Abstract

The possibilities for fiber optics are nearly endless because they are flexible under extreme conditions and the signal do not distort easily. Wireless technology has introduced high speed internet accessibility through wireless broadband. Radio over fiber; the integration of microwave and optical networks is the potential solution for reducing cost in terms of equipment, running finance and capacity enhancement. Radio over fiber, a supreme technology for the amalgamation of wireless and wired environment, because it combines the best parameters of two mostly used communication technologies. The purpose of this paper is to analyze the performance of ROF as a backhaul technology when compared to the traditional optical fiber in wireless environments like LTE & IEEE 802.16 WiMAX. Radio technology over optical fiber as a medium can prove to be the next generation solution. The analysis is then used to identify ROF feasibility as a backhaul technology for LTE and WiMAX. Optical and ROF network is deployed using MATLAB for acquiring the results through simulation to prove the hypothesis.

References

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Index Terms

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Keywords

ROF  Fiber Optics  Wireless Networks  LTE  WIMAX  Service  Backhaul Technology.