FACULTY Q AND A MODEL

TEAM NAME: Neurally Efficient

Team Leader : Akhil Vaid

Problem ID: DS-164

Please provide as much information as possible as it would help us evaluate the submission better.

Product/Idea

● What is the problem you are trying to solve?

ANS: Problem of creating an app. To help forest frontline staff.

(Do you have any supporting statistics from reliable sources, if so please do share.)

● How does your idea address the problem?

ANS: 2 problems are mentioned. First is to track location of the forest staff for their safety, and other is to capture assets and locations corresponding to them. Asset can eb anything like wildlife or poachers etc. Both task must be done offline. Our idea solves this in GPS less and Internetless areas.

● Who are the target customers?

ANS: Target customers are Forest patrolling officers, this can be extended to armymen, miners in caves, tourists etc.

● What makes your idea unique?

ANS Our idea is unique because we propose fusing IMU data from the android phone to work with GPS data hence giving tracking in GPS less environment, this is novel in android app.

● Do you have a revenue generation model? If so please do share.

ANS: Revenue generation can be on basis of Advertisements, or by making the app customizable for premium members, how much time they can store data on the cloud etc.

● What are the geographies, do you think the idea would be suitable for?

ANS: The geographies include anywhere on the Earth as 20 GNSS satelites cover the whole earth to triangulate and get position.

● What are the risks associated with your idea and how can you mitigate it?

ANS: Risks are false markers for assets such as poachers uploading their position somewhere else instead of real staff. In that case we will take forest federation ID which is unique for login to APP.

● Who are the stakeholders involved in order to take bring this idea/product/service to the market?

Stakeholders are government officials who may fund and provide basic mobile phones to forest patrol staff for our app to be deployed.

(Ex: State govt, Department of trade and taxes, pollution control board, Manufacturers)

Intellectual Property Assessment

● Is your idea patentable or patented?

Might be patentable since IMU data fusion is not a very new concept. We are using Kalman Filters and Madgwick Filters. The presentability and working of the Android App is novel.

(If so please provide details)

● Is your idea built existing work? If so how is it different?

No its not based on exact existing work. We just use some mathematical tools which have been around for some time to help estimate path acaurately.

Prototype/ Proof of Concept

● What is the nature of the prototype/ proof of concept, you would be able to submit?

(Ex: Github repository, Hardware prototype)

ANS: We have sent Github Repository link to Bhatia Sir and Manusheel sir. Also the Android APK is included in the repository, Prototype was shown thrice in college.

● Have you completed pilot tests for your prototype/POC? If so please share.

Yes We have completed tests and our prototype works perfectly in absence of internet and gps.

● What is the approximate cost of developing the prototype?

Approximate cost is NIL, cost maybe their for increased accuracy if user wishes to connect external gps and IMU for precise mapping.

● Please share the relevant elements while submitting the POC/ Prototype

❏ Block diagram

❏ Software Architecture- Control/Data flow

❏ Block Diagram of Data Flow

❏ Hardware architecture

❏ Components/ Connectors

❏ CAD models

❏ Visual/Touch Interface

❏ (Mechanical actuators/switches, touch sensitivity, haptics)

Supporting details

● What regulatory requirements have to be met to bring the idea to life?

ID’s for forest rangers must be unique and regulated.

● Do you have a business plan/ commercialization strategy? If so please share.

Commercialization through social media is best and by direct camps for forest rangers.

● What is rough estimate of manufacturing/operational costs?

Manufacturing costs is just cost of phone, basic internet will be needed for syncing data. Might be around Rs.5000

● What is volume of products/ amount of revenue do you expect to make in the first year?

We can make upto 1Lakh plus revenue in one year if given the chance.