

Application of Beamforming Technology to Radio Train Control Systems

Takayasu KITANO Koki IWAMOTO Kazuki NAKAMURA

Recently, radio train control system has widely been introduced in urban areas. Since the shortage of frequency channels is concerned in sections with high dense lines such as urban areas, it is necessary to establish a method to control multiple lines with a small number of frequency channels. Therefore, we propose a method of transmitting information to multiple trains using a small number of frequency channels for radio train control system by applying beamforming technology in which base stations cooperatively control the directionality of transmitter.