ABSTRACT

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TCP PERFORMANCE IN WiFi TECHNOLOGY

(XI + 20 pages: 3 tables, 2 figures,)

TCP is known as a protocol for controlling data transmission. But TCP that is used for WiFi technology works much different from one that is defined for LAN or WAN technology. This paper presents the result obtained from the experimentation on evaluating TCP performance in WiFi technology.

The experimentation involved two scenarios. First, testing single connection between 1 Access Point and 1 Client; second, testing multiple connection between 1 AP and 2 clients. Normally, these 2 clients will compete for a bandwidth share. Parameters used to measure the performance of TCP in WiFi technology are distance, enable/disable RTS/CTS mechanism, and orientation of the transmision, i.e., downlink (from AP to Client) and uplink (from Client to AP),

From this experiment it can be concluded that Client with stronger signal got more bandwidth share than the one with weaker signal. Furthermore, RTS/CTS mechanism that is originally developed for guaranteeing data transmission contributed negative effect on the total throughput.

References: 7 (1997 - 2005)