

Radio access network power management considering radio over fiber technique for 4G mobile system

Abstract

Radio over fiber technique was suggested as excellent candidates for 4G radio access network considering large number mobile users. With higher number of base stations, a microwave link presents more disadvantages across base stations in relation to power management, interference effect, atmosphere effects, and maintenance. In this paper, the radio over fiber power management technique is introduced. It transmits and receives signals with lower losses and dispersion effect through the fiber link. The signal quality is improved with the parameters optimization for practical applications. It proposed better power level for 4G mobile base stations with the expected coverage area, as well as power control and signal improvement for the system.