

#C615483 : MAJOR ELECTRICAL ENGINEERING
KEY WORD: SHARED-BUFFER / FAST PACKET SWITCH / NONUNIFORM TRAFFIC LOAD
CHATCHAI SIRILAR : PERFORMANCE ANALYSIS OF SHARED-BUFFER FAST PACKET
SWITCH UNDER NONUNIFORM TRAFFIC LOAD: THESIS ADVISOR: PROF. PRASIT
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This thesis presented the analysis of mathematical equations for queueing model of shared-buffer fast packet switch which can be used to find characteristics such as throughput, delay time, and loss probability under non-uniform traffic load condition such as hot spot traffic and point to point traffic. The principle of analysis is to analyze each switch element and combine each result to be the total result of shared-buffer switch. We relatively use the mathematical equations to create the computer program to calculate throughput, delay time, and loss probability at each size of switch element (d) and buffer (B) such as $d=2$ with $B=4$, $d=2$ with $B=6$, $d=4$ with $B=8$, and $d=4$ with $B=12$.

The result of testing show that throughput and loss probability depend on the ratio of buffer size to switch element size. The delay time depends on switch element size or buffer size. It is found that nonuniform traffic load causes raise in the three characters of nonuniform output address but opposite in the other output address.

ภาควิชา.....	วิศวกรรมไฟฟ้า	ลายมือชื่อนิสิต.....
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