Abstract

This paper intends to study outdoor RF attenuation path loss behavior under certain restrictions. The study has been conducted in Nablus city to develop and optimize a suitable propagation model based on one of the existing propagation models based on outdoor measurements for 900 MHz, where a local GSM system is operating under severe geographical terrains and frequency limitations. The optimized model has been chosen such that certain error parameters are minimized. Some of the proposed models are; Bertoni-Walfish, Hat, Walfisch-Ikegami and the standard macrocell. In this paper a Tuned Bertoni-Walfisch model has outperformed the other models and has proven, to be the best suited for propagation analysis involving such terrain. This is achieved by varying the range dependence using Least Mean Square Error (LMSE) method.
References

- Alvaro Valcarce, Jie Zhang. "Empirical Indoor-to-Outdoor Propagation Model for Residential Areas at 0. 9–3. 5 GHz". IEEE ANTENNAS AND WIRELESS PROPAGATION LETTERS, VOL. 9, 2010
- Z. Nadir, Member, IAENG, N. Elfadhil, F. Touati. "Pathloss Determination Using Okumura-Hata Model And Spline Interpolation For Missing Data For Oman". Proceedings
Index Terms

Computer Science  Mobile Communication

Keywords

Multipath channel  radio channel modeling  Path loss model  Propagation measurements
Bertoni-Walfisch model
GSM 900