

## **ABSTRACT**

*The development of communication technologies is currently developing rapidly, especially in the use of wireless (wireless) information technology and Internet broadcasting. In addition, LTE technology is currently used by the public because most of the Indonesian population needs communication and data backup. Planning an LTE network is necessary to provide the best service and reliable network quality. This design is based on the geographical area and area of Bekasi city which is  $\llbracket 210.49 \text{ km} \rrbracket^2$ . In this last project, the authors used frequencies of 700 MHz, 1800 MHz and 2100 MHz with the Price Hata and Okumura Hata propagation models. The simulation software used in this study uses Atoll. The plan is based on coverage of an average 700 MHz frequency RSRP value of -110 dBm and an average SINR value of 15 dB. At a frequency of 1800 MHz, the mean RSRP failure value is -120 dBm and the mean SINR failure value is -10 dB. At a frequency of 2100 MHz, the mean RSRP failure value is -120 dBm and the mean SINR failure value is -8 dB. According to these results, the frequency of 700 MHz is considered sufficient for the network services of the city of Bekasi.*

**Keywords : LTE, RSRP, SINR, Planning**