

**Author & Presenter: Jared Baraza,
Lecturer, Kenyatta University, School of Pure and Applied Sciences,
P.O. Box 43844-00100, Nairobi, Kenya. Tel: +254 20 810901,
Fax: +25420 811242/811575, Cell phone: +254 724 664 254**

Paper 2:

Topic: A comparative analysis of wired and wireless systems and their effectiveness in bridging the digital divide in developing countries

Abstract: Wireless systems have proved to be very useful in providing last mile solutions for voice, data and Internet in semi urban and rural areas in developing countries. This paper will compare and analyze some of the contemporary wired and wireless technologies and their applications for integrated voice, data and IP services. It is important for network design engineers in developing countries to select the best system that can deliver the required services at an economical cost in their networks. In particular the following parameters will be analyzed for each system: Performance, availability, capacity, coverage, bandwidth, frequency, QOS and Cost benefit analysis. The following systems will be analyzed: SDH Radio, WiFi, WiMax, VSAT, CDMA 450/2000, WCDMA/UMTS, Hyper LAN, DSL, Optical fiber with DWDM/SDH and Free Space Optics (FSO).