

## **ABSTRACT**

*Man is called al-Insan because he is often forgot, so he needs warning. Usually, what happens is that you forget the position of the items that are in the room and forget to return them to their original place, so that when you need them back, you do not have to struggle to find and move other unnecessary items. To deal with it, precautions need to be taken. The aim of the research is to combine the RSSI and MLAT algorithms to determine the exact position of the object.*

*The method of completing this study is to simulate the position of transmitters and receivers on MATLAB, simulate RSSI algorithms to determine distances, simulate MLAT algorithms to determine positions, and display position calculations in MATLAB. The research was done in a simulation room with a room length of 10 meters and a room width of ten meters. By determining distances using RSSI and positions using MLAT. On the part of its appearance, it produces a two-dimensional prediction point.*

*By using the correction method (refTar) to approximate the distance of the position of the predicted point (TarX and TarY) to the point (ref Tar), the distance between the positions of the object is accurate. In this study, the outliers observed the outliers area by performing outlier detection performed as many times as percoabit when the Rx position is in the simulation room with a different starting point of the target and also using the z-score threshold requirement =  $Z > 3$ , which produces the area for the distance of position instead of including the outlier area.*

**Keywords:** *Indoor Positioning System (IPS). RSSI, MLAT, MATLAB.*