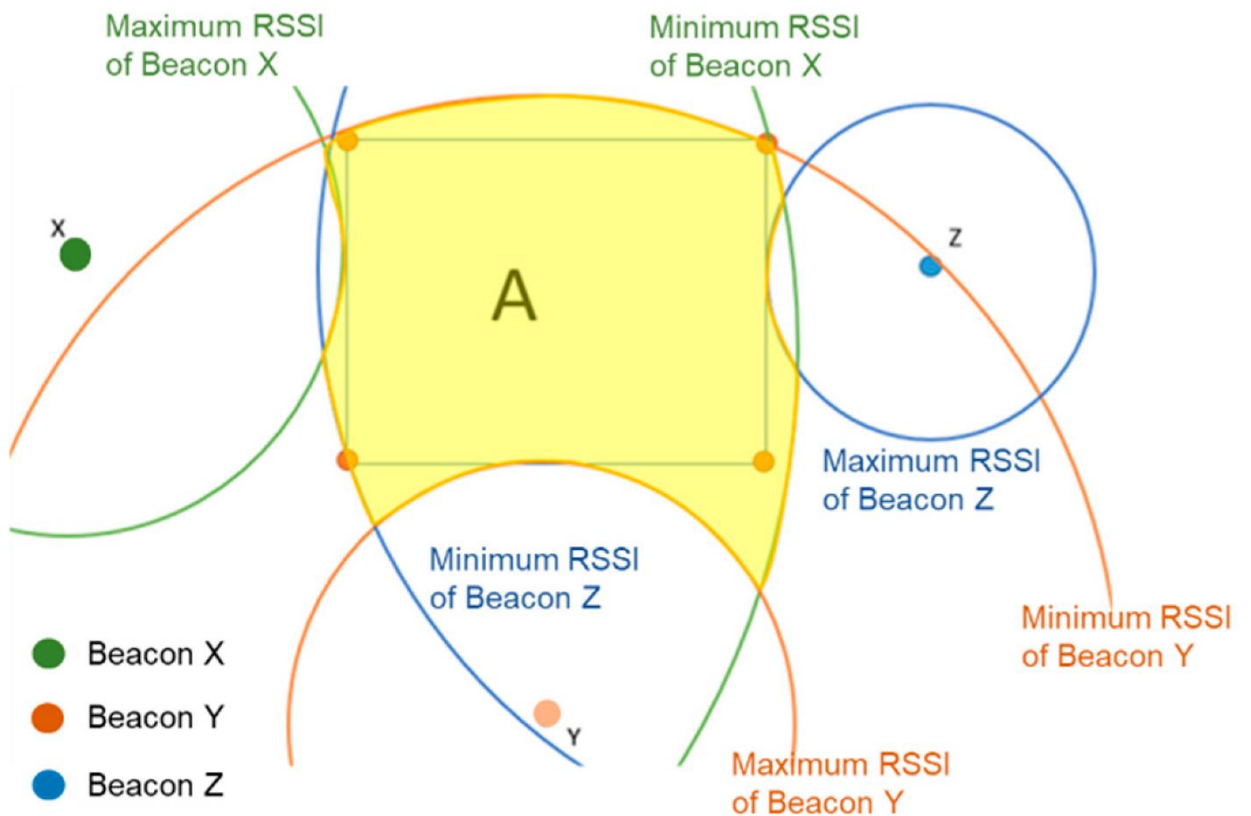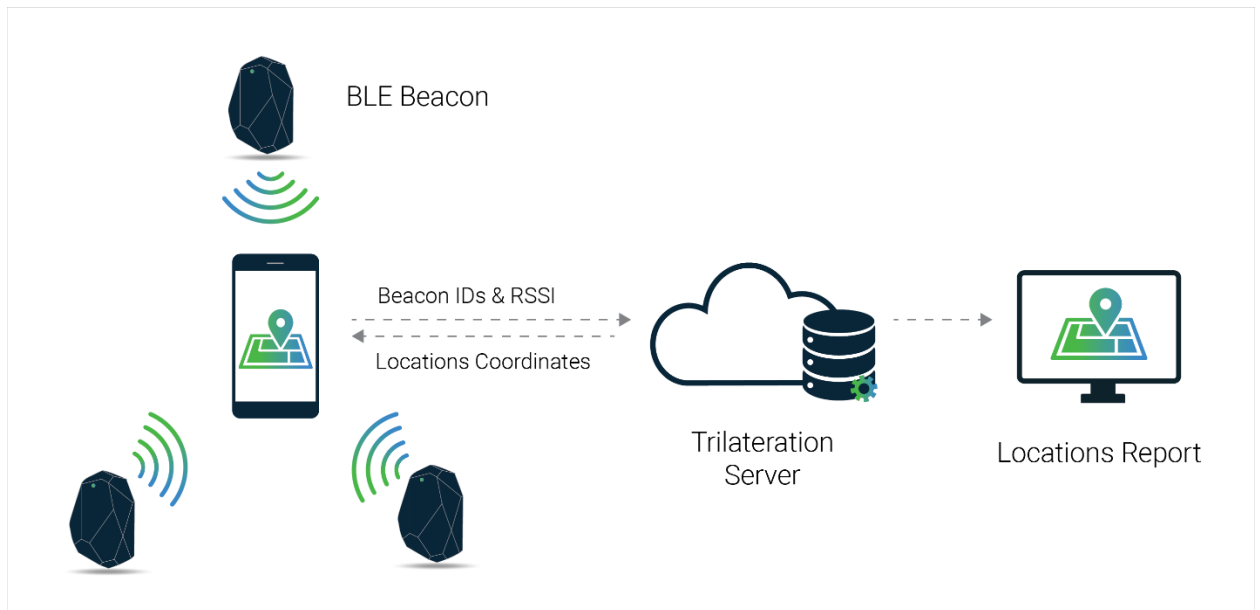