

Adaptive Transmission Scheme Based on Channel State in Dual-Hop System

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Abstract : In this paper, a dual-hop relay based on channel state is studied. In the conventional relay scheme, a relay uses the same modulation method without reference to channel state. But, a relay uses an adaptive modulation method with reference to channel state. If the channel state is poor, a relay eliminates latter 2 bits and uses Quadrature Phase Shift Keying (QPSK) modulation. If channel state is good, a relay modulates the received symbols with 16-QAM symbols by using 4 bits. The performance of the proposed scheme for Symbol Error Rate (SER) and throughput is analyzed.

Keywords : adaptive transmission, channel state, dual-hop, hierarchical modulation, relay

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