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 correlating portion demodulates input data by fast Fourier transformation, delays a demodulated symbol by a predetermined period, and correlates a symbol demodulated during the delay to the delayed symbol. A pilot position detecting portion compares the correlation with a predetermined pilot position and extracts a correlation corresponding to the pilot position. A frequency offset compensating portion estimates a frequency offset to the extracted correlation if the extracted correlation is a predetermined maximum and shifts the phase of pilot data by the estimated frequency offset.

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