Abstracts

Channel loading effects on power limited wireless transmitters utilizing discrete multitone modulation

A. Leke and J.S. Kenney. "Channel loading effects on power limited wireless transmitters utilizing discrete multitone modulation." 1997 MTT-S International Microwave Symposium Digest 3. (1997 Vol. III [MWSYM]): 1147-1150.

A method is presented for optimizing the throughput of a radio channel limited by intermodulation distortion induced in transmission of discrete multitone (DMT) signals. The DMT concept is presented, and the carrier-to-interference ratios as a function of the amount of channel loading are computed for different power levels. These values, obtained using 2 different methods-the NPR approach and the MMSE Gain method-are shown to be in good agreement. The degradation in C/I for a fully loaded channel with respect to the two-tone case is also computed.

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