

## Pairwise error probability of a new subcarrier mapping scheme (ICI-SC Technique) for STFBC MIMO-OFDM system

### Abstract:

Pairwise error probability of a new subcarrier mapping scheme (ICI-SC Technique) for STFBC MIMO-OFDM system This paper analyses the Pair-wise Error Probability (PEP) performance for multiple-input multiple-output orthogonal frequency division multiplexing (MIMO-OFDM) system to reduce the problem of intercarrier interference (ICI) where coding scheme is applied over space time frequency block codes (STFBC). It is expected that by inserting new subcarrier mapping scheme (ICI-SC technique) at the transmitter, PEP can be improved, ICI can be reduced, and maximum diversity order can be achieved with the efficient bandwidth. An analytical framework for the PEP performance analysis of STFBC MIMO-OFDM system has been proposed. Then, a new subcarrier mapping scheme (ICI-SC technique) is introduced to compensate the integrated effect of frequency offset (FO) for intercarrier interference (ICI) reduction with maximum diversity order in the system. The result shows that the proposed PEP offers an improvement over STFBC MIMO-OFDM system by using a new subcarrier mapping scheme (ICI-SC technique).