MC-CDMA = Mitigation for the phenomenon of CFO in MC-CDMA systems..

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(carrier frequency offset, CFO)

(inter-carrier interference, ICI)　　　　　　　　MC-CDMA (multi-carrier coded-division multip-access)

(frequency selective)

(multipath intensity profile, MIP)

MC-CMDA

:　　　　　　　; MC-CDMA　　;　　　　　　(M-D combining) ;

[1] J. Proakis, Digital Communications. New York: McGraw-Hill, 1989.

[2] T. Eng and L. B. Milstein, " Coherent DS-CDMA Performance in Nakagami Multipath Fading," IEEE Trans. on Commun., Vol. 43, pp. 1134-1143, Mar. 1995.

[3] S. Kondo and L. B. Milstein, " On the Use of Multicarrier Direct Sequence Spread Spectrum Systems," in Proc. IEEE MILCOM ' 93.

Boston. MA, pp. 52-56, Oct. 1963.

[4] N. Yee, J. P. Linnartz, and G. Fettweis, " Multi-carrier CDMA in Indoor Wireless Radio," in Proc. PIMRC ' 93, Yokohama, Japan, pp. D1.3.-1.5, Dec. 1993.

[5] L. -L. Yang, and L. Hanzo, " Multicarrier DS-CDMA: A Multiple Access Scheme for Ubiquitous Broadband Wireless Communications," IEEE Commun. Mag., pp. 116-124, Oct. 2003.

[6] S. Kondo, and L. B. Milstein, " Performance of Multicarrier DS-CDMA System," IEEE Trans. on Commun., Vol. 44, pp. 238-246, Feb. 1996.

[7] J. Luo, J. Zeidler, and J. Proakis, " Error probability Performance for W-CDMA Systems with Multiple Transmit and Receive Antennas in Correlated Nakagami Fading Channels," IEEE Trans. on Veh. Tech., Vol.51, no.6, pp. 1502-1516, Dec. 2002.

[8] E. K. Al-Hussaini and A. A. Al-Bassiouni, " Performance of MRC Diversity Systems for the Detection of Signals with Nakagami Fading," IEEE Trans. on Commun., Vol. COM-33, pp. 1315-1319, Dec. 1985.

[9] W. C. Lee, Mobile Communications: Design Fundamentals, 2nd Ed., New York: Wiley, pp. 202-211, 1933.

[10] M. Nakagami, The m-distribution A General Formula of Intensity Distribution of Rapid Fading, in Statistical Methods in Radio Wave Propagation. Oxford, U. K.: Pergamon, pp. 3-36, 1960 [11] W. C. Y. Lee, " A Study of Antenna Array Configuration of an m-Branch Diversity Combining Mobile Radio Receiver," IEEE Trans. on Commun. VT-20, pp. 93-104, 1971.

[12] R. K. Mallik and M. Z. Win, " A new Approach to the Performance Analysis of DS-CDMA Over Fading Channels," in Proc. IEE Int. Conf. Personal Wireless Communications (ICPWC) 2002, pp. 300-304, Dec. 2002.

[13] T. Eng and L. Milstein, " Coherent DS-CDMA Performance in Nakagami Multipath Fading," IEEE Trans. on Commun., Vol. 43, no. 3-4, pp.1134-1143, Feb./Apr. 1995.

[14] M. Pursley, " Performance Evaluation for Phase Coded Spread Spectrum Multiple Access Communication-Part I: System Analysis," IEEE Trans. on Commun., Vol. COM-25, no.8, pp.795-799, Aug. 1977.

[15] G. Efthymoglou and V. A. Aalo, " Performance of RAKE Receivers in Nakagami Fading Channel with Arbitrary Fading Parameters," Electron. Lett., Vol.31, pp.1610-1612, Aug. 1995.

[16] J. Luo, J. Zeidler, and J. Proakis, " Error Probability Performance for W-CDMA Systems with Multiple Transmit and Receive Antennas in Correlated Nakagami Fading Channels," IEEE Trans. on Veh. Tech., Vol.51, no. 6, pp.1502-1516, Dec. 2002.

[17] I. S. Gradshteyn and I. M. Ryzhik, Table of Integrals, Series and Products, 5th Ed. San Diego, CA: Academic, 1994.

[18] V. A. Aalo, T. Piboongungon, and G. P. Efthymoglou, " Another Look at the Performance of MRC Schemes in Nakagami-m Fading Channels with Arbitrary Parameters," IEEE Trans. on Commun., Vol. 53, Issue 12, pp. 2002-2005, Dec. 2005.

[19] H. M. Srivastava and H. L. Manocha, A Treatise on Generating Functions. New York: Wiley, 1984.

[20] H. Exton, Multiple Hypergeometric Functions and Applications. New York: Wiley, 1976.

[21] Kang Z., Yao K., " On the Performance of MC-CDMA over Frequency-selective Nakagami-m Fading Channels with Correlated and Independent Subcarriers," In Proceeding of Globalcom, Vol. 5, pp. 2859-2863, 2004.

[22] Yang L. -L, Hanzo L., " Performance of Generalized Multicarrier DS-CDMA over Nakagami-m Fading Channels," IEEE Transaction on Commun., Vol. 50, pp. 956-966, 2002.

[23] Chen J. I. -Z., " Performance Analysis of MC-CDMA Communication Systems over Nakagami-m Environments," Journal of Marine Science and Technology, Vol. 14, no. 1, pp. 58-63, 2006.

[24] L. Rugini, P. Banelli, " BER of OFDM System Impaired by Carrier Frequency Offset in Multipath Fading Channels," IEEE Trans. on Commun., Vol. 4, No. 5, pp. 2279-2288, Sep. 2005.

[25] Chen J. I. -Z., " Performance Analysis for an MC-CDMA System over Single- and Multiple-Cell Environments in Correlated-Nakagami-m Fading," IEICE Trans. on Commun., Vol. E90-B, No. 7, pp. 1713-1724, July 2007.

[26] Liu X., Hanzo L., " Exact BER Analysis of OFDM Systems Communicating over Frequency-Selective Fading Channels Subjected to Carrier Frequency Offset," IEEE Vehicular Technology Conference, VTC2007 spring, pp.1951-1955, Dublin, Ireland 22-25, April 2007.

[27] S. Bernard, " Digital Communications Fundamentals and Applications", pp. 962-966, Prentice Hall International Inc., 2001.

[28] T. S. Rappaport, " Wireless Communications Principles and Practice", prentice Hall PTR, New Jersey, 1996.

[29] B. Sklar, " Rayleigh Fading Channels in Mobile Digital Communication Systems Part 1: Characterization", IEEE Commun. Magazine, pp. 90-100, July 1997 [30] Matthias Pa"tzold, " Mobile Fading Channel", Wiley, pp. 3-7, 2002.

[31] Scott L. Talbot and Behrouz Farhang-Boroujeny, " Mobility and Carrier Offset Modeling in OFDM," in IEEE GLOBAL Telecommunications Conference, 26-30 Nov 2007, pp. 4286-4290.