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基于公平性原则的简化自适应资源分配算法

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Adaptive Resource Allocation Algorithm Based On Fairness Principle

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- 摘要
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摘要 提出了一种简化的自适应资源分配算法,此算法在保证用户公平性的前提下,使OFDMA系统的吞吐量最大化,且具有较低的计算复杂度.算法将整个分配过程分解为2步:基于公平性原则对子载波进行分配;计算各用户所需的总功率,并以注水算法对功率进行分配.仿真结果表明,相比于固定分配方式,笔者提出的自适应资源分配算法可以明显提高OFDM系统的频谱效率.

关键词: 正交频分复用 自适应资源分配 公平性原则

Abstract: A simplified adaptive resource allocation algorithm is proposed.The algorithm can maximize throughput of OFDMA system and ensure fairness of users,and it has a low computational complexity.It splits the whole allocation into two steps,which include the first subcarrier allocation based on fairness principle and the subsequent power allocation by waterfilling method.The simulation results show that compared with fixed allocation method,the adaptive resource allocation algorithm proposed in this paper could remarkably improve spectral efficiency of OFDM system.

Key words: OFDM adaptive resource allocation fairness principle

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