

Intelligent Communicator (Android Application)

Sanil Raut^{#1}, Tushar Gawande^{#2}, Yogesh Joshi^{#3}, Aditya Gulwelkar^{#4}

Computer Science, Pune University

¹sanilf1@gmail.com

²invtag@gmail.com

³yogesh8.pune@gmail.com

⁴aaditya.gulwelkar@gmail.com

Abstract— Recent years have witnessed a meteoric increase in the adoption of smartphones. Their popularity can be attributed to the incredible functionality and convenience smartphones offered to end users. In fact, existing mobile phones are not simply devices for making phone calls and receiving SMS messages, but powerful communication and entertainment platforms for web surfing, social networking, GPS navigation, etc. Not surprisingly, mobile users are increasingly relying on smartphones to store and handle personal data. Inside the phone, we can find current (or past) geo-location information about the user, phone call logs of placed and received calls, an address book with various contact information, as well as cached emails and photos taken with the built-in camera. This gives rise to need of creating applications for users that are helpful to organize the data on the mobile phones and utilize all the features that are provided efficiently. We have developed an Android Application called Intelligent Communicator for the purpose of providing a helpful tool to the end user to manage his/hers daily tasks more efficiently. In this paper we are explaining the application that we have built.

Keywords— Android, Intelligent Communicator, Location tracking, Scheduling, Busy message.

I. INTRODUCTION

Mobile communication allows transmission of voice and multimedia data via a computer or a mobile device without having connected to any physical or fixed link. Mobile communication is evolving day by day and has become a must have for everyone. Mobile phones are gradually reducing the problem in communication and many day to day life application and other services anywhere and anytime. There are a lot of applications like call management and others but this application which is android based is more customized and most simplified of all. All kinds of security and authentication is provided in this application so that only appropriate user can make changes or handle the application. Also there is no such application available in android having multiple modules working together.

This application is basically designed for android mobile phone users. In this application all the features that a mobile phone user need for easy and reliable communication are provided. Also we have chosen Android platform because Android has lots features that other mobile operating systems don't have. The basic difference between the android operating system and other system is that android has Dalvik virtual Machine. Also it using very light weight database known as SQLite. That

will help it to speed up the performance. In android you can open multiple screens and can easily switch between one another.

'Intelligent Communicator' is an application developed on the Android platform for android mobile phone users. This application uses Android as its base along with GPRS, GPS and GSM services. It may happen that you don't want to receive calls/messages from a particular person; our application allows you to do so automatically. It also may happen that you are be busy somewhere and not able to receive a call from a particular person. In such a case this application automatically sends predefined message to that particular person. You can also save reminders for sending messages to particular person on a particular day at a particular time. While you are on a trip and need to inform your dear ones about your whereabouts, you can do so using our application. Our application would use GPS and track your location (Exact area) and send message of the same to your dear ones on a regular interval.

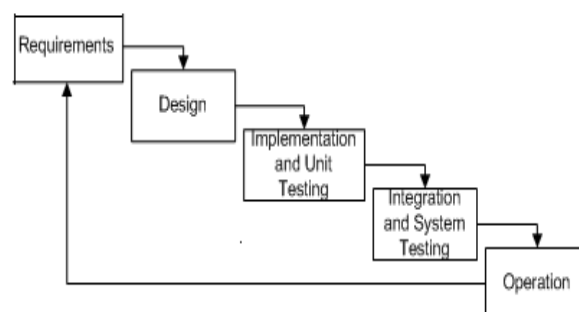
The main features of this application are as follows:-

- 1.Location Track
- 2.Reminder Scheduler
- 3.Busy Message

II. APPLICATION FEATURES

The application is implemented using the incremental model. Its various phases are requirement analysis, design, Implementation and testing, Implementation and testing, Integration and System Testing, Operation.

Incremental model:



Android has been chosen for developing this application for the following reasons:

- Full phone software stack including applications
- Designed as a platform for software development
- Android is open
- Android is free
- Community support
- Tool support
- 100% Java Phone

SYSTEM FEATURES:

GPS Based Location Tracking:

- Description and Priority:
Highest priority as GPS location provider lets you know the exact longitude and latitude of a particular user.
- Stimulus/Response Sequences:
Once we request for a location of particular user, that request is sent to a Web Server. Web Server will responds to our request in form of Latitude and Longitude.
- Functional Requirements:
On receiving exact values of a Latitude and Longitude, that location is sent to the concerned person via text message using GPRS.
REQ-1: GPS service in the Mobile Device.
REQ-2: Real Time Latitude and Longitude.
REQ-3: GPRS service in the Mobile Device.

