Tcl Script:

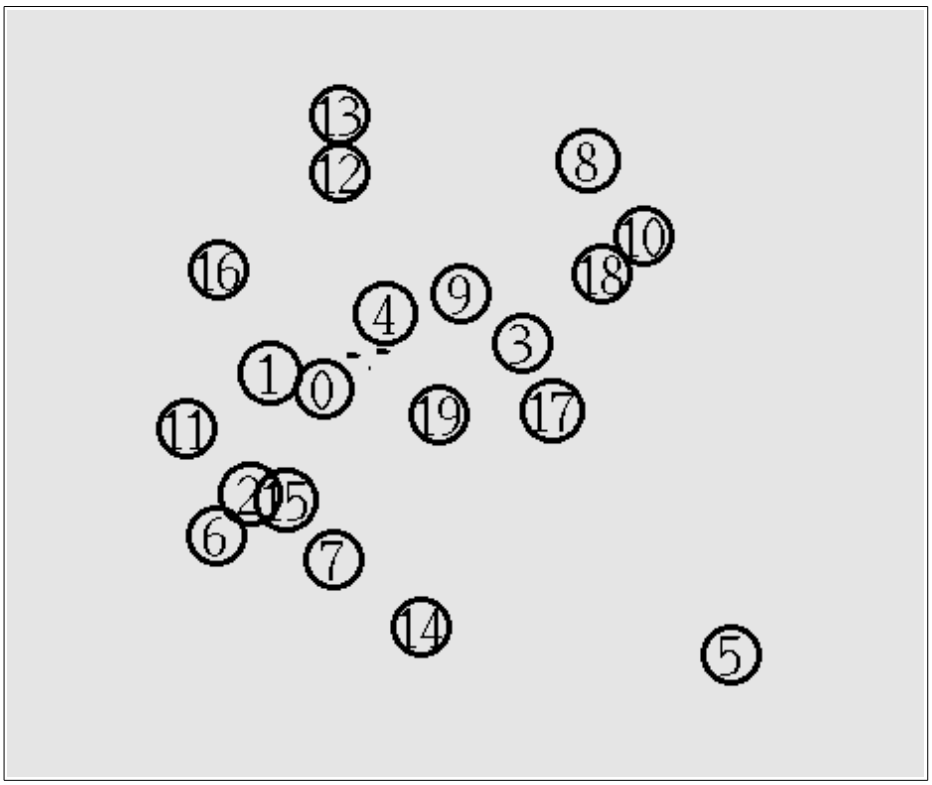
```
if($argc!=1) {
      error: "Command: ns <ScriptName.tcl><NumberOfNodes>"
      exit 0
}

set val(chan) Channel/WirelessChannel
set val(prop) Propagation/TwoRayGround
set val(ant) Antenna/OmniAntenna
set val(ll) LL
set val(ifq) Queue/DropTail/PriQueue
set val(ifqlen) 50
set val(netif) Phy/WirelessPhy
set val(mac) Mac/802_11
set val(rp) AODV
set val(nn) [lindex $argv 0]
set val(stop) 100

set opt(x) 750
set opt(y) 750

set ns [new Simulator]
set trfd [open Wireless.tr w]
set namfd [open Wireless.nam w]

$ns trace-all $trfd
$ns namtrace-all-wireless $namfd $opt(x) $opt(y)

set topo [new Topography]
$topo load_flatgrid $opt(x) $opt(y)
set god_ [create-god $val(nn)]

$ns node-config \
      -adhocRouting $val(rp) \
      -llType $val(ll) \
      -macType $val(mac) \
      -ifqType $val(ifq) \
      -ifqLen $val(ifqlen) \
      -channelType $val(chan) \
      -propType $val(prop) \
      -antType $val(ant) \
      -phyType $val(netif) \
      -topoInstance $topo \
      -agentTrace ON \
      -routerTrace ON \
      -macTrace OFF \
      -movementTrace OFF

for {set i 0} { $i < $val(nn) } { incr i } {
      set n($i) [$ns node]
}

for {set i 0} { $i < $val(nn) } {incr i} {
```

```
      set XX [expr rand()*750]
      set YY [expr rand()*750]
      $n($i) set X_ XX
      $n($i) set Y_ YY
}

for {set i 0} { $i < $val(nn) } {incr i} {
      $ns initial_node_pos $n($i) 30
}

set tcp1 [new Agent/TCP]
$ns attach-agent $n(1) $tcp1
set ftp1 [new Application/FTP]
$ftp1 attach-agent $tcp1

set sink1 [new Agent/TCPSink]
$ns attach-agent $n(3) $sink1
$ns connect $tcp1 $sink1

$ns at 0.0 "destination"
proc destination {} {
      global ns val n
      set now [$ns now]
      set time 5.0
      for {set i 0} { $i < $val(nn) } {incr i} {
            set XX [expr rand()*750]
            set YY [expr rand()*750]
            $ns at [expr $now+$time] "$n($i) setdest $XX $YY 20.0"
      }
      $ns at [expr $now+$time] "destination"
}

for {set i 0} {$i< $val(nn)} {incr i} {
            $ns at $val(stop) "$n($i) reset"
}

$ns at 5.0 "$ftp1 start"
$ns at $val(stop) "$ns nam-end-wireless $val(stop)"
$ns at $val(stop) "stop"

proc stop {} {
      global ns trfd namfd
      close $trfd
      close $namfd
      exec nam Wireless.nam &
      exit 0
}
$ns run
```

Awk File:

```
BEGIN {
      packetRcvd = 0;
      throughput = 0.0;
```

```
}
{
      if($1 == "r" ) && ( $3 == "_3_") && ( $4 = "AGT" ) && ( $7 == "tcp"
) && ( $8 > 1000) {
            packetRcvd++;
      }
}
END {
      throughPut = ((packetRcvd * 1000 * 8) / (95.0 * 1000000));
      printf("the throughput is : %f \n", throughPut);
}
```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