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Indoor Navigation “BeaCate”

# Project vision

In our project, we are looking forward to build an indoor navigation system, that can be used in different indoor locations all around the world.

We found that there is no practical application that is used to describe the users position within inside the buildings and stores, and that the Satellite technology that is used on roadmaps is not an alternative since it lacks on the tight places accuracy, where its unable to determine an accurate position inside a specific building dues to many factors.

## Implementation

### To Implement such an idea, and after an extensive research, we found that Beacons “small Bluetooth devices” are best designed to fulfill such vision and goals, where they can broadcast a low frequency Bluetooth signal that can be detected by smart phones.

### The Beacons costs are not high and they can last for a long period of time, while at the same time are flexible in programming.

### Beacons can store a small amount of data that could be useful in our application, as we might be able to add more extra features along the way.

### defining locations by names and giving suggestions is a feature to be added to the system, as well as a GUI of an actual map of the targeted area to be mapped.

### Upon reaching destinations the beacon may possibly add some specific info to that location.

# project summary

Beacon technology is becoming the trend in marketing materials as well as other applications, however there is still no valid application and system that use them affectively as a position sensor for indoor navigation, and by accomplishing such project we believe that we would be one of the pioneers in implementing such technology in that manner.

By the end of this project we expect to build a prototype of our indoor navigation system based on a small area in the UNT IT department, that would help people navigate the department using Beacon Technology.