

Evaluating Path Loss Models for E-Band Communication

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Abstract – The allocation of a large amount of bandwidth by regulating bodies in the 70/80 GHz band, i.e., the E-band, has opened up new potentials and challenges for providing affordable and reliable Gigabit per second wireless point-to-point links. This paper gives a comparative analysis of pathloss for different frequency bands of the respective path loss models. Subsequently, different propagation models, ITU-R and SUI models, are compared against measurement results and it is concluded that to meet specific availability requirements, E-band wireless systems may need to be designed with larger fade margins compared to microwave systems.

Keywords– E-Band, Pathloss, ITU-R, SUI.

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