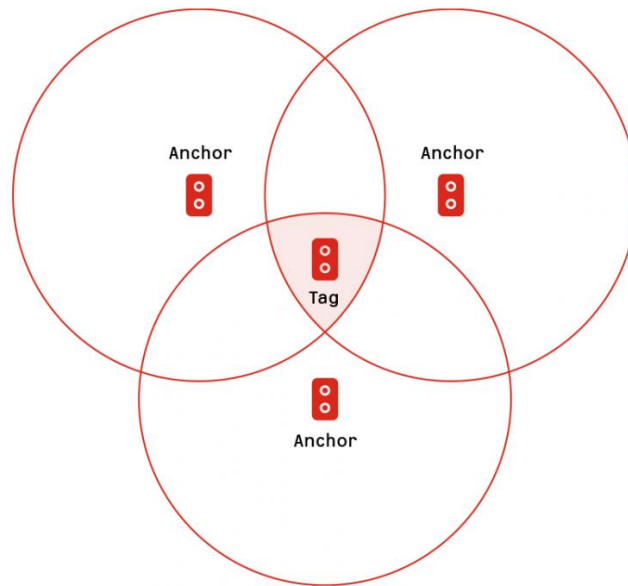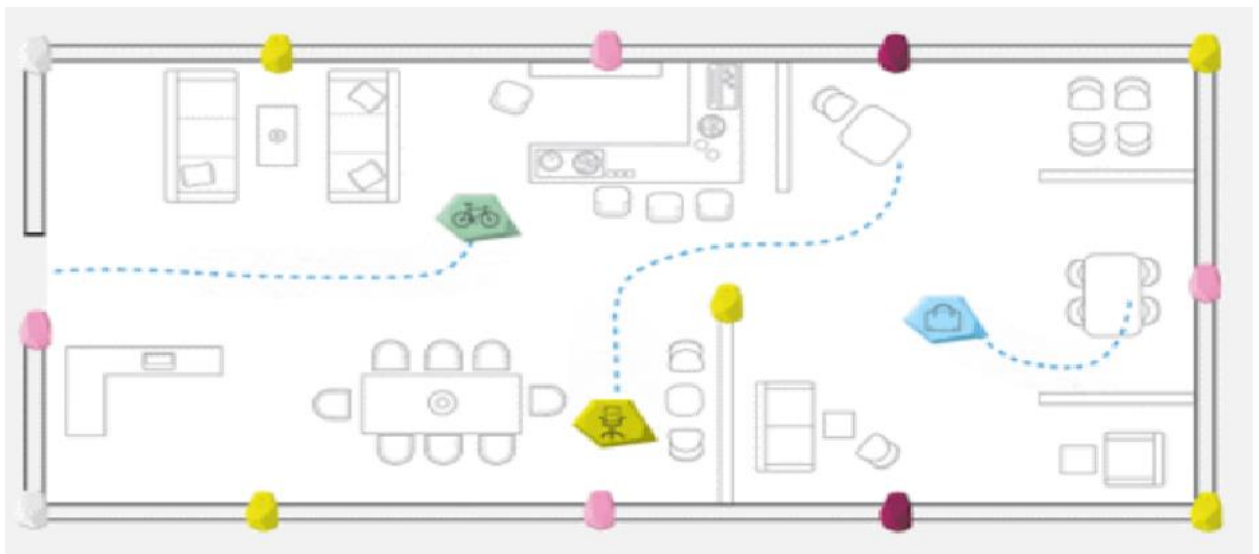# PROJECT CONCEPT
HIGH LEVEL IDEA

