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# Help in SOS an Emergency Mobile Application

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**ABSTRACT:** This project is aimed at developing an emergency android app for the safety purpose. The system is an android application that can share user's location. This system can be used as an emergency app. The Real time location sharing feature on Help In SOS (In Morse Code, "SOS" is a signal sequence of three dits, three dats, and another three dits spelling "S-O-S"). The expression "Save Our Ship" was probably coined by sailors to signal for help from a vessel in distress) will let users send their current location to others with a single tap. The feature is especially useful for women as it gives a view of real time location, thereby ensuring their safety while on the move. It will help users to schedule emergency messages and mails. Also user can use location alarm feature in the app. The popularity of micro-blogging has made general purpose information sharing a pervasive phenomenon. This trend is now impacting location sharing applications (LSAs) such that users are sharing their location data with a much wider and more diverse audience. I found significant differences in terms of users' decisions about what location information to share, their privacy concerns, and how privacy-preserving their disclosures were. Based on these results, I provide design implications for future LSAs.

**KEYWORDS:** Location sharing, privacy, place naming, mobile application, children safety, women safety locationbased

## I. INTRODUCTION

With the ubiquity of GPS-enabled mobile devices, We seeing an emerging class of location-sharing applications (LSAs) that allow users to continuously sense, collect, and share their current location. Without these devices, people previously relied on location awareness via communication channels like phone calls [32], SMS [15], or instant messaging [24]. With LSAs, we now see a shift in location sharing from previous approaches using one-to-one sharing to current approaches of sharing with many people at once. The push for more information sharing is largely driven by popular micro-blogging and social media sites like Twitter and Facebook, whose users share 50-60 million status updates daily [25]. Past literature has shown that these micro-blogging sites are successful in part because they help users build up social capital within their network. We believe that this "social" factor has been under-utilized in past LSAs. Consider, for example, LSAs like Reno [18], WatchMe [23], and the Whereabouts Clock [10] – these LSAs are all motivated by scenarios that emphasize a more utilitarian perspective of location sharing and focuses on activities like coordination and planning. These purpose driven LSAs are in distinct contrast from those that support location sharing within social networks like Foursquare [2], Loopt [4], BrightKite [1], and Locaccino [30]. These latter LSAs have motivating scenarios that emphasize the social aspects of location sharing, where users might announce their arrival at a location not because others need to know but because it is simply interesting or fun to do so.

Generally speaking, sharing information within a large social network introduces several interesting properties that have not yet been thoroughly explored in previous work. In this report, We interested in understanding social location sharing in terms of how users choose what types of location information

In today's unsafe world, most parents would be concerned when their children are out of the house whether they would wander off to inappropriate and unsafe places which could eventually lead to dangers such as go missing or are kidnapped. Therefore, it is imperative to be able to track children location. In addition, most parents and children carry a smart phone. Thailand has 90 million mobile subscriptions among its 66 million people. The smartphone penetration rate is 36 percent, up 17 percent from last year. Thus, this paper proposes an Android app that can help many people in emergency situations by sharing their live location with others.

## 1. Problem Statement:

When we are travelling many problems come in our journey. To handle them the Help In SOS (Save Our Ship) is made. Many times we sleep during our journey and miss our station. To overcome this problem Help In SOS provide and location alarm which will wake you up at the right place. In existing systems there is no feature of live location sharing scheduling and conditional location sharing according to place the Help In SOS proposes this new way of location sharing.

## II. RELATED WORK

This report focuses on location sharing applications (LSAs), a particular class of location-based services that supports location sharing between users. Here we describing about LSAs those that primarily support sharing location with one other person (one-to-one). With one-to-one location sharing, a user's location is shared with one other person. For example, Glympse [3] lets users send a URL containing their current location to another person. After a specific time period, the map no longer updates. While nothing prevents a user from publicly posting this URL and making it accessible to the world, the original Glympse scenario was to share a time-limited lease of a user's location to one other person.

Other LSAs share users' locations with small (typically homogeneous) groups, like co-workers [27, 31], family members [10, 18], or close friends [7, 18, 23]. There are also LSAs that share location with larger, more diverse groups. These one-to-many LSAs are often integrated with services that provide a relatively extensive social network, like Facebook (Locaccino [30]), instant messaging (IMBuddy [17]), or one's address book (ContextContacts [26]). We also see some one-to-many LSAs opting to use their own application-specific social networks, like Loopt [4], Foursquare [2], and BrightKite [1].

## III. PROPOSED WORK

The Help In SOS (Save Our Ship) is an android application which is made in JAVA and XML. The application can be used to share live location with others, schedule emergency messages and mails and to add location alarms.

**Live Location Sharing:** In this feature the user can able share his/her live location with others. The feature has three modes:

1. **Live location sharing:** Here user will able to share his/her live location instantly.
2. **Schedule Sharing:** Here user will able to schedule his live location sharing
3. **Conditional Sharing:** Here user will able to share his/here live location by condition. Means the app will share users live location if user will not be in the area on time which was mentioned in the app.

