



PERFORMANCE PREDICTION (EW) -COFDM USING MUTUAL INFORMATION

Determine the quality of the transmission and predict the decoding performance

Technological benefits

Innovative

Prediction of physical layer performance of mobile receivers.
 Signals compatible with the latest standards.
 Determines the quality of the transmission.
 Predicts decoding performance.
 Indication of the quality of the channel and the quality of the telecom link.

Adaptable

Uses existing performance prediction tools on conventional waveforms (OFDMA) by modifying the calculation of the equivalent SNR.

Invention overview

The invention makes it possible to determine the quality of the transmission and to predict the decoding performance of the physical layers of the receivers, more specifically in terms of mobility. This invention uses the conventional mutual information method for waveform (EW) -SC-OFDM waveform prediction. Compared with the use of new reference curves, the method makes it possible to widely reuse all the existing performance prediction tools on conventional waveforms (OFDMA) by modifying just the calculation of the equivalent SNR.

Potential applications

Spatial

Telecommunication systems by satellite

Development of mobile phone chipsets

Complementary inventions

B0838
 B0922



Serial input symbols to transmit



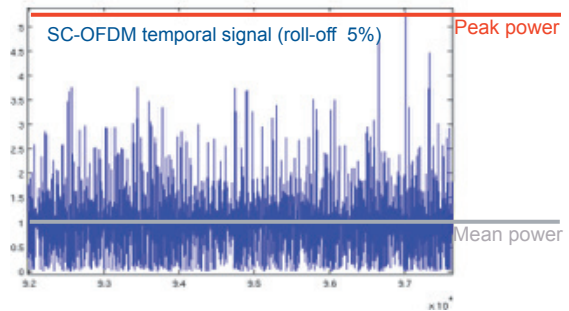
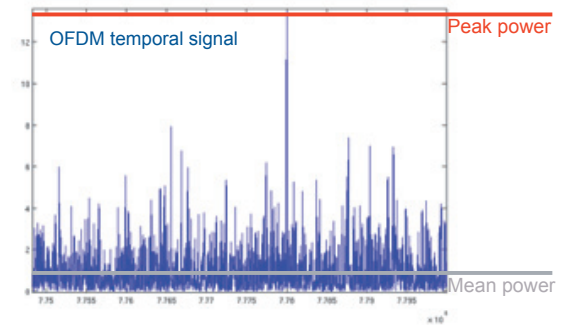
OFDM spectrum

OFDM modulates each subcarrier with one data symbol



SC-OFDM spectrum

SC-OFDM spreads all data symbols on each subcarrier



Commercial benefits

Economical - Adaptable

Suitable for existing prediction tools.
 Use of a conventional method of mutual information.
 Simple modification of calculation of the equivalent SNR.

TRL : 2

Patented invention, available under license