Automatic Sending Message for Missed Calls:

- Description and Priority:
If the user knows that he is going to receive a call but due to some obvious reason he may not be able to answer the call so he can save a text

message written for a that person informing the reason for not answering the call.

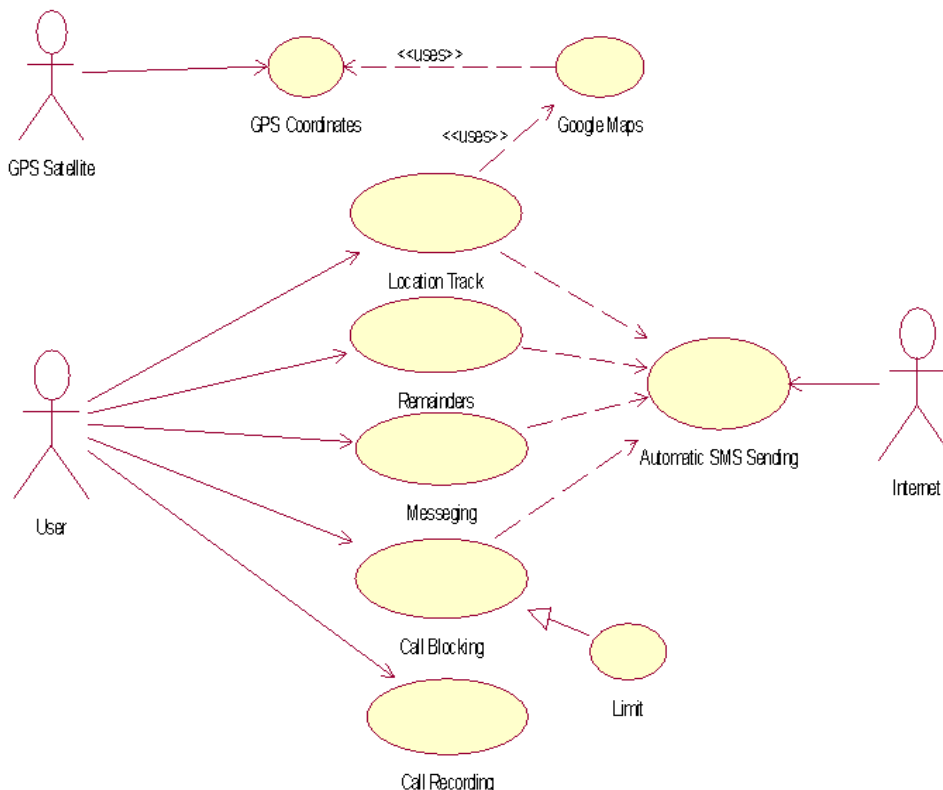
- Stimulus/Response Sequences:
The user saves a text message which he /she intends to send the concerned person whose call will be missed by the user. This miss call causes a text message send via GPRS to the user.
- Functional Requirements:
When the caller's call goes unanswered he/she will receive a text message through GPRS. The user has to add the member and a text message to be sent.

Automatic Sending Message for Reminders

- Description and Priority:
The user sets certain reminders for meetings, birthdays, anniversaries etc his / her text messages stored for these events are sent automatically and the user gets notification regarding the sent messages.
- Stimulus/Response Sequences:
The user saves text messages for the reminders he sets, at the right day and time set by the user the message is send via GPRS. The concerned individuals or groups receive text messages while the user is notified regarding the sent messages.
- Functional Requirements:
The user has to add the member and a text message to be sent.

