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EXPERIMENT 10

PROBLEM DEFINITION:

Network consists of 3 nodes (Client1, Router1 and Endserver1). The duplex link between Client1 and Router1 has 2 Mbps of bandwidth and 100 ms of delay. The duplex link between Router1 and Endserver1 has 200Kbps of bandwidth and 100 ms of delay. Each link between nodes uses a Drop Tail queue.

Code:

```
#-------Event scheduler object creation--------#



set ns [new Simulator]




#----------creating nam objects----------------#

set nf [open tcp1.nam w]
$ns namtrace-all $nf

#open the trace file
set nt [open tcp1.tr w]
$ns trace-all $nt

set proto rlm

$ns color 1 blue
$ns color 2 yellow
$ns color 3 red

#---------- creating client- router- end server node----------------#

set Client1 [$ns node]
set Router1 [$ns node]
```

```
set Endserver1 [$ns node]



#---creating duplex link---------#

$ns duplex-link $Client1 $Router1 2Mb 100ms DropTail
$ns duplex-link $Router1 $Endserver1 200Kb 100ms DropTail



#----------------creating orientation-----------------#

$ns duplex-link-op $Client1 $Router1 orient right
$ns duplex-link-op $Router1 $Endserver1 orient right

#------------Labelling----------------#

$ns at 0.0 "$Client1 label Client1"
$ns at 0.0 "$Router1 label Router1"
$ns at 0.0 "$Endserver1 label Endserver1"

#-----------Configuring nodes------------#

$Endserver1 shape hexagon
$Router1 shape square

#----------------Establishing queues---------#

#$ns duplex-link-op $Client1 $Router1 queuePos 0.1
#$ns duplex-link-op $Router1 $Endserver1 queuePos 0.5

#---------finish procedure--------#

proc finish {} {
         global ns nf nt
```

```
        $ns flush-trace
        close $nf
        close $nt

        puts "running nam..."
        exec nam tcp1.nam &
        exit 0
    }

#Calling finish procedure
$ns at 6.0 "finish"
$ns run
```

Output: