

## Performance Improvement of Cooperative Scheme in Wireless OFDM Systems

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**Abstract :** Recently, the wireless communication systems are required to have high quality and provide high bit rate data services. Researchers have studied various multiple antenna scheme to meet the demand. In practical application, it is difficult to deploy multiple antennas for limited size and cost. Cooperative diversity techniques are proposed to overcome the limitations. Cooperative communications have been widely investigated to improve performance of wireless communication. Among diversity schemes, space-time block code has been widely studied for cooperative communication systems. In this paper, we propose a new cooperative scheme using pre-coding and space-time block code. The proposed cooperative scheme provides improved error performance than a conventional cooperative scheme using space-time block coding scheme.

**Keywords :** cooperative communication, space-time block coding, pre-coding

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