## Current Status of Broadband Wireless Communication Technologies in Railways and Future Challenges to Them

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This paper describes the current status of broadband communication technologies which can be applied to railway transport, particularly focusing on the application to broadband services for passengers on board the train. In the first half of this paper, we give a brief overview of the current status of wireless LAN (IEEE802.11), satellite communication, next-generation mobile phone, millimeter wave communication and optical communication technologies. In the latter half, we make an account of the three different optical communication technologies which we are currently developing to be used for broadband communication for trains.