

Title (en)

CORRECTION OF PHASE AND AMPLITUDE DISTORTION, PARTICULARLY FOR MULTICARRIER SIGNALS

Title (de)

KORREKTUR VON PHASEN UND AMPLITUDENVERZERRUNGEN, INSBESONDERE FÜR MEHRTRÄGERSIGNALE

Title (fr)

CORRECTION DE LA DISTORSION DE PHASE ET D'AMPLITUDE, EN PARTICULIER DES SIGNAUX DE MULTI PORTEUSE

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Application

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Abstract (en)

[origin: WO9834382A1] This invention relates generally to receiving frequency division multiplex signals, and, more precisely, to a method and apparatus of receiving orthogonal frequency division multiplex signals. OFDM signals may comprise both data and reference carriers (also known as pilots). The pilot signals are transmitted with a known phase and amplitude, however when they are received at a receiver the phase and amplitude is seldom as it was at the transmitter. This is due to problems of channel distortion which cause the phase and amplitude of the signals to be distorted. The same distortion also affects the data carriers, which can result in erroneous data being received. However, since the pilot signals are transmitted with a known phase and amplitude the distortion suffered by the pilot can be calculated, and the pilot can be rotated and re-scaled to recover its original phase and amplitude. Applying the same transformation to the data signals corrects them for any channel distortion. The present invention provides an effective method and apparatus for quickly and accurately recovering the amplitude and phase of an input signal.

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