APPARATUS AND METHOD FOR COMPENSATING FOR FREQUENCY OFFSET IN ORTHOGONAL FREQUENCY DIVISION MULTIPLEXING SYSTEM

ABSTRACT OF THE DISCLOSURE

There is provided an apparatus and method for compensating for a frequency offset in an orthogonal frequency division multiplexing (OFDM) system. In the frequency offset compensating apparatus, a phase detection portion separates effective data symbols and guard interval symbols from an input signal, correlates the effective data symbols to the guard interval symbols, and detects a phase based on correlations. A phase compensation portion performs phase compensation by inverting the sign of the latter of successive symbols if the phase difference between the successive symbols is a predetermined value or greater. A phase offset estimator averages compensated phases and estimates a frequency offset based on the average.

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