PROPAGATION MODELLING FOR BROADBAND FIXED WIRELESS FOR MM-WAVE CHANNELS

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A model for the prediction of millimetre-wave propagation in suburban areas is presented. This model has been developed for the purpose of investigating coverage and coverage enhancement methods in broadband terrestrial fixed wireless systems such as LMDS. Both line of sight and non-line of sight modes are considered. The results of a comparison with field measurements conducted at 28 GHz are presented. The predicted coverage values result from a number of simulated scenarios, demonstrating the relative influences of factors such as: maximum tolerable path loss, base and subscriber antenna heights, subscriber rooftop location, cell radius, deployment of nonregenerative repeaters, and macrodiversity.