

Augmentation Opportunity of Transmission Control Protocol Performance in Wireless Networks and Cellular Systems

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Abstract : The expansion in wireless technologies and the extensive with the wide use of mobile devices have drawn the attention of research and technological communities towards wireless environments, such as Wireless Local Area Networks (WLANs), Wireless Wide Area Networks (WWANs), and mobile systems and ad-hoc networks. Unfortunately, wired and wireless networks are expressively different in terms of link reliability, bandwidth, and time of propagation delay. By adapting new solutions for these enhanced telecommunications, superior quality, efficiency, and opportunities will be provided where wireless communications were otherwise unfeasible. Some researchers define 4G as a significant improvement of 3G, where current cellular network's issues will be solved and data transfer will play a more significant role. For others, 4G unifies cellular and wireless local area networks, and introduces new routing techniques, efficient solutions for sharing dedicated frequency bands, and an increased mobility and bandwidth capacity. This paper discussed the possible solutions and enhancements probabilities that proposed to improve the performance of Transmission Control Protocol (TCP) over different wireless networks and also the paper investigated each approach in term of advantages and disadvantages.

Keywords : TCP, Wireless Networks, Cellular Systems, WLAN.

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