Gean Castillo

Kindergarten or retirement home indoor location

The idea of this application is to be able to locate the children or elderly people within a location. The application should be able to create safe zones and red zones, so when an elder person, and they stand up their bed and walks to a location where they should not be at, the beacon will detect it and transmit it to a security person within the facility.

This should not be a native app, as the map will be accessed through a website, and also the idea is for the security or management department at the facility can have the map open on a computer screen or tv surveillance.
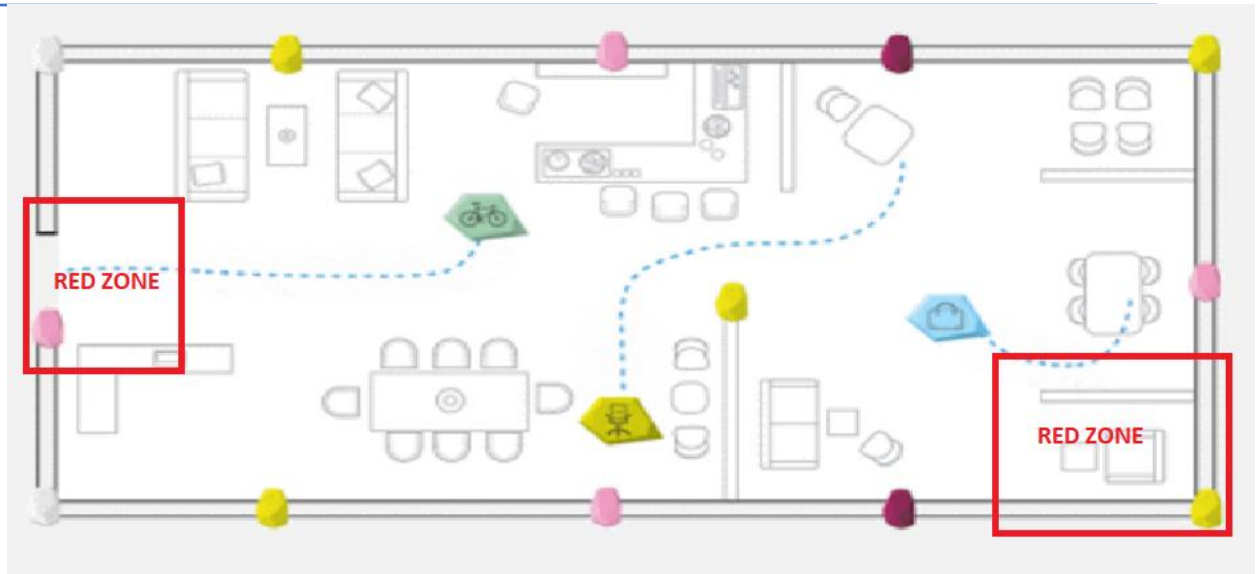
Also on the legal part, we will let the customers know the information shown on the application is use as a reference, it cannot be use as a security measure, it cannot be use to avoid accidents, it will be used to monitor people and assist them, but also to keep them away from areas they should not be at.

I know that I mentioned that no native app should be created, but there should be something running on a mobile that I can open and create a map using beacons references (as on the video below). We also need to make sure that we can create or make a difference in the case that the facility has more than 1 floor with people on each floor. It could be great to create a map from the facility, draw the map or upload a simple map (blueprint) of the facility. The website can be in English, but I would like to have the possibility for the backend to be either in English or Spanish, I can help translating, but that is important. The website should have a (registered or login section), when person logs in, will view the admin panel depending on their user access.

The backend should have an admin panel, where I can create users, provide access to see the map with the beacons moving around. Could be good to add metrics to it, like where did the kid/person stay the longest time, which areas did the kid/person visited, etc.

The beacons (ibeacons or eddystone) used should be something that can be assigned to a kid/person, they can be wristband watch or what you recommend. (Should not be expensive and accessible).

The people at the facility should be able to add as many beacons as they want to, and register that beacon to a person / child. For example I as I father goes to the kindergarten and sign up my boy there, they will assign a beacon to him, so then, they can watch him on the screen. But let's say I move or I want to take him out that school, then the personnel inside of the kindergarten can delete my boy's info and release the beacon (ibeacon or eddystone) to another boy/girl.