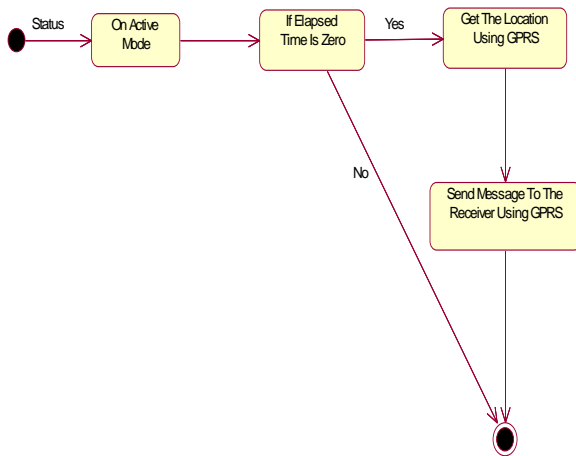
III.APPLICATION DESIGN

An application design can be best explained with the diagrams. The following diagram is a use case diagram that describes the working Intelligent Communicator.

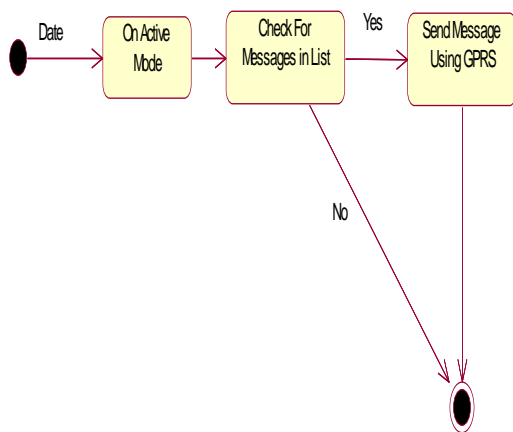


The working of application can be easily apprehended by looking at the above diagram. Now, we shall take a look at all the three modules that we have developed using state transition diagrams.

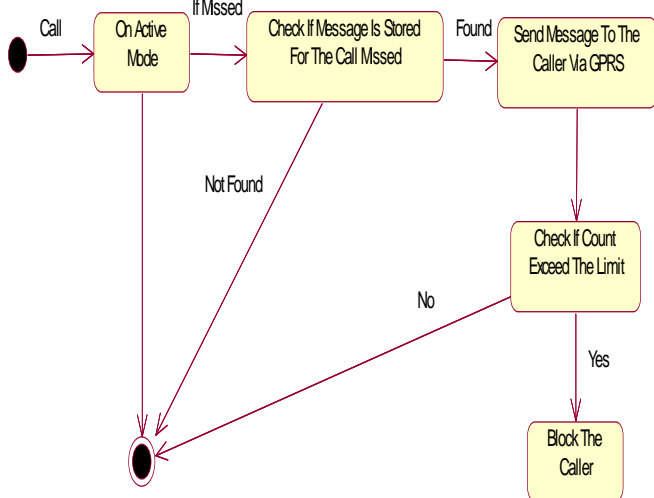
A. Location Track:



B. Reminder Scheduler:



C. Busy Message:

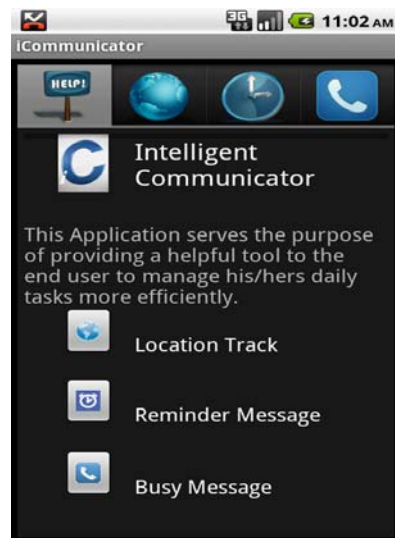


IV.SNAPSHOTS

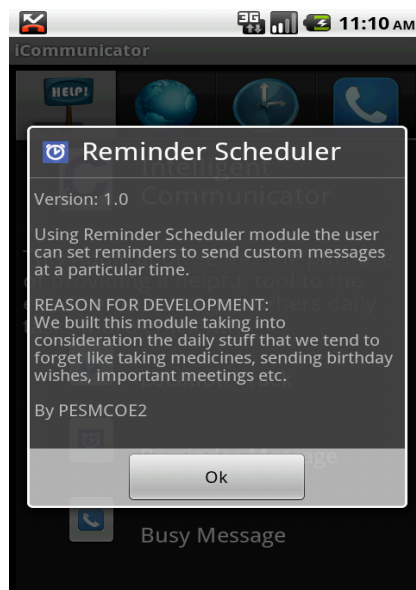
Following are some snapshots of Intelligent Communicator.



