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Performance Evaluation of Distributed and Co-Located MIMO LTE Physical Layer Using Wireless Open-Access Research Platform

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Abstract : In this paper, we evaluate the benefits of distributed 4x4 MIMO LTE downlink systems compared to that of the co-located 4x4 MIMO LTE downlink system. The performance evaluation was carried out experimentally by using Wireless Open-Access Research Platform (WARP), where the comparison between the 4x4 MIMO LTE transmission downlink system in distributed and co-located techniques was examined. The measured Error Vector Magnitude (EVM) results showed that the distributed technique achieved better system performance compared to the co-located arrangement.

Keywords : multiple-input-multiple-output (MIMO), distributed MIMO, co-located MIMO, LTE
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