

Program:

```
set ns [new Simulator]
set tracefile [open wireless.tr w]
$ns trace-all $tracefile

set x 500

set nf [open out.nam w]
$ns namtrace-all-wireless $nf $x $x
proc finish {} {
    global ns nf
        $ns flush-trace
        close $nf
        exec nam out.nam &
        exit 0
}

set topo [new Topography]
$topo load_flatgrid 500 500
create-god 6

set val(chan) Channel/WirelessChannel
set val(ifqlen) 50
set val(mac) Mac/802_11
set val(propo) Propagation/TwoRayGround

$ns node-config -adhocRouting AODV -llType LL \
    -macType $val(mac) -ifqType Queue/DropTail/PriQueue \
        -ifqLen $val(ifqlen) -antType Antenna/OmniAntenna \
        -propType $val(propo) -phyType Phy/WirelessPhy \
        -channel [new $val(chan)] -topoInstance $topo \
        -agentTrace ON -routerTrace OFF \
        -macTrace ON -movementTrace OFF

set n0 [$ns node]
set n2 [$ns node]
set n3 [$ns node]
set n5 [$ns node]

$n0 random-motion 0
$n2 random-motion 0
$n3 random-motion 0
$n5 random-motion 0

$ns initial_node_pos $n0 10.0
$ns initial_node_pos $n2 30.0
$ns initial_node_pos $n3 20.0
$ns initial_node_pos $n5 30.0
```

```
$n0 set X_ 10.0  
$n0 set Y_ 20.0  
$n0 set Z_ 0.0
```

```
$n2 set X_ 100.0  
$n2 set Y_ 200.0  
$n2 set Z_ 0.0
```

```
$n3 set X_ 150.0  
$n3 set Y_ 230.0  
$n3 set Z_ 0.0
```

```
$n5 set X_ 270.0  
$n5 set Y_ 120.0  
$n5 set Z_ 0.0
```

```
$ns at 1.0 "$n0 setdest 490.0 340.0 25.0"  
$ns at 1.0 "$n2 setdest 300.0 130.0 5.0"  
$ns at 1.0 "$n3 setdest 190.0 440.0 15.0"  
$ns at 5.0 "$n5 setdest 100.0 200.0 30.0"
```

```
set tcp [new Agent/TCP]  
$ns attach-agent $n0 $tcp  
set sink [new Agent/TCPSink]  
$ns attach-agent $n5 $sink
```

```
$ns connect $tcp $sink
```

```
set ftp [new Application/FTP]  
$ftp attach-agent $tcp
```

```
$ns at 1.1 "$ftp start"
```

```
set udp [new Agent/UDP]  
set null [new Agent/Null]  
$ns attach-agent $n2 $udp  
$ns attach-agent $n3 $null  
$ns connect $udp $null  
set cbr [new Application/Traffic/CBR]  
$cbr attach-agent $udp  
$ns at 2.0 "$cbr start"
```

```
$ns at 5.0 "finish"  
$ns run
```

Output:

