

## **MULTIPLE INPUT MULTIPLE OUTPUT TRANSMISSION SCHEMES FOR LONG TERM EVOLUTION**

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### **Abstract**

The wireless industry is rapidly moving towards the convergence of communications, computing and consumer platforms. Users want high speed, high reliability high quality access when they are fully mobile. The 3GPP has recently completed the specifications of LTE standard and provides IP-based broadband wireless access in a mobile environment, there by affording network operators superior performance. Increasing demand for high performance 4G broadband wireless is enabled by the use of multiple antennas at both base station and subscriber ends. The use of these antennas improves communication performance. MIMO technology has attracted attention in wireless communications, since it offers significant increase in data throughput and link range without additional bandwidth or transmitted power. It achieves very high spectral efficiency and link reliability or diversity. Because of all these properties, MIMO transmission schemes are now moving into main streams of Communications, and these are essential for supporting future broadband data services. LTE incorporates the most advanced techniques of OFDMA and antenna techniques such as MIMO, SDMA Beam-forming provides improved user data rates in both high and lower SINR regions. In this paper, the various advanced MIMO transmission schemes employed in LTE and overview of the current ongoing work on the evolution of LTE towards LTE advanced and full IMT -Advanced capabilities have been discussed.

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