ABSTRACT

Bluetooth is one of technology that's used for wireless communication, that standardized by SIG (Special Interest Group) – Ericsson, Intel, IBM and Toshiba.

The Bluetooth technology can build a flexible mobile wireless network because the mobile digital equipment such as laptop, PDA, headset, and phone-cell can be detected automatically and communicate directly to the others equipment such as PC, printer, Internet Access, etc.

This final project analyze scatternet formation process in D building of STT Telkom. And make a simulation to analyze that performance.

Based of the result of simulation, AWGN channel is influenced by interference; other ways the distance factor and wall attenuation give more effect for rician channel. BER for interference AWGN channel which 10 meters communication is $1{,}834.10^{-5}$, and BER for rician channel that across 2 walls is $4{,}973.10^{-4}$. Both of that BER are under maximum BER for Bluetooth standard - 0.1% or 10^{-3}. *Throughput* for AWGN channel is around 99.99% and 99.95% for rician channel.