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References

1. ETSI TS 100 392-2 V 3.1.1, "Terrestrial Trunked Radio (TETRA); TETRA Enhanced Data Service (TEDS); Air Interface Specification," Sept. 2006.
2. C. Berrou and A. Glavieux, "Near Optimum Error Correcting Coding and Decoding: Turbo Codes," *IEEE Trans. Comm.*, vol. 44, no. 10, pp. 1261-1271, Oct. 1996.
3. O.Y. Takeshita and D.J. Costello, "New Deterministic Interleaver Design for Turbo Codes," *IEEE Trans. on Information Theory*, vol. 46, no. 16, pp. 1988-2006, Sept. 2000.
4. S. Le Goff, A. Glavieux and C. Berrou, "Turbo Codes and High Spectral Efficiency Modulation," *IEEE ICC1994*, pp. 645-649, May 1994.
5. J.G. Proakis, *Digital Communications*, Fourth Edition, McGraw-Hill, 2000.
6. ETSI TS 125 212 V3.4, Universal Mobile Telecommunications System (UMTS): Multiplexing and channel coding (FDD), pp. 14-20, Sept. 2000.
7. J.A.C. Bingham, "Multicarrier Modulation for Data Transmission: an Idea Whose Time has Come," *IEEE Comm. Magazine*, pp. 5-14, May 1990.
8. ETSI EN 300 401, "Radio Broadcasting Systems: Digital Audio Broadcasting (DAB) to Mobile, Portable and Fixed Receivers," May 2001.
9. ETSI ETS 300 744, "Framing Structure, Channel Coding and Modulation for Digital Terrestrial Television," Mar. 1997.
10. IEEE Std 802.11a - 1999, "Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications: High-Speed Physical Layer in the 5GHz Band," Sept. 1999.
11. ETSI TS 101 475 V1.3.1, "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Physical (PHY) Layer," Dec. 2001.
12. IEEE Std 802.16 - 2004, "IEEE Standards for Local and Metropolitan Area Networks-Part 16: Air Interface for Fixed Broadband Wireless Access Systems," June 2004.
13. G. Cherubini, E. Eleftheriou and S. Olcer, "Filtered Multitone Modulation for High-Speed Digital Subscriber Lines," *IEEE J. Select. Areas Comm.*, vol. 20, no. 5, pp. 1016-1028, June 2002.
14. ETSI EN 301 958, "Digital Video Broadcasting (DVB): Interaction channel for Digital Terrestrial Television (RCT) incorporating Multiple Access OFDM," Mar. 2002.
15. S.M. Kay, *Fundamentals of Statistical Signal Processing: Estimation Theory*, Englewood Cliffs, NJ, Prentice-Hall, 1993.
16. ETSI TS 122 060, "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); General Packet Radio Service (GPRS); Service description; Stage 1", Mar. 2003.
17. ETSI EN 301 344, "Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS); Service description; Stage 2", Sept. 2000.

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ERRATUM

Correction to "Comparison of Orthogonal and Non-Orthogonal Approaches to Future Wireless Cellular Systems"

Figure 2 in the first paper in the last issue, Peng Wang, Jun Xiao and Li Ping, "Comparison of Orthogonal & Non-Orthogonal Approaches to Future Wireless Cellular Systems," *IEEE Vehicular Technology Magazine*, Volume 1, Issue 3, pp 4-11 was printed incorrectly. The correct figure, along with Figure 3, which was printed correctly, are reproduced below. We apologise for the error.

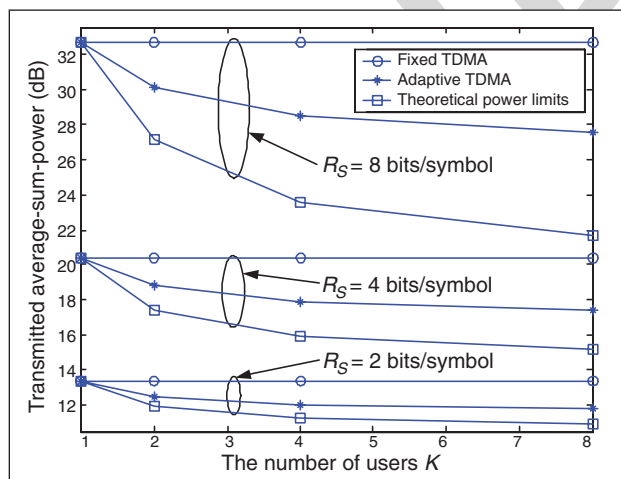


FIGURE 2 The transmitted average-sum-power versus the number of users K for a multiple access system with different MA techniques. The channel coefficient for each user consists of path loss and lognormal fading. All users have the same average rate and are assumed to be uniformly distributed in a normalized single hexagon cell with edge length 1.

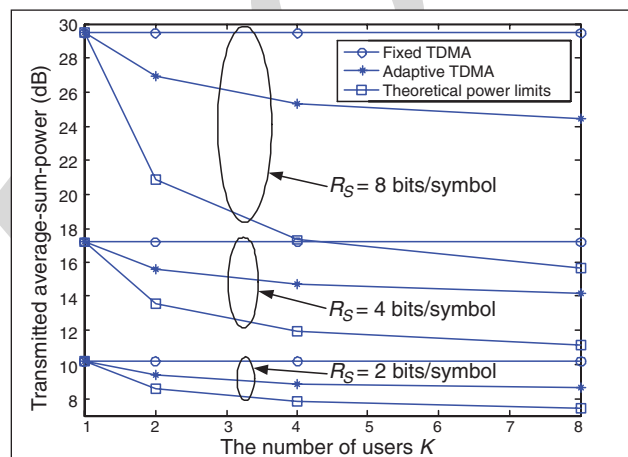


FIGURE 3 The transmitted average-sum-power versus the number of users K for a multiple access system with different MA techniques. The base station is equipped with two antennas. The channel coefficients for each user consist of path loss, lognormal fading and Rayleigh fading. All users have the same average rate and are assumed to be uniformly distributed in a normalized single hexagon cell with edge length 1.