Project Description / Technical Writing

**EGGS-ELLENT TRACKING**

The purpose behind this development is to deliver an asset tracking device that is not only low in cost, but to ensure accountability of all items and ultimately keep your workforce safe and compliant. It eliminates time wasted for employees who are constantly searching for assets!

For this specific project, we developed four types of “EGGs” (Electromagnetic Geolocating Gadget). By EGG’s, we used a raspberry pi hardware to manipulate exactly what we need done. The first EGG, also known as the over-easy egg, is for the small assets. By small assets, this can be referring to anything, such as a torch wrench or any type of small handheld asset. The second EGG is the poached egg. This EGG is for medium size devices, such as medium boxes or parts. The third EGG, eggs benedict, is for the large assets, such as a forklift. Finally, the fourth EGG, the hardboiled egg, is for the sensitive or need-to-know items. These are for certain items that not all employees need to know about. For instance, it could be a new computer chip for a vehicle that has not been released yet.

How it works:

The EGG is made up of four components: Raspberry Pi 4 model B, NFC antenna, speaker, and power source. It will have three communication channels: entry points NFC, such as doorways, mobile devices NFC, for variable locations but ensuring accurate GPS locations, and WiFi routers, which will be fixed to physical locations. The EGG will send a ping every five minutes to update its location and time to the database.

The database has an extremely user friendly interface. It will depend on what user permissions you have when you log in, with what information you will see. The reason for this is specifically tied to the fourth EGG, where all employees may not have a need to know about some assets. When you log into the website to view the database, it will display the ItemID, Last Updated Time, Last Update Manner, Last User, Location (Map), and the Battery Power Level for the specific EGG. This information can be manipulated to add additional information if needed.

The MySQL server was setup through local host and that allows communication with the database and incoming data traffic as the devices continuously update their location.