**Message Scheduling:** In this feature user will able to schedule his emergency messages and mails.

**Location Alarm:** In this feature user will able to add location alarm which will ring when the user will be on the location.

**Live Locations Shared with Me:** In this section user will be able monitor live locations shared with him/her. Also it shows the statuses of shared locations. Which are:

1. **Active:** This mode will be visible in green colour. It indicates live location of the user is being shared and location is continuously updating.
2. **Inactive:** This mode will be visible in orange colour. It indicates live location is being shared but not updating since the other user turned off location or internet or switched off the device.
3. **Expired:** This mode will be visible in red colour. It indicates live location sharing has been stopped because there is some error is occurred in other device which was sharing location. The available location is the last location which is user have.

## IV. METHODOLOGY

The model that is basically being followed is the WATER FALL MODEL, which states that the phases are organized in a linear order. First of all the feasibility study is done. Once that part is over the requirement analysis and project planning begins. If system exists one and modification and addition of new classes is needed, analysis of present system can be used as basic model. The design starts after the requirement analysis is complete and the coding begins after the design is complete. Once the programming is completed, the testing is done. In this model the sequence of activities performed in a software development project are: -

- Requirement Analysis
- Project Planning



- System design
- Detail design
- Coding
- Unit testing
- System integration & testing

**Testing Process:** In the software development life cycle, after the requirement analysis, feasibility study, design and coding phase, one of the phase of utmost importance is the testing phase. In this phase, we get to see if the expected and final outcomes are same with all the required specifications being maintained as per the requirement. This is the debugging phase of the application on its entirety and not simple debugging of few lines of code on the IDE. This phase starts with the smallest unit of a code through Unit Testing and travels a long way till it ends with User Acceptance Testing. For industrial applications, testing is performed through highly automated tools like Docker for NodeJS applications, but such automated testing tools are out of scope for this project. This testing phase helps in finding bugs which can be at the code level, system level, environment level, then fixing those bugs, then retesting the same functionalities to check the new changes are compatible with others and then at the end of many testing strategies the product is delegated to corresponding authority for release. Testing at the application/code level is performed by writing test cases. To err is human – we all know. When code is nothing but human typed language with a sense of grammar and context understandable by the OS and computer scientists, there can always exist errors. We can eliminate these errors by thinking about corner cases or scenarios that might never happen but if happens, our application is strong enough to handle them. Testing the application with every possible scenario which it can/cannot handle and still our application staying steadfast is what we target for.

## V. SIMULATION RESULTS

Simulation involves various features in Help In SOS (Save Our Ship).

1. **Home:** Here user will select any feature he/she wants to use by simply tapping on it (fig 1).
2. **Live Location Sharing:** Here to share live location instantly user will enter contact number, gmail and message. To schedule sharing user will first make ‘Share Later’ switch on and then enter time and date also. To make it conditional sharing user will add expected location where he/she is expecting him/her at the time. Then to start sharing user will simply click the switch at the top right corner in the app bar (fig 2).
3. **Schedule Messaging:** Here user will be able to send emergency messages and mails to any person. User will fill contact number, gmail, message, time and date. Then to start scheduling user will simply click the switch at the top right corner in the app bar (fig 3).
4. **Location alarm:** To get notified when reach the location/station. User will use this option by simply selecting the location and setting area radius in the app. Then to start alarm user will simply click the switch at the top right corner in the app bar (fig 4).
5. **Live locations shared with me:** This option is useful to monitor the live locations shared with the user. The feature will show sharing statuses which are active, inactive and expired. User can select the shared location and monitor it by a map (fig 5).
6. **Map:** Map will be used to select locations if needed and also be used to monitor others location (fig 6).
7. **Profile:** Here user can sign-in by a google account to share live location and access other features. A button is on the screen by using which user can give or revoke access of the app to the account. User will click back button at the top right corner on the screen to redirect to home screen (fig 7).

