ABSTRACT

Wireless Local Area Network (WLAN) is a local computer network which is oftenly used nowadays, such as at the High School building Arts & Design Indonesia (STISI) Telkom. Because of the important role of the WLAN on a campus to support ongoing learning activities, it will require a plan for good indoor coverage area that can cover all locations - potential locations in the building.

In this final project has been made indoor WLAN coverage area in the building of STISI Telkom. Planning of coverage area at STISI Telkom building using the Network Stumbler software and insider for walktest to measure signal strength on existing conditions. Calculation of this WLAN coverage area plan using the COST 231 propagation model which accounted for multiwall Indoor damping effect of the walls and floors so that the results of the calculation approaches the real situation. In the coverage area plan simulation, it was used RPS software v5.4. From the simulation results can be generated the graphs of the average signal strength received by users.

In the final stage it can be concluded that the number of Access Points required for Telkom STISI to cover entire building as many as 24 pieces with a cell radius of 12 m. Average signal strength level - the average user received on the ground floor of -49.96 dBm, -42.53 dBm floor by floor, two of -40.92 dBm, -42.47 dBm at the third floor and the fourth floor of - 36.88 dBm. The results of this research can also be used as reference to the part in the construction Sisfo Telkom STISI WLAN coverage area.

Key Word: WLAN, Cost 231 Multiwall Indoor, Walktest, Access Point, RPS.