

Abstract

Method for deriving parasitic signals from modulated digital signals

The invention relates to a method for deriving parasitic signals from modulated, digital signals, with each signal from the digital data to be transmitted being determined by means of a modulation schema (2). The modulated digital signals received at the receiver end also include parasitic signals in addition to the transmitted, modulated digital signals. At the receiver end, the modulated digital signals transmitted from a transmitter are then reconstructed, mainly on the basis of values of the digital data to be transferred determined at the receiver end (7, 8). These reconstructed, modulated digital signals are then subtracted from the received modulated digital signals (9) and the parasitic signals are estimated from the result of the subtraction without influence from prior filtering at the receiver end (10). Furthermore, at the receiver end, influencing parameters, e.g. attenuation or time delay of a transmission channel, can be taken into account during the reconstruction of the transmitted, modulated digital signals.

From the parasitic signals estimated at the receiver end, any possible unauthorized carrier frequencies by which the regular carrier frequencies are disturbed can be determined, for example by demodulation, even if the parasitic signals do not lie fully within the bandwidth of the regular carrier frequency or carrier frequencies. In addition, the inventive method can generally be used with digital modulation to derive parasitic signals.

Fig 1.