Abstract—Retrodirective array antenna is possible to do automatically beam-tracking because it can control the phase information of the output signal toward opposite direction to input signal without a priori knowledge of the arrival direction. The receive performance of retrodirective array system is degraded considering multipath signal in wireless communication system. In this paper, we analyze the system performance of digital retrodirective array system using digital phase conjugation under multipath signal. Simulation results show that the error about phase and magnitude of direct signal direction occur in the present of multipath signal.

Keyword—Retrodirective antenna, multipath signal, phase detection, phase conjugation.

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