

INTERFERENCE CANCELLATION APPARATUS AND METHOD

ABSTRACT

Embodiments of the present invention relate to the field of communications
5 technologies, and provide an interference cancellation apparatus and method, which
can avoid being limited by a dynamic range of an ADC/DAC and can cancel a
second-type self-interference component effectively. The method includes: acquiring
a radio frequency reference signal; receiving a radio frequency receive signal by
using a main receive antenna; canceling a first-type self-interference component in
10 the radio frequency receive signal according to the radio frequency reference signal,
to generate a first processed signal; acquiring the reconstructed self-interference
signal according to a self-interference channel parameter and the radio frequency
reference signal; canceling a second-type self-interference signal in the first
processed signal according to the reconstructed self-interference signal to generate a
15 second processed signal; performing down-conversion processing on the second
processed signal to generate a third processed signal; performing analog to digital
conversion on the third processed signal to generate a digital signal; and acquiring a
digital baseband reference signal, and performing self-interference channel estimation
according to the digital baseband reference signal and the digital signal to acquire the
20 self-interference channel parameter. The present invention is used for interference
cancellation.

FIGURE 12