

C715585 : MAJOR ELECTRICAL ENGINEERING

KEY WORD:

ATM / KNOCKOUT SWITCH / BURST / NONUNIFORM TRAFFIC

NATTORN PALIVANICH : A STUDY OF THE BURSTY AND NONUNIFORM TRAFFIC

EFFECTS ON THE PERFORMANCE OF KNOCKOUT ATM SWITCH. THESIS ADVISOR :

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TIARAWUT, Ph.D. 61 pp. ISBN 974-636-489-8.

The objective of this research is to study the effects of burst traffic, when the destination of each burst is 1) uniformly distributed among the outputs, 2) concentrated on a single hot spot, on cell loss probability of the knockout ATM switch. By using simulation, assuming switch size of 16 input/output and burst traffic at all inputs.

It is found that burst traffic increases cell loss probability in the buffer of the switch. The loss performance can be improved by increasing the buffer size for the case of low mean burst length. To satisfy the same level of cell loss probability, the buffer size for burst traffic must increase 3 times compared to that of non burst traffic.

For hot spot nonuniform distribution, non burst traffic has more flexibility to support hot spot load than burst traffic, which can be improve by increase buffer size, but only when input load is low.

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