

## **ABSTRACT**

### ***INDOOR POSITIONING DEVICE USING BLUETOOTH AS BEACON***

*Technology to track position nowadays has been widely used. Technology such GPS can be used to track someone's position, address or as a signpost to a place. But GPS have disadvantages when used indoors, such low accuracy due to signal obstructed by buildings. Therefore, should be made a system to track positions that can be used indoors. This study aims to create a tool that can track someone's position on a mobile device using bluetooth signal strength and to ease in searching a person.*

*This study uses bluetooth low energy in order for the power used is low. Using mobile devices to estimate the position of the searcher and the position of the person sought by the trilateration method to calculate the distance based on receives signal strength and the coordinate position of the transmitter. The system tested in Ararkula building (O) of Telkom University at ground floor.*

*The end result of this system is a tool that has been tested experimentally and can estimate position with average accuracy rate above 90 percent.*

*Keywords : Bluetooth Low Energy, Indoor Localization, Mobile Device, Trilateration*