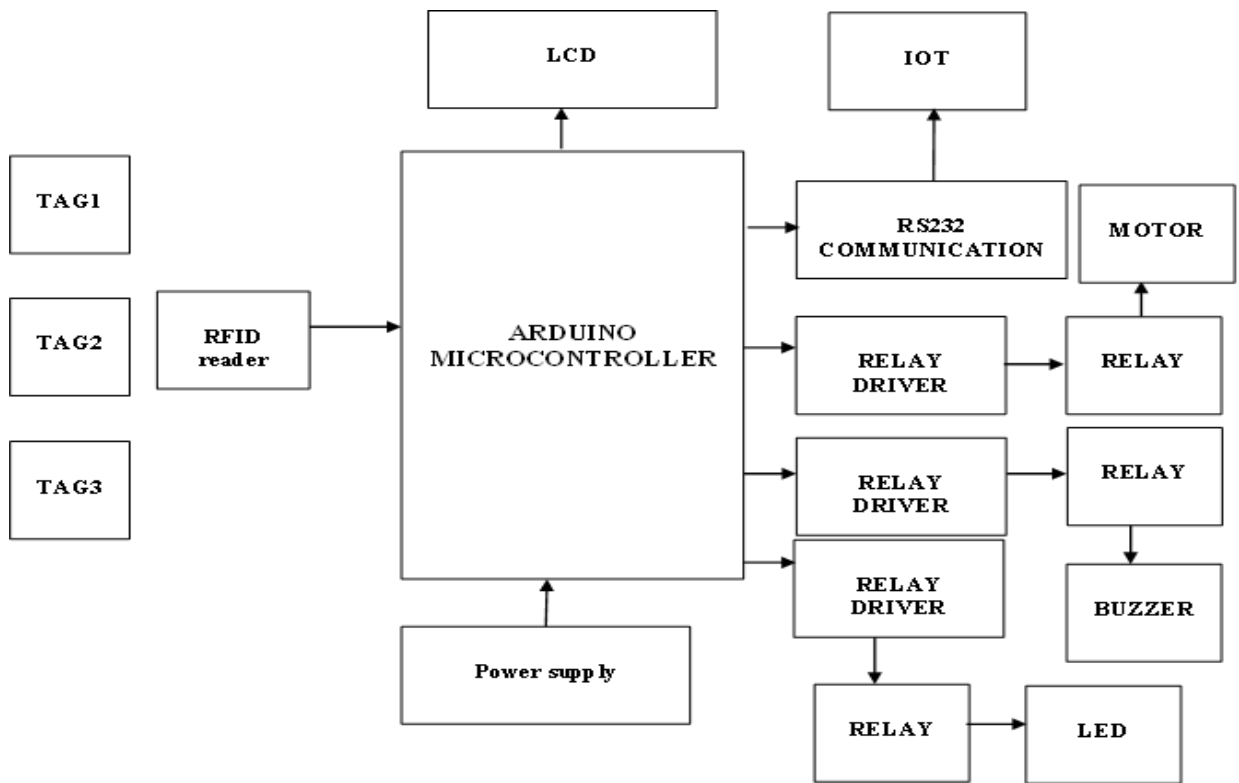

Fig.1. Block Diagram of Proposed system

2.2 Experimental Setup

The process can be well explained with the block diagram that intames the details of the stable buyos from the RFID tag to the RFID reader through the radio frequencies. This is then processed in Arduino uno328 that has 54 digital input and output pins and also 3 serial communication ports An enhanced implementation is made in this project in order to enhance the safety of the fishermen. The technologies like Internet on Things and RFID are used. The major process of this project is controlled by the Arduino UNO.The RS232 Communication is used in order to connect to the IoT.The RFID Tag maintains the information about location of the borders and it is placed in the stable buyos.When the boat reaches the buyos, the RFID reader reads the information that is radiated from the RFID Tag.The read information is processed through the Arduino UNO and the output from the Arduino UNO is obtained in the IoT web page through the RS232 Communicator. Thus ,this process enhances the safety of the fishermen by detecting the position of the boat that is being monitored by the Navy of the particular country. In case of any emergency the Navy can send any rescue forces to rescue the fishermen in danger.This location and safety informations can be monitored in the allocated IoT web page with the access granted to particular group of people or authorities. Thus an enhanced implementation is made with the IoT and RFID technology

III.. RESULTS AND DISCUSSION

Thus on working with is project the positives are able to attain from it. Thus this shows the process of success rate for the further development and the future real time implementation.

