

## Mobile WiMAX Network based Wireless Communication on Rail: An Analysis

**Authors :** Vinod Kumar Jatav, Dr. Vrijendra Singh

**Abstract :** WiMAX is an emerging wireless technology designed by WiMAX forum. WiMAX technology delivers broadband internet access with QoS, mobility and robust security. WiMAX is among the prominent mobile broadband wireless technology which laid the foundation for the next generation networks (NGN). The next-generation communication system for railway should facilitate high level network availability, fast mobility for high speed trains with reliability, high handover rate, the firmness of train operations, and high QoS. The system should also be capable to provide various railway services by transmitting big data efficiently. One of the most promising technologies for the next generation railway wireless communication is Mobile WiMAX. This paper analyses some of the network architectures for railway wireless communication and considers the elementary concepts to facilitate the users with broadband internet access on trains. The paper aims to recognize the suitability of Mobile WiMAX technology for the special requirements of broadband internet facilities and wireless telecommunication services of Railways.

**Keywords :** Broadband internet, IEEE 802.16e, mobile WiMAX, Railway wireless communication

**Conference Title :** ICCCN 2015 : International Conference on Computer Communications and Networks

**Conference Location :** Zurich, Switzerland

**Conference Dates :** January 13-14, 2015