

ABSTRACT

Optical wireless communication technology is becoming a trend with its speed in sending data because it uses light as a transmission medium. This wireless communication makes an important part of the communication system used in the room as the next generation after Wi-Fi technology. Efficient Light Fidelity technology requires careful consideration between the functions requested as a lighting and communication system as well. The factor in this research is the change of distance and field of view for the model of fixed led panels and moveable led panels. Study conducted to see the results of the two kinds of led panel model in the form of bit error rate and signal to noise ratio. The best results in this test is using fixed led panels that has a SNR value of 30.05 dB followed by the moveable led panels 20 deg with SNR value of 29.50 dB and the moveable led panels 40 deg with the SNR value 27.74 dB. The results of the BER and SNR of the two models led panels are not much different from each other. A very contrasting value that has being tested in the simulation between the led panel models are the distance and the angle of the field of view. Using an angle of 48-degree field of view has better result than using an angle of 90-degree field of view. This is evidenced by the results of the value obtained by the concentrator at a given angle. The smaller the angle of field of view that given , the more optimal the light that the photographer receives.

Keywords : *Light Fidelity, Indoor Communication, Fixed LED Panel, Moveable LED Panel, Field of View*