1) Test case 1: over all hardware output
2) Test case 2: IOT output

Fig. 2. Overall Hardware Output

id	value	isactive	ReceiveDate	receivetime	receivetype	empid
150	Boatno:D105border3cross#	✔	2/5/2018 10:48:53 PM	2/5/2018 10:48:53 PM	2	110
149	Boatno:D105border3cross#	✔	2/5/2018 10:48:43 PM	2/5/2018 10:48:43 PM	2	110
148	Boatno:D105border2cross#	✔	2/5/2018 10:48:35 PM	2/5/2018 10:48:35 PM	2	110
147	Boatno:D105border2cross#	✔	2/5/2018 10:48:27 PM	2/5/2018 10:48:27 PM	2	110
146	Boatno:D105border2cross#	✔	2/5/2018 10:48:19 PM	2/5/2018 10:48:19 PM	2	110
145	Boatno:D105border2cross#	✔	2/5/2018 10:48:10 PM	2/5/2018 10:48:10 PM	2	110
144	Boatno:D105border1cross#	✔	2/5/2018 10:46:32 PM	2/5/2018 10:46:32 PM	2	110
143	SEA_BORDER_CHECK	✔	2/5/2018 10:46:20 PM	2/5/2018 10:46:20 PM	2	110
142	Boatno:D105border2cross#	✔	2/5/2018 10:45:42 PM	2/5/2018 10:45:42 PM	2	110
141	Boatno:D105border2cross#	✔	2/5/2018 10:45:34 PM	2/5/2018 10:45:34 PM	2	110
140	Boatno:D105border2cross#	✔	2/5/2018 10:45:25 PM	2/5/2018 10:45:25 PM	2	110
139	Boatno:D105border1cross#	✔	2/5/2018 10:34:55 PM	2/5/2018 10:34:55 PM	2	110
138	Boatno:D105border1cross#	✔	2/5/2018 10:34:46 PM	2/5/2018 10:34:46 PM	2	110
137	SEA_BORDER_CHECK	✔	2/5/2018 10:34:36 PM	2/5/2018 10:34:36 PM	2	110
136	Boatno:D105border1cross#	✔	2/5/2018 8:49:56 PM	2/5/2018 8:49:56 PM	2	110
135	Boatno:D105border1cross#	✔	2/5/2018 8:49:48 PM	2/5/2018 8:49:48 PM	2	110
134	SEA_BORDER_CHECK	✔	2/5/2018 8:49:31 PM	2/5/2018 8:49:31 PM	2	110
133	Boatno:D105border3cross#	✔	2/5/2018 8:45:21 PM	2/5/2018 8:45:21 PM	2	110
132	Boatno:D105border3cross#	✔	2/5/2018 8:45:13 PM	2/5/2018 8:45:13 PM	2	110

Fig. 3. IOT output

IV.CONCLUSION

Thus a method is implemented to enhance the safety of the fishermen. The technologies like RFID and IoT are used as they are considered as the advanced technologies. The information through the RFID are read by the user anywhere in the world through the IoT. This is made to increase the safety measures of the fishermen. In case any emergency the rescue forces are sent to safety the life of the fishermen.

V.FUTURE WORK

Inorder to implement this setup an method is being used based on the RFID technology. In this an RFID Tag is placed in the 3 stable buyos that are able to maintain the border identification . RFID Reader the stored informations are being shared in the form of the radio frequencies. Thus the RFID reader sends the received informations to the Arduino Uno 328 and RFID reader placed in the boat. IOT(internet on thinks)and RS232 communication similar to the serial port that are used to the sending to message of the particular people .

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