Abstract

Number of helpline numbers are available that provide services such as ambulance service, protection to girls etc. But this number lacks the feasibility and are unable to provide the service. So to overcome the drawback of this service, we propose a system that provides frequently needed help in our day to day life. This paper presents the design of our system that focuses on helping out people to track the location of a missing person or in need of any general help by using an Android or a Web application.

Keywords : Android, Long code Service, Helpline

1. INTRODUCTION

Each one of us come across various situations in life where we need help to face it. Such help can be mental help or physical help. Apart from mental help the physical help is needed in case of accidents, harassments, robbery etc. To face this situation number of helpline numbers are available to get the help. Example of such numbers are “1091-WOMEN HELPLINE NUMBER”, “1098-AMBULANCE HELP” etc. The numbers mentioned above are common for all people of the country. So the country is organized in a hierarchical order like state, district, city and so on. Each category of the hierarchy uses various helpline numbers. The user can use any number and ask for help from local authorities or police. The user who need the help should dial the number and specify certain things such as location, situation, type of attack etc. But this number lacks the flexibility and help is provided only in rare cases. Along with this the user needs to provide the evidence to the police. In addition to the above all requirements of helpline, user needs to remember variety of numbers for different needs.

To overcome the drawback, we propose an integrated application which combines the help that is needed mostly. The application consists of modules that provide help for ambulance, some critical situation such as harassment, robbery etc. and can also broadcast the missing persons report. There are three modes of access to use the service such as web app, android app and long code service. So the user willing to use the service can choose one of the modes. For this the user should fill the details either using web application or android application. User using android application need to register by feeding the necessary information. The information will be used while asking for help. Apart from android application, we have web application that is used to broadcast the report of the person who is missing, provides basic information about the help service and how to use them. The web application is based on long code service.

One of the unique feature the user can use is the long code service. User who doesn’t have an android mobile can use the long code service. The service needs the user to register himself with the web application and allot the keyword to the location he/she visits during his work. This keyword is used when the person needs the help and corresponding location person gets the message for help. In each module the timer is set to resend the message in cases the help is not received from any of the recipients. This process is carried out by the server. Thus aim of providing help taking time as an important constraints is fulfilled.

2. EXISTING SYSTEM

In this section we present some existing systems with their features to understand the concepts related to helpline service in detail

2.1 Safety net app

Application developer: Predictive Solutions (An Industrial Scientific Company)

Description:
The Safety Net app from Predictive Solutions allows customers to predict, and ultimately prevent, workplace injuries. First, the app allows customers to conduct inspections and collect workplace safety observations from their jobsites. The following are the steps for the user to register with the app:

1. Configure to match your company’s safety observation program including checklists, worksite locations, team members and other relevant information.
2. Add detailed information during inspections, such as comments and severity levels.
3. Add observation pictures.
4. Mark items for follow up and assign actions, responsibility and due dates.
5. Upload your observations to Safety Net with the tap of a button to ensure that the data is available in real time.
6. Provide feedback to observers and inspectors, in real time, to ensure quality data is being collected.
7. View and manage open issues.

Features:
1. **Safety Net** is the leading safety management system for saving lives by predicting workplace injuries.
2. Safety Net assumes that many observable indicators of injuries and fatalities, if corrected, can prevent incidents from occurring.

Disadvantage:
1. This is a companion app for existing Predictive Solutions customers.

2.2 **V with u app**

Application developer: Star India Pvt. Limited

Description:
1. V With u app is an emergency app which sends alert messages at the click of a power button of a smartphone consecutively 2 times.
2. It sends out alert messages every 2 minutes to the fedded contacts.
3. The receiver receives the link of sender’s location every 2 minutes giving their updated location and hence help is provided.

Features:
1. With this application, we can know about the whereabouts of our loved and dear ones.
2. This is quite good, useful and an initiative taken application which provides help to everyone.

Drawbacks:
1. The major drawback of this application is that it won’t work if there is nil balance, no internet connection or Wi-Fi or any other in stable connection.

2.3 **Bsafe app**

Application developer: Silje Vallestad and Team

Description:
1. Bsafe is a personal safety application where we have to set our own personal safety networks of friends, family etc.
2. It works same as V with u application but uses a timer mode to program an automatic alarm that will trigger when required.
3. The Guardian Alert button will immediately notify your friends and family members that you need help, and let them know where you are (GPS) and what’s happening (video). It will even set off a siren (optional).

Features:
1. New in v3.2.10
2. Improved location reporting
3. Fixed missing timestamp issue

Drawbacks:
1. This application works only with Wi-Fi connectivity, internet connection and with a user balance.

3. **PROPOSED SYSTEM**

We thereby propose a system that includes some of the features of existing systems and overcomes their demerits.