Device Profile:

iBeacon

UUID
f7826da6-4fa2-4e98-8024-bc5b71e0893e

MAJOR
29990

MINOR
36559

Eddystone UID

NAMESPACE
f7826da6bc5b71e0893e

INSTANCE ID
76696b315a58

Eddystone URL

URL
http://kntk.io/eddystone

Eddystone TLM

1155 × 511

Red zone. Can be possible to create "red zone areas" where if the beacons gets inside or near to it can advise the facility personnel that the kid or the person is in or next to the area? For example we can locate "red zone beacons" so when another beacon gets nearby it can do the job.

As mentioned above the website (responsive) should be simple minimalistic and clean, the name I am looking to have for the website and brand is **Bspot** (name can change).

Please make it as user friendly as possible. Also will be good to for example add the square meters of the facility so that it can calculate how many beacons will be needed (I don't know if this is needed) it is just that I saw a company that had it. The application/service should be able to grow as needed.

Deliverables:

- Beacon indoor location system
- Red zone creation by area, so when a beacon reaches a framed red zone will inform the people watching the live map.
- System back end for administration and map view for the beacons
- Map creation software to map locations
- Responsive website.

Documentation:

- Along with the project, please provide me with documentation and source code of the solution.

Projects References:

- https://www.youtube.com/watch?v=9cH44pE1Fks&list=PL_043-mnyFbqN1Sl0NoOab93BO6uIjVAU&index=13&t=13s

  Video above have the complete idea of the Project.

- https://www.youtube.com/watch?v=ULBN4yv9-EY&list=PL_043-mnyFbqN1Sl0NoOab93BO6uIjVAU&index=14&t=0s

Video above have the idea of the indoor mapping.

- https://www.youtube.com/watch?v=0HKjEPh_Pu8&t=4s

- https://www.youtube.com/watch?v=ttkdQZpgTAk

Projects documentation examples and github

- http://www.beacon-line.com/ ← this is something very cool.
- https://github.com/andreacanepa/Beacons-Indoor-Positioning-System
- https://github.com/neXenio/BLE-Indoor-Positioning <---- very good.
- https://github.com/alexohneander/IndoorGPS
- https://github.com/SteveAbb/Vestigo
- https://github.com/mKeRix/room-assistant
- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6386953/
- https://indoor.here.com/#/
- https://beaconrtls.net/
- https://www.openbeacon.org/about.html
- https://github.com/tsathishkumar/indoor_location_tracker
- https://github.com/Jason-Gew/BLE-Beacon-Tracking-System
- https://github.com/IndoorLocation/basic-beacon-indoor-location-provider-android
- https://softwaremill.com/beacon-location-service/

Website design references:

- https://preview.themeforest.net/item/pekko-minimal-dark-wordpress-theme/full_screen_preview/25044036?clickid=VLHzbnTscxyOTzrwUx0Mo3YSUkiTTiUvdQncwM0&iradid=275988&iradtype=ONLINE_TRACKING_LINK&irgwc=1&irmptype=mediapartner&irpid=369282&mp_value1=&utm_campaign=af_impact_radius_369282&utm_medium=affiliate&utm_source=impact_radius

- http://preview.themeforest.net/item/kelly-minimal-portfolio-blog-html/full_screen_preview/21347996?clickid=VLHzbnTscxyOTzrwUx0Mo3YSUkiTTE

xHdQncwM0&iradid=275988&iradtype=ONLINE_TRACKING_LINK&irgwc=1&irmptype=mediapartner&irpid=369282&mp_value1=&utm_campaign=af_impact_radius_369282&utm_medium=affiliate&utm_source=impact_radius ← really good

- http://themes.rainbowit.net/rainfo-demos/rainfo/index.html

- http://preview.themeforest.net/item/haswell-multipurpose-one-multi-page-template/full_screen_preview/12087194?clickid=VLHzbnTscxyOTzrwUx0Mo3YSUkiTTB2fdQncwM0&iradid=275988&iradtype=ONLINE_TRACKING_LINK&irgwc=1&irmptype=mediapartner&irpid=369282&mp_value1=&utm_campaign=af_impact_radius_369282&utm_medium=affiliate&utm_source=impact_radius
- http://preview.themeforest.net/item/haswell-multipurpose-one-multi-page-template/full_screen_preview/12087194?clickid=VLHzbnTscxyOTzrwUx0Mo3YSUkiTTBy2dQncwM0&iradid=275988&iradtype=ONLINE_TRACKING_LINK&irgwc=1&irmptype=mediapartner&irpid=369282&mp_value1=&utm_campaign=af_impact_radius_369282&utm_medium=affiliate&utm_source=impact_radius

----------------------- End of Kindergarten – Retirement home Project ---------------------------