

SIGNAL TRANSMISSION METHOD AND APPARATUS

ABSTRACT

A signal transmission method and an apparatus are disclosed. In this method, a first communication apparatus generates a full-wave radio frequency electrical signal, and converts the full-wave radio frequency electrical signal into a half-wave radio frequency optical signal. The half-wave radio frequency optical signal is a radio frequency optical signal having a positive half-amplitude or a negative half-amplitude of the full-wave radio frequency electrical signal. The first communication apparatus sends the half-wave radio frequency optical signal. A second communication apparatus receives the half-wave radio frequency optical signal, and converts the half-wave radio frequency optical signal into the full-wave radio frequency electrical signal. It can be learned that, compared with a radio frequency optical signal having a full amplitude of the full-wave radio frequency electrical signal, average optical power of the half-wave radio frequency optical signal is lower, reducing transmit optical power between the first communication apparatus and the second communication apparatus. This helps reduce power consumption of an optical component. When an optical signal is transmitted between the first communication apparatus and the second communication apparatus through an optical fiber, the reduction of the transmit optical power further helps reduce a non-linear effect of optical fiber transmission, to reduce signal distortion caused by the non-linear effect of the optical fiber transmission.

FIG. 6