Pinpointing Perfect Position: Is GPS Triangulation Best?

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Abstract

The purpose of this research paper is to determine if the processes used by GPS models currently is the best way to determine position. This process is done by using triangulation and trilateration as the methods in pinpointing position. Trilateration uses three distances from points in determining location, where as triangulation uses angles. This idea was applied to multilateration, which uses distances as another approach when pinpointing. The difference between trilateration and multilateration is that the process in getting the point in trilateration is faster, however the accuracy of multilateration is greater as the area is zoned into and calculated, rather then just calculated. The process used in multilateration using a quadrilateral to pinpoint is done by dividing the shape into triangles and then connecting the satellites to the point's position that is being calculated. The centroid is then found for each triangle, and the process is repeated with the new shape until the area is zoned into.

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