

APPLE: Providing Absolute and Proportional Throughput Guarantees in Wireless LANs

Authors : Zhijie Ma, Qinglin Zhao, Hongning Dai, Huan Zhang

Abstract : This paper proposes an APPLE scheme that aims at providing absolute and proportional throughput guarantees, and maximizing system throughput simultaneously for wireless LANs with homogeneous and heterogeneous traffic. We formulate our objectives as an optimization problem, present its exact and approximate solutions, and prove the existence and uniqueness of the approximate solution. Simulations validate that APPLE scheme is accurate, and the approximate solution can well achieve the desired objectives already.

Keywords : IEEE 802.11e, throughput guarantee, priority, WLANs

Conference Title : ICCCN 2016 : International Conference on Communications and Computer Networks

Conference Location : Singapore, Singapore

Conference Dates : January 07-08, 2016