**Life Finder**

Group #6: Students 1-4

Student 1 - Computer Science

Student 2 - Computer Science

Student 3 - Computer Science

Student 4 - Computer Science

**What Work Needs To Be Done:**

* What are the possible environmental surroundings that the user could be in?
  + Can we expect the app to be utilized in every scenario?
* How does mesh networking work?
  + Which type of mesh networking will be best suited for our needs?
  + What is the battery consumption like when using mesh networking?
  + How is mesh networking implemented?
* What is the range of mesh networking?
  + What’s the largest distance between 2 people can a message be sent through mesh networking?
* What is the cost of development?
  + Cost of wages and testing?
* How often will the app get updates?
* Who is responsible for distributing a special version of the app for first responders?
  + Do we need a seperate app or a locked mode?
* How can we manage the app so it can be used only during an event where a natural disaster strikes?
  + Do we want to limit it to be used only during natural disasters?

**Why This Work Needs To Be Done:**

Around the world, natural disasters can strike at any moment and we all need to be prepared in case that does happen. Due to the nature of this generation, most people own a mobile device. As the years go by, the durability of a device improves, bringing features we wouldn’t have expected a decade ago such as water resistance for a certain amount of time. As the world gets ravaged by tornados, earthquakes, tusamines, hurricanes, and typhoons, there is a high possibility that some people may go missing and it’s a difficult task in finding them safely.

Our app, Life Finder is here to help solve this problem of finding the missing. Our app is effective as it works even if you don’t have access to an internet connection as it uses a technology called mesh networking. It essentially bounces messages from nearby phones with the app until it reaches its destination. Therefore, this app can prove more beneficial in these situations as people can request assistance even if the network grid goes down.

**Qualifications/Management Plan/Technical Approach:**

We are a group of computer scientists who are capable of tackling a project of this magnitude through the power of collaboration. After studying the possible scenarios of where and how our application can be used during the aftermath of a natural disaster, we determined the necessary features in our app. One computer scientist will start working on the overall design of the application while the other 3 computer scientists start figuring out how to implement mesh networking into the app. After figuring that out, the 3 computer scientists will join up with the computer scientist working on the design and functionality of the app.

When the app is completed, we need to go in the testing phase into proving that this app works the way it was intended to. Testing needs to be thorough as to make sure the app can work in the expected situations we predict it will be used in. After doing the controlled testing, we would first distribute and advertise the app to areas affected by natural disasters so people get a general idea of what it does as they are the most prone to getting hit. These areas would be states such as Florida, Texas, Lousianna, Mississippi, Alabama, and Georgia as they usually feel the impact whenever a hurricane makes landfall. We’ll be working with the law enforcement in those states in distributing a special version of the app that allows them to receive the distress messages sent by civilians if they’re in need of assistance.

Once the app is distributed to law enforcement, they need to be informed and trained on how the app works. Training should only take a few days. For a wider spread of the app, an instructional video can be created to speed up the utilization of the app in search and rescue situations.

**References:**

BBC (2016). *How long can survivors last under rubble?* Retrieved from [https://www.bbc.com/](https://www.bbc.com/news/world-32485586)

[news/world-32485586](https://www.bbc.com/news/world-32485586)

Lee, Jeffery (2018). *How to build a wireless mesh network*. Retrieved from [https://blog.particle.](https://blog.particle.io/how-to-build-a-wireless-mesh-network/)

[io/how-to-build-a-wireless-mesh-network/](https://blog.particle.io/how-to-build-a-wireless-mesh-network/)

**Code of Conduct:**

**Scope**

This code of conduct applies to all employees of Life Finder regardless of company status.

**Respect in the Workplace**

All members of Life Finder are expected to respect each other. We do not tolerate any discrimination, harrassment, or unprovoked assault towards anyone. If you find anyone to be violating this code, please report it to one of the following people directly or anonymously through their email: the local employment rights office, the vice president, or the head of the company.

**Professionalism**

All employees of Life Finder are expected to complete their work on time. The company email should be only used for company related tasks. All employees should wear clothing that follows the company dress code. Employees should remain loyal to the company and must not accept any gifts or disclose any sensitive information towards third parties unless authorized by the head of the company.

**Protection of Intellectual Property**

All employees of Life Finder are expected to keep all sensitive information such as emergency personnel activation codes private.

**Disciplinary Actions**

Any employee who fails to follow the code of conduct will face disciplinary action which include demotion, reduced pay, suspension, and/or termination.

Legal action may be taken on those who conduct theft of intellectual property and any other unlawful behavior.

**Mission Statement:**

Our mission is to manufacture an application that can assist those who are missing or trapped by natural disasters by providing them the ability to contact for help where they couldn’t in the past. Issues such as internet outages prevent easy contact for help through 911. Our application will incorporate technology such that the user can contact for help even during an internet outage. Beyond natural disasters, our application will work alongside the primary emergency system (911) and provide the necessary assistance to allow the public to feel safe in their daily lives.

**Boilerplate:**

Life Finder’s conception began with the idea of assisting emergency personnel in finding people potentially missing or trapped during the aftermath of a natural disaster. Through mesh-networking, our company is able to aid our safety service providers the extra information they will need to save more people in a faster, safer and more informed way. We hope to be utilized by recovery, safety, and protection personnel such as firefighters, police officers, EMTs and more. Our technology will provide safety personnel more information about individuals by utilizing their phone which will help the personnel find more people and recover them faster. When cell towers and the internet aren’t available, Life Finder will help those in distress.

**Job Posting**

**Position Overview: Front End Developer**

Life Finder is looking for an individual who is passionate about helping others in a time of a natural disaster, a good team worker, and has good analytical skills. As a front-end developer, you will create interaction portions of the app by using HTML, CSS, Python, and JavaScript. Life Finder is trying to make the app work for both iOS and Android, so any additional languages that may help us is appreciated. As a front-end developer, it is expected for you to complete a set amount of work weekly. This job position is temporary but based on performance it can lead to full-time employment.

**Requirements:**

* Bachelor Degree in Computer Science
* Background in Computer Science
* Have U/X Design experience
* Preferred skills in HTML, CSS, Java, and possibly Python
* Flexible work schedule
* Must have good communication skills

**Job Type:** Temporary but can lead to full time employment

**Salary**: Based on performance and work duration, up to $70,000 a year

**Employment Length:** 6 months

**Schedule**: Mon-Friday 9AM-5PM, but must be open to work on some weekends.