ABSTRACT

Wireless Local Area Network (WLAN) network system is a requirement of DC and IOT buildings in Telkom Institute of Technology Purwokerto. When the wlan network coverage in the DC building now still can not cover up to the IOT building then, the design of indoor network using Radiowave Propagation Simulator to be the right solution.

The existing WLAN situation is still not maximal, because the placement of access point (AP) is less strategic or lack of number of AP used. After simulation of existing result shows the value of Signal to Interference Ratio (SIR) parameter reaches 3.38 dB average.

In the building of IOT, the design is done by AP amount based on the required coverage estimate 13 AP and capacity required 12 AP. then do placement position AP comparison results, the second scenario better scenario 13 AP. Based on the overall value of the parameter increments floor RSSI-0.26 dBm, while from SIR 0.89 difference parameter dB. Further comparison of the results of the evaluation will be carried out from the design scenario 13 AP and optimization results existing AP DC building. The results of the comparison of the value of the coverage difference-17.59 dBm is better than the existing State as seen from the results of the whole. On the parameters of the simulation result comparison SIR have difference 5.92 dB is much better than existing State.