

WIRELESS COMMUNICATION DEVICE AND SENSING METHOD

ABSTRACT

A wireless communication device which includes: a sensing antenna for sensing communication by a primary user; a first transmission antenna; a second transmission antenna; first transmitting unit that generates a transmission signal to be transmitted from the first transmission antenna; second transmitting unit that generates a transmission signal to be transmitted from the second transmission antenna and that cancels, in the sensing antenna, a transmission signal from the first transmission antenna; digital signal processing unit that suppresses the transmission signal from the first transmission antenna, from a received signal of the sensing antenna; and sensing unit that detects communication by a primary user on the basis of the received signal of the sensing antenna that has been processed by the digital signal processing unit. While performing communication as a secondary user, the device detects communication by a primary user. Hence, constant sensing is enabled in a cognitive radio communication device.

Fig. 1