Biker To Biker Communication

1Nowman Rashid Naikawadi, 2Md. Saqeeb Javid Attar, 3Sonal Sanjay Havale, 4Prof. (Dr.) S. A. Patil

DKTE Society's Textile and Engineering Institute, Ichalkaranji (An Autonomous Institute)
DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION ENGINEERING
Final B.Tech (2019-20)
PROJECT SYNOPSIS

- **Objectives:**

The objective of this RF based communication channel is to provide a safe and connected service.

Some indicative of this alternate communication channel are:-
1) Seek help in case of an emergency
2) Broadcast pre-configured messages e.g. low fuel, stop ahead etc.
3) Share ones location

- **Block Diagram/ Flow Chart/ Algorithm:**

- **Introduction: (History, Current Scenario)**

- Nerves of economic development:
  - Fast transportation system
  - Rapid transit system

- In 2018 one serious road accident occurred every minute on Indian roads and 16 die every hour.
- Traffic Problem, Road Block, Loss of fuel and Time.

Need for an offline communication channel through which Riders can broadcast messages and alerts to other Riders in the near vicinity.
**Literature Review:**

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Authors</th>
<th>Year</th>
<th>Main finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hyungtae Rho, Joungsun Ahn, Sangkyung Sung Youngjae Lee</td>
<td>2010</td>
<td>On the basis of trilateration process how the position of the receiver is calculated. GPS satellites are constantly moving in Geosynchronous orbit.</td>
</tr>
<tr>
<td>2</td>
<td>Moore P. Crossley</td>
<td>1999</td>
<td>GPS communicates via radio waves which travel at a known speed (the speed of light). There are presently 24 satellites in the GPS constellation.</td>
</tr>
<tr>
<td>3</td>
<td>Golhar, R. V., Vyawahare, P. A. Borghare, P. H. Manusmare</td>
<td>2016</td>
<td>Android applications are written in Java programming language. Without using the standard Java Virtual Machine (JVM) android applications cannot be executed. Technology are Sqlite, JAVA ,XML ,[]</td>
</tr>
</tbody>
</table>

**Project Description:** (Describe Project in 7-8 lines.)

As we face many traffic problems, our project is one of the solution to it. We are going to broadcast the message of any of the situation happened ex: accident, land slide, heavy rain etc. with the help of RF module from the front traveler to all the travelers behind him.

With the help of Bluetooth module Neo-6M which is used for communication purpose and send messages to the others. Also we can send the exact location of the incident site by using the GPS module. And we are going to develop an android application so that the user can easily select any of the message. And a display is used to display to message.

**Project Plan** (Divide the project in 2-4 phases and mention the phase wise plan of action)

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Activity</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Algorithm design, Component purchasing</td>
<td>August, September</td>
</tr>
<tr>
<td>2</td>
<td>Separate module testing</td>
<td>October</td>
</tr>
<tr>
<td>3</td>
<td>Hardware Implementation</td>
<td>November</td>
</tr>
<tr>
<td>4</td>
<td>Interfacing App With hardware, Final debugging and testing &amp; report writing.</td>
<td>December, January</td>
</tr>
</tbody>
</table>

**Project Estimate and Tentative Component List**

**Advantages:**

Solves the Issue of Traffic

Helps in Emergency

**Disadvantages/Future Improvements:**

The device have be to fit into all bikes, so it is costly.

The frequency which we are using is free, so if someone used same then miss match of data is possible

Expansion capabilities to support payloads like data, voice and also to support the low bit rate video
References (as per IEEE / standard format)

[6] [Accessed on 18 July 2019]

- Answers to questions asked during Presentation Session:
  - Arduino nano is used because for cost minimization purpose as well as we have to connect 8 nodes such as shown in block diagram.
  - RF module can transmit data up to 1 Km.