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RESEARCH ARTICLE

Design of Power and Rate Adaptation with Scheduling In Wireless Networks Based On SIC

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Abstract— To properly evaluate the usage of SIC, a joint design of power and rate adaptation algorithm with scheduling in wireless networks is to be analyzed. SIC (Successive Interference Cancellation) is an effective way of multiple packet reception (MPR) to fight with interference in wireless networks. Power management and high data rate is an important problem in wireless networks. With the help of SIC these problems are investigated. The link scheduling and power adaptation will minimize the total transmission power in a network and rate adaptation algorithm will minimize the high data rate in a network. The main objective is to improve the performance (QoS) of a network topology. Joint design of power and rate adaptation with scheduling has great potential to increase the throughput gain and successful delivery of packets and capacity in wireless networks. Performance of proposed scheme has been verified using network simulator to show that the approach is efficient

Keywords— Link Scheduling; Multiple Packet Reception; Power Adaptation; Rate Adaptation; Successive Interference Cancellation; Throughput

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