Abstract

In this paper, a discrete-time single server model is considered in which the server functions can be interrupted and serves on dual mode operating strategy. After a server interruption, the
server can either continue the transmission of the message or can completely retransmit the message. These modes are called Continue After Interruption (CAI) mode and Repeat After Interruption (RAI) mode respectively. Two types of traffic are considered (i) multimedia data traffic server operates on Continuous After Interrupt (CAI) mode and (ii) normal data traffic mode server is at Retransmit after Interrupt (RAI) mode. First, we give some general results on a GI-1-1 queue. Next we derive expression for the probability generating function of system contents and cell delays. Some performance measures such as mean delays have been derived in both types of server modes.

Reference

- Hsu J., “Buffer behavior in computer communication system”, IEEE transactions on Communications (22) pp 1940-41, 1974.

Index Terms

Computer Science

Networks

Key words

Discrete-time queueing model
server interruption

mean packet delays

Continue After Interruption (CAI) mode

Repeat After Interruption (RAI) mode.