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Evaluation of mobile GSM performance under different atmospheric propagation models

Qaysar S Mahdi and Idris H Salih
Ishik University, Iraq

Atmospheric propagation is very effective on the performance of the wireless, mobile, radar, and communication systems. In this paper different atmospheric models are constructed under different atmospheric conditions. The performance of a GSM mobile communication is tested under different atmospheric models. From the obtained results, it is noticed that the coverage of the mobile system antenna is changed highly if the refractive index model of certain country is changed. It is concluded that the atmospheric propagation is very essential parameter to be taken into account when the siting of a mobile GSM network is to be evaluated and designed. This study will be very useful in order to predict the performance of ground radio and airborne systems

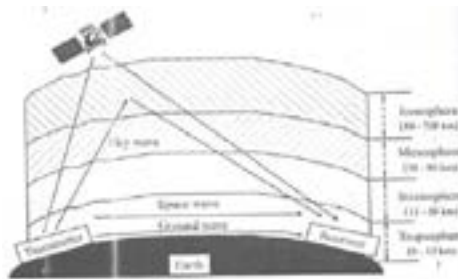


Figure: Propagation of different types of radio waves.

Recent Publications

1. Ergin Dinc and Ozgur B Akan (2014) Beyond-line-of-sight communications with ducting layer. IEEE Communications Magazine 52(10):37-43.
2. P Valtr and P Pechac (2005) Tropospheric refraction modeling using ray-tracing and parabolic equation. Radio Engineering 14(4):98-104.

Biography

Qaysar S Mahdi has completed his PhD from Engineering Military College and Postdoctoral studies from Engineering Military College. He is the Director of IT Services & Website Department; Ishik University. He has published more than 15 papers in reputed journals and has been serving as an Editorial Board Member of reputed journals.

qaysar.mahdy@ishik.edu.iq