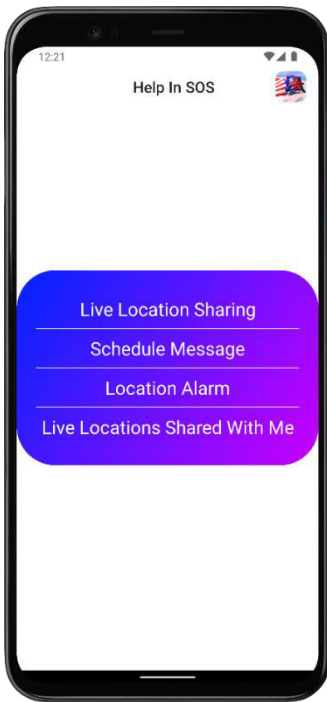


Fig 1: Home Screen

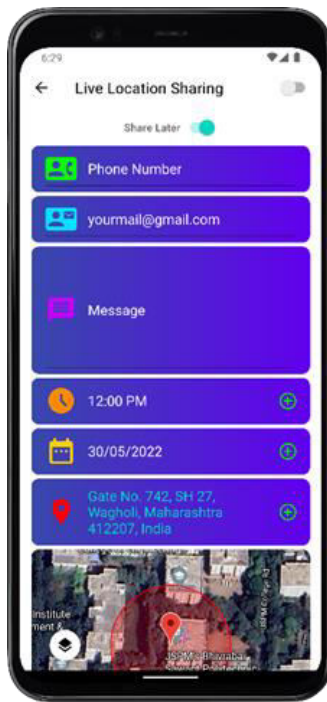


Fig 2: Live location Sharing Screen

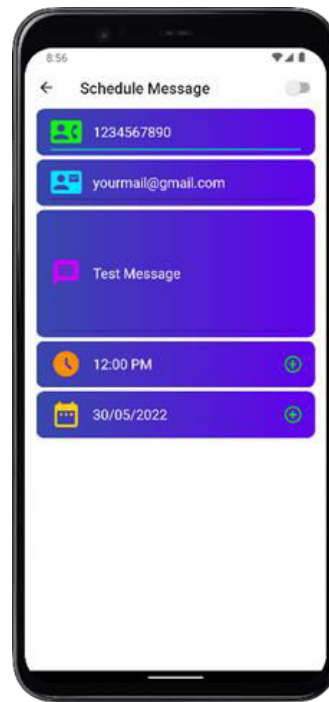


Fig 3: Schedule Messaging Screen

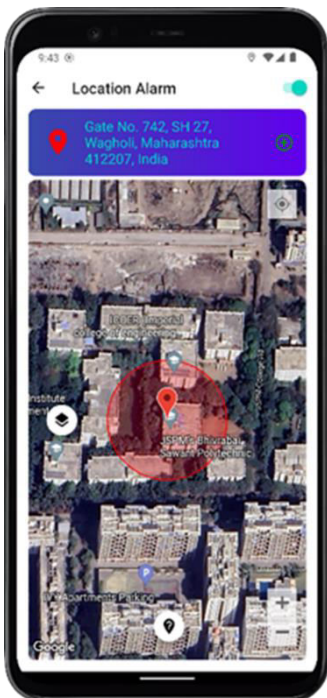


Fig 4: Location Alarm Screen



Fig 5: Live Locations Shared With Me Screen

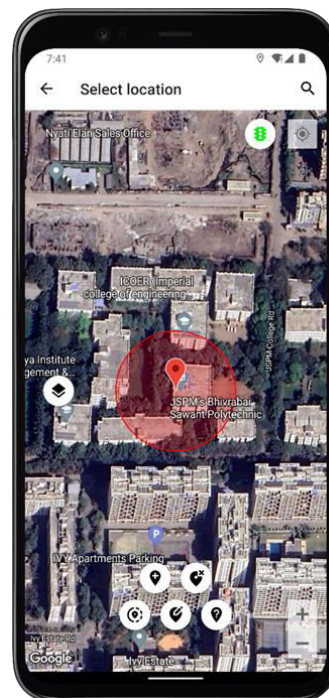


Fig 6: Map

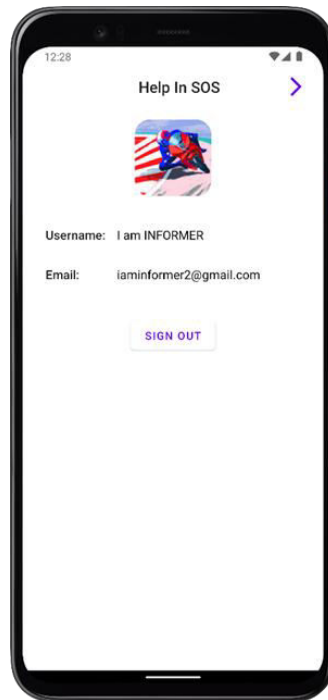


Fig 7: Profile Screen

## VI. CONCLUSION AND FUTURE WORK

We have proposed an emergency app which helps user in emergency situation. User can share his/her location with anyone by mail and contact number. User can schedule live location sharing or can share location by condition of location. In conditional sharing the app will share location if user is not in the area mentioned by user at the time and date. This three modes of sharing can help user in different scenarios. Also the Schedule Messaging feature can help user in many situation. It helps user to schedule emergency messages and mails. The location alarm feature is also a very helpful feature. It makes the travel much more easy, fun and safe. It allows user to set a location alarm which will ring when user will enter the area. All these emergency features are very helpful to the user. The app is simple, easy to use and user friendly. The UI is not so beautiful but it is simple which doesn't irritate user to find options which are needed. The apps works perfect in lower versions of android which makes it compatible to many devices. The app can run very smooth even in low-end devices. It can be used in women and child safety. We can protect our loved on from dangers. We can call help in emergency situations by using Help In SOS.

In future We have plans to add vibration in the app, make location alarm more accurate and customizable like adding custom ringtones for alarm. We will make the app more lightweight and faster. We will make the UI more attractive. We will remove the bugs if we find any in the app. We will try to reduce the size of the apk. Also we have plan to add themes in the app and different modes of theme dark and light.

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