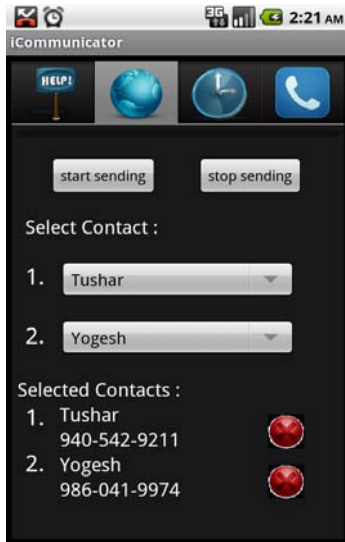
Screenshot Running Instance of application



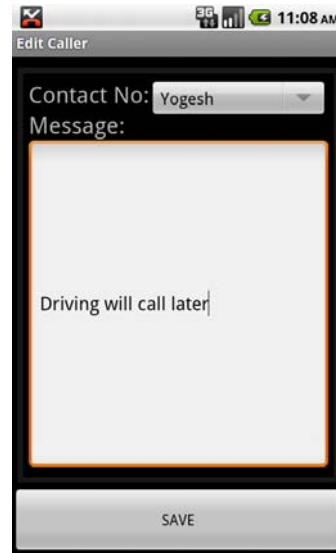
Screen1: HELP TAB



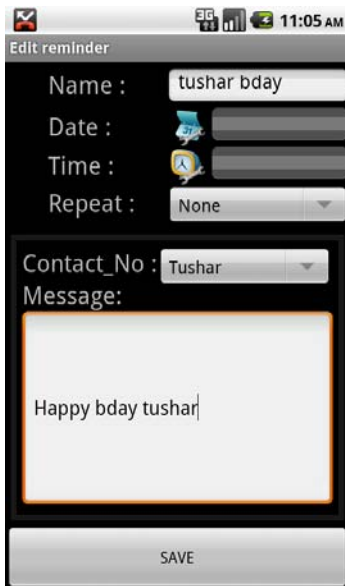
Help tab for Reminder Scheduler



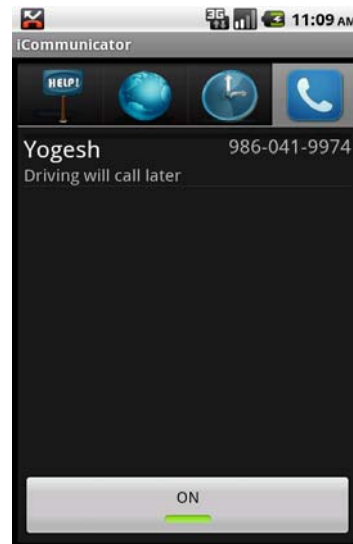
Screen 2: Settings page for Location Track module



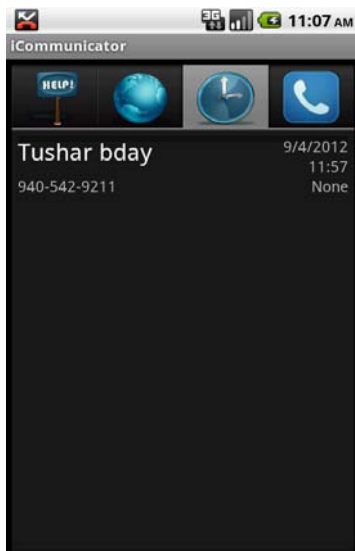
Screen 5: Settings page for Busy message Module



Screen 3: Settings page for Reminder Scheduler



Screen 6: Entry page for Busy message Module



Screen 4: Entry page for Reminder Scheduler Module

V. CONCLUSIONS

Intelligent Communicator application helps the user to manage his calls, save reminders for certain events, track his location and inform his loved ones through automatic messaging. The application is flexible as it provides facility to update to the settings previously made.

Thus we conclude that, all the functions related to the Intelligent Communicator application are executed properly.

VI. FUTURE SCOPE

- Using accelerator feature of android that sense motion when coupled with our module, we can develop accident detection system.
- The Location track module can be extended to secure tracking for blind people.
- A medical reminder system can be developed with reminder sending module, so that old aged people can get regular reminders for their medicines.
- Text Message Feature can be substituted with voice mail feature.

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