**Multipath Triangulation: Decimeter-level WiFi Localization and Orientation with a Single Unaided Receiver**

***Paper summary:***

The paper introduces readers to how to use a single WiFi access point to pinpoint the location of a target to a decimeter precision The first section of the paper demonstrates the insufficient in previous methods such as Chronos or ToF (Time of Flight) solely method. It also illustrates the advantage of using a multipath approach instead of an alright disapprove in many papers with related researchers.

The document then demonstrates the methods used to find the distance between a receiver and a transmitter. The approach elaborate in the paper can even calculate the angle of orientation of the access point to the transmitter. The paper finally shows the result of the experiment and the set up used to prove the result

***Strength of the paper:***

The strengths of this paper lie in the methods used by the author to demonstrate their work. First, they provide a clear result on how their approach is better and summarize it into a table. As known, the table can or provide more visual differentiation to viewers. Secondly, the paper provides a clear mathematical demonstration of the result.

***The weakness of the paper:***

The main weakness of this paper is the wordiness. The paper contains a few too many uneasy explanations and is therefore too wordy.

***What I learn:***

From this paper, I learn a couple of things:

- A new method called the triangular method. This consists of using the ToF, LoS, and other data, to calculate the shortest path and the angle of the access point with respect to the transmitter.

- The previous paper technic has come weaknesses which were not elaborate in the paper itself.

***Future Work:***

After reading many papers on this topic I can seem to find any future ideas that can be added. Maybe make a public protocol that uses these techniques like the TCP protocol. This way, one can use this at the application layer.

This paper was well written except for the weakness mentioned above. It addresses the issue of WiFi localization with proof and experimental results.