

ABSTRACT

Long Term Evolution telecommunications infrastructure technology as 4G LTE technology. *LTE* has two types of technology, *FDD* (Frequency Division Duplex) and *TDD* (Time Division Duplex). *FDD* used simulation frequency of 1800 MHz and *TDD* used for simulation 2300 MHz frequency. Planning performance analysis differences *LTE FDD* with *LTE TDD* in South Tangerang by using site existing in the *Atoll* simulator 3.3 planning two stages, planning on *coverage* and planning on *capacity*, *coverage* calculation the number of sites enode-B is 6 *FDD* and *TDD* sites. Simulation results show that the average RSRP value on *FDD* is Urban at -118,92 dBm while the average RSRP value for Urban *TDD* is -108,95 dB. SINR *FDD* value is 4.6 dB and the SINR *TDD* value is 4.6 dB. *FDD* downlink throughput for Video Phone services is 287.6 Mbps while *TDD* downlink for VoIP services is 78.36 Mbps. *FDD* uplink throughput value for Video Phone services is 591.4 Mbps, *TDD* uplink throughput value for VoIP services is 65.21 Mbps.

Keywords : *LTE FDD (Frequency Division Duplex)*, *LTE TDD (Time Division Duplex)*, *Atoll*, *Coverage*.