

## **ABSTRACT**

*The rapid development of railway transportation technology provides significant wireless service demand. To be able to produce good quality wireless services in fast-moving train conditions, innovation technology is needed that can overcome fluctuations in Signal to Noise Ratio (SNR)*

*One of the technologies used to overcome SNR fluctuations is to use reconfigurable antenna pattern method. Directional radiation pattern will produce high gain and increase SNR. An antenna with a directional radiation pattern is needed and can be taken from the fast train.*

*This research develops a method that can configure the radiation pattern on the antenna system to support optimal gain in dealing with SNR fluctuations resulting from the development of high speed trains*

*The radiation pattern can be reconfigured in the form of a multibeam radiation pattern with the ability of the beam switch in accordance with the movement of the rail. Switch beam that is used based on a microcontroller using GPS reference.*

**Keywords:** *Antenna, reconfigurable, switch beam*