

## 室内分布发射天线STBC系统的发射天线位置优化

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## Antenna Location Optimization for STBC with Distributed Transmit Antennas in an Indoor Environment

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摘要

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**摘要** 该文针对室内环境下分布发射天线STBC系统,在考虑了路径损耗、阴影衰落和莱斯衰落的基础上推导了室内的平均误符号率(AASER),通过使室内的平均误符号率最小得到了优化的发射天线位置。理论分析表明最优的发射天线位置与房间的长、宽、高以及移动台的高度有关。仿真结果验证了理论分析的正确性。

**关键词:** 无线通信 分布式天线系统 空时分组码 天线位置优化 室内

**Abstract:** The Area Averaged Symbol Error Ratio (AASER) for indoor STBC downlink with distributed transmit antennas is derived, considering the effects of path loss, shadow fading and Rician fading. Then optimal antenna location can be obtained by minimizing AASER. Theoretical analyses show that the optimal antennas location is related to the room length, width, height and the height of the mobile station. Simulation results prove the correctness of the theoretical analysis.

**Keywords:** Wireless communications Distributed antennas systems STBC Antenna location optimization Indoor

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