Rank-deficiency in indoor MIMO

Vu V.K., Nguyen D.T.

College of Technology, Vietnam National University, Hanoi, Viet Nam; Faculty of Engineering, University of Technology, Sydney, NSW, Australia

Abstract: This paper points out in an analytical way that rank-deficiency in indoor MIMO is typically due to the small size of scattering windows in the NLOS propagation path between the transmitter and the receiver. ??2007 IEEE.

Index Keywords: Multiplexing; NLOS propagation; Small size; MIM devices

Year: 2007
Source title: IEEE Region 10 Annual International Conference, Proceedings/TENCON
Art. No.: 4428974
Link: Scorpus Link
Correspondence Address: Vu, V. K.; College of Technology, Vietnam National University, Hanoi, Viet Nam
Conference name: IEEE Region 10 Conference, TENCON 2007
Conference date: 30 October 2007 through 2 November 2007
Conference location: Taipei
Conference code: 72927
ISBN: 1424412722; 9781424412723
CODEN: 85QXA
DOI: 10.1109/TENCON.2007.4428974
Language of Original Document: English
Abbreviated Source Title: IEEE Region 10 Annual International Conference, Proceedings/TENCON
Document Type: Conference Paper
Source: Scopus
Authors with affiliations:

1. Vu, V.K., College of Technology, Vietnam National University, Hanoi, Viet Nam
2. Nguyen, D.T., Faculty of Engineering, University of Technology, Sydney, NSW, Australia

References:

1. Telatar, E., Capacity of Multi-antenna Gaussian Channels (1999) Eur. Trans. Telecommun, 10 (6), pp. 585-596. , Nov./Dec
2. Foschini, G.J., Gans, M.J., On limits of wireless communications in a fading environment when using multiple antennas (1998) Wireless Pers. Commun, 6, pp. 311-335. , Mar
3. Chizikh, D., Foschini, G.J., Gans, M.J., Valenzuela, R.A., Keyholes, correlations, and capacities of multielement transmit and receive antennas (2002) IEEE Trans. Wireless Commun, 1, pp. 361-368. , Apr
4. Almers, P., Tufvesson, F., Molisch, A.F., Measurement of Keyhole Effect in a Wireless Multiple-Input Multiple-Output (MIMO) Channel (2003) IEEE Communication Letters, 7 (8), pp. 373-375. , August
5. Gesbert, D., Bolcskei, H., Gore, D.A., Paulraj, A.J., Outdoor MIMO Wireless Channels: Models and Performance Prediction

(2002) IEEE Transactions on Communications, 50 (12), pp. 1926-1934. , Dec

6. Jakes, W.C., (1974) Microwave Mobile Communications, pp. 60-65. , Wiley, New York
7. Da-Shan Shiu, G., Foschini, J., Gans, M.J., Kahn, J.M., Fading Correlation and its Effect on the Capacity of Multielement Antenna Systems (2000) IEEE Trans. Commun, 48 (3), pp. 502-513. , Mar