

## Efficient Variable Modulation Scheme Based on Codebook in the MIMO-OFDM System

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**Abstract :** Because current wireless communication requires high reliability in a limited bandwidth environment, this paper proposes the variable modulation scheme based on the codebook. The variable modulation scheme adjusts transmission power using the codebook in accordance with hannel state. Also, if the codebook is composed of many bits, the reliability is more improved by the proposed scheme. The simulation results show that the performance of proposed scheme has better reliability than the the performance of conventional scheme.

**Keywords :** MIMO-OFDM, variable modulation, codebook, channel state

**Conference Title :** ICWCSN 2015 : International Conference on Wireless Communication and Sensor Networks

**Conference Location :** Zurich, Switzerland

**Conference Dates :** July 29-30, 2015