# Location-Based Social Network

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**Abstract**—Location-based Mobile Social Networks are becoming increasingly popular as one can find almost each and every person on these Networks (OSNs), such as Facebook and recent emergence of smart-phones specially contributed for this popularity as they are well packaged with the features of internet & GPS, specially Google Android Phone by allowing a user to track the location to arrange a meeting or event, when friends are around and by providing the ability to make new friends  In this report, The Developer the presents a Location-based Mobile Social Network that constitutes a framework that provide features like, finding a friend's real-time updated location (Location is updated in continuous interval) which helps user to find exact location of a friend also finding friend's exact location only by a SMS, voice notifications, so that the friend can receive message, when they are driving the vehicles (Voice Notifications) also creating the event on social network with date and time so that they won't have to call or email each and every friend for event invitation with Changing the place and date of event anytime without informing each and every friend specifically & emergency messages to notify friends who are in 100 meter range of app-user.

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## 1. INTRODUCTION

In this emerging world of technology, there is a need of doing things, quickly and at one place, nobody is ready to get the same kind of services from different- different places as it is time consuming, also they need services in very low cost and in very less time and the services must be easy to access and the proposed system will fulfill this need by providing a single mobile application for multiple activities such as Social Networking, Location Services, Voice notifications, Speed of user & Event Creation etc. so the user can fulfill the purpose of -

- ❖ Finding a friend's real-time updated location(Location is updated in continuous interval)
- ❖ Finding friend's exact location by SMS
- ❖ Messaging a friend so that the friend can receive when they are driving the vehicles
- ❖ Private Messaging
- ❖ Friend request and finding friends by current city
- ❖ Creating the event on social network with date and time so that they won't have to call or email each and every friend for event invitation
- ❖ Changing the place and date of event anytime without informing each and every friend specifically.

## 2 PROBLEMS AND THEIR SOLUTIONS

1. Find Friends: Generally getting a friend's exact location that is continuously updated usually requires either to call, SMS or visiting their profile on social networking application, so it takes huge time to check everyone's location, so this study proposes every friend's location on map itself which is continuously updated in regular interval.

2. Extra cost incurred: Accessing a website on mobile poses more bandwidth charges as it downloads whole webpage, so this study proposes, download only data that has to be presented, which sharply deducts the cost occurred. Calling thousands of friends for an event requires calling or SMS them which poses extra cost, while in proposed system the event is created on Google map itself so from there only the friends can get the necessary information like event date, time, place and purpose so the user won't have to tell each and every friend personally. Providing the path guideline to every stranger friend, who are new to the city, creates a great headache, if they are more in numbers, so in proposed system the location of event is provided relative to the user's location means two indicators will be there and from that one indicator

will indicate the event location and other for user's own location.

3. More time taking: Getting everyone's location on a single page: Generally getting a friend's location usually requires visiting their profile on social networking application, so it takes huge time to check everyone's location however in proposed system the location of a group of friends will be shown on the map i.e. a single page. Calling thousands of friends for an event requires calling or SMS them as it will take huge time in notifying them, so in proposed system user will create a event with details like name, purpose, date, time and place, which will appear on Google map that is available to user's friends so there won't be any need of calling them specifically.

4. Less Availability: The other social networking applications present in market require internet connection to get connected, so if a user doesn't have the mobile which is not having the capability to connect to the internet then they cannot get any information from the application, so they did lack in availability.

5. Trust: The application provides real-time location with the help of Google maps and GPS which does provides a location that is accurate so location provided by the application always holds true.

6. Customized according to user situation: If a user is driving the vehicle and the user has to receive a notification from mobile phone then either he has to pick the mobile phone or stop the vehicle to receive the notification so in proposed system, user can switch to vehicle mode in the application and then the user will be able to listen to the textual notifications means textual notification will be converted into voice notifications.

7. If a user has to change the time and place of the event then the user has to notify all of their friends again and for this, again they have to call or SMS the friends who are on their way to the event which creates a huge problem, so in proposed system, as soon as the user changes the event parameters it will be updated on the Google-map and there won't be any need of notifying them specifically for this.

