**Life Finder**

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**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:**

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