The proposed system consist of three modules:

3.1 **General Help**

General help is needed by the user in cases of harassment, robbery, molestation etc. In such case the earliest help can be received from the nearby polices, public servants and relatives. This could provide way to overcome the crime to take place.

3.2 **Ambulance Help**

Ambulance service plays a vital role during accidence. There are number of ambulance services are available and to remember each one of them is difficult. So to provide easy access to ambulance service this module is proposed. Here the user need to only press the button to get the nearby ambulance service.

3.3 **Missing Person Help**

The module is used to find the person who are reported as missing. Here the missing person report is broadcast to the contacts or on the website. Details of missing person is displayed to users on website and also to subscribers.

3.4 **Access Modes**

To get an access to the application, the system has got various modes as follows:

3.4.1 **Android App**

Initially the user who wish to get the service and has a smart phone registers with the android app. For registration the user has to fill all the details such as personal information, location that he/she visits and keywords to each location. Each keyword will contain location i.e. corresponding address and phone numbers to which the user wants to ask for help. All this information is saved in the database. The server is responsible for maintaining all the data. When the need for help arises the user has to choose the module i.e. type of help he/she needs.
There are three modules: 1) General 2) Ambulance 3) Missing Person Finder. Working of first two modules is same. The user need to trigger the help button and the SMS is send. This SMS is first received by the server. The server extracts the location and matches with the location saved in the database and if the match is found the SMS is send to the respective relatives in case of general help and to ambulance in case of ambulance help. Once the feedback is received from the respective number then android app stops. If the feedback is not received and the timer gets expired, then the server is again comes into the picture. Here the user need not to trigger the help button again. The server handles the entire procedure and repeats it up to some predefined count.

Apart from general help and ambulance help we have one more module i.e. Missing Person Finder. This module enables the user to find the missing person. The user who wish to use the module have to feed the details of the missing person. This details is saved and forwarded to the contacts that are present in the mobile. Thus it broadcast the report to various contacts. Thus the android app provides an easy way of using the service.

3.4.2 Web app with long code service.
A web application or web app is an application software that runs in a web browser. It is created in a browser-supported programming language (such as the combination of JavaScript, HTML and CSS) and relies on a web browser to render the application. Web applications are popular due to the ubiquity of web browsers, and the convenience of using a web browser as a client, sometimes called a thin client. The ability to update and maintain web application without distributing and installing software on potentially thousands of client computers is a key reason for their popularity, as is the inherent support for cross-platform compatibility.

The web application uses “Long code service” to provide the user with the service. Initially the user who wishes to get the service, registers with the web app. For registration the user has to fill all the details such as personal information, location that he/she visits and keywords to each location. Each keyword will contain location i.e. corresponding address and phone numbers to whom the user wants to ask for help. All this information is saved in the database. The server is responsible to maintain all the data. The user can also display the missing person details on the web app.

3.4.3 Long Code Service
A long number also known as a virtual mobile number, dedicated phone number or long code, is a reception mechanism used by businesses to receive SMS messages and voice calls. As well as being internationally available, long numbers enable businesses to have their own number, rather than short codes which are generally shared across a lot of brands. Long numbers allow a wide range of industries to generate large amounts of mobile-originated SMS from the subscribers, such as wireless application service providers, mobile virtual network operators, mobile virtual network enablers, SMS aggregators, e-sellers, advertising agencies, media channels and mobile infrastructure providers. Long code service make use of long number.

The user has to enter the keyword following the HELP as a start of SMS. This SMS is first received by the server. The server extracts the location and matches with the location saved in the database and if the match is found the SMS is sent to the respective relatives. Once the feedback is received from the respective number then android app stops. If the feedback is not received and the timer gets expired, then the server again comes into the picture. Here the user need not trigger the help button again. The server handles the entire procedure and repeats it up to some predefined count. Thus long code service enables the user to use the service without having the smart phones. This will help the common people to get the help through or application.

4. DESIGN

Fig (a). Block Diagram of Customized Helpline System
4.1 Android App
The flow diagram of android app is as shown below:

4.2 Long code service with Web Application
The flow chart of long code service with the web application is as shown in fig (c). The chart contains two separate technologies that are integrated together. The access mode is designed for the user who do not have the smartphone and wish to use our service.

5. CONCLUSION
We have studied various softwares that are available for providing help in various critical conditions. Although these softwares provide various facilities, but lack some of the functionalities and is only available to smartphone users. These softwares do not provide an integrated service that can be used in all the possible scenarios. So we have proposed a system that can work in most possible cases and provide the user with an integrated system. The user can select the application according to his need and use it at the time when he/she needs any help. The service “Customized Helpline System” is not only for the smartphone users but it can be used by the common people who do not have such facilities.

This enables people to get help from anywhere, anytime and according to their requirements. Thus the service is provided with means for providing basic security constraints and health constraints. The usage of various modern technologies provides an easy way to establish connection between people and their relatives and ensures that they are safe.

6. REFERENCE