8. Emergency situations: If a user is stuck in the emergency situations at some place and he needs to contact his friends then it's a huge problem to identify which friends are nearby

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right now and again calling or texting a number of friends takes more time so the propose system will identify that which friends are nearby to user and accordingly send emergency notification to them.

9. Getting friend's location by a SMS in emergency situation, where no internet connectivity is there: Currently there is no system in the market, which can tell the user's friends exact location and address only by messaging (SMS) or finding the nearest friend location wise. The proposed system will find the user's friend by their user-id or if they are near to the user and the users can always SMS as in today era every mobile is with SMS functionality and with the help of SMS the list of friends which are nearby to user will be sent to the users mobile and as per the need, the emergency notification will be sent to the friends.

## 3 USER ACTIVITY

For finding how user interact with this research finding an application was developed & distributed among various college students & the user's response were like this-



Fig. 1. Comparison of private messages (Message) with public messages (Wall)

🟢        Messages                    🔵    Wall-Messages

This graph shows that user's like message sharing publicly rather than private messaging that matches with the current wall option given by popular social networks in those user update their wall-status that can be accessed by user's friends however social network's also provide messaging that is private but that is used less compared to public messages (Information sharing) To find out whether user's are uploading their location the location upload report has been generated for various user's and result's were almost same as given in

the figure below



- User's like to upload their location on daily basis as shown in the figure above so that they can share their location like places (Restaurant etc.) they visit.

## 4 STUDY OF SIMILAR SYSTEMS
A study of current system has been made to find whether they fulfill the need of user's.

1. **BuzzMobbers**- "BuzzMobbers" can connect with the people around them experiencing the same social activity. At concerts, sporting events, college campuses, shopping centers and more, BuzzMobbers can join or create the Buzz in a GPS-enabled "Ring," where those on site can share messages, tips reviews, photos and other content in a contained community. [1], [2] **Limitations**- 1) No Provision for real-time tracking of friends 2) If user lost the mobile application then user cannot find the friends 3) No emergency Notifications 4)No Voice notification for vehicle mode

2. **MobiLuck-** Mobiluck is a free mobile tool that allows to 1.Share current whereabouts with friends, 2. Receive alerts when one of our friends is in close proximity, and 3. Chat with our IM contacts. [3], [4] **Limitations**- 1) once user has lost the mobile application then user cannot find the friends. 2) No emergency Notifications 3) No Voice notification for vehicle mode

3. **GyPSii**- GyPSii connects people, places and communities across networks and devices, enabling members to share their real life experiences in the virtual world on your mobile phone and the internet [5], [6]  **Limitations**- 1) If user lose the mobile application then user cannot find the friends 2) No emergency Notifications 3) No Voice notification for vehicle mode

## 5 BENEFITS OF AVAILABILITY
❖   If a person is driving car/vehicle and he cannot pick up the phone and other person (Caller) has some important message to convey him then, he cannot convey the message until the person who is driving the vehicle, pick the phone. In proposed system a person has to press the option of vehicle mode (before driving) then whatever message he/she receives, will automatically be converted into voice and he/she can easily listen to it. That's how he/she can get the important notifications, while driving also.

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❖ Currently there is no system in the market, which can tell the user's friends exact location and address only by messaging (SMS) or finding the nearest friend location wise. The proposed system will find the user's friend by their user-id or if they are near to the user and users can always SMS, as in today era every mobile is with SMS functionality.

## 6 CONCLUSION

The recent emergence of location-based mobile applications and social networking websites has thrilled the market with its popularity [7], currently one can find any person on these two applications. So what is going to happen, if the features of these two things are packaged into a single application, where a user can taste the experience of interacting, socializing as well as finding out the friend's location? Location-based mobile social networking constitutes a framework within which previously independently-launched location-based services such as search, friend-finder, people tracking and user-generated content finds new momentum by complementing and reinforcing each other. Hence, it comes as no surprise that many vendors are moving in quickly with the acquisition of beta launch of the location-enabled Chat social instant messaging application.

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