# Simulation parameters setup

#===================================

set val(chan) Channel/WirelessChannel ;# channel type

set val(prop) Propagation/TwoRayGround ;# radio-propagation model

set val(netif) Phy/WirelessPhy ;# network interface type

set val(mac) Mac/802\_11 ;# MAC type

set val(ifq) Queue/DropTail/PriQueue ;# interface queue type

set val(ll) LL ;# link layer type

set val(ant) Antenna/OmniAntenna ;# antenna model

set val(ifqlen) 50 ;# max packet in ifq

set val(nn) 6 ;# number of mobilenodes

set val(rp) AODV ;# routing protocol

set val(x) 1052 ;# X dimension of topography

set val(y) 600 ;# Y dimension of topography

set val(stop) 10.0 ;# time of simulation end

#===================================

# Initialization

#===================================

#Create a ns simulator

set ns [new Simulator]

#Setup topography object

set topo [new Topography]

$topo load\_flatgrid $val(x) $val(y)

create-god $val(nn)

#Open the NS trace file

set tracefile [open out.tr w]

$ns trace-all $tracefile

#Open the NAM trace file

set namfile [open out.nam w]

$ns namtrace-all $namfile

$ns namtrace-all-wireless $namfile $val(x) $val(y)

set chan [new $val(chan)];#Create wireless channel

#===================================

# Mobile node parameter setup

#===================================

$ns node-config -adhocRouting $val(rp) \

-llType $val(ll) \

-macType $val(mac) \

-ifqType $val(ifq) \

-ifqLen $val(ifqlen) \

-antType $val(ant) \

-propType $val(prop) \

-phyType $val(netif) \

-channel $chan \

-topoInstance $topo \

-agentTrace ON \

-routerTrace ON \

-macTrace ON \

-movementTrace ON

#===================================

# Nodes Definition

#===================================

#Create 6 nodes

set n0 [$ns node]

$n0 set X\_ 303

$n0 set Y\_ 302

$n0 set Z\_ 0.0

$ns initial\_node\_pos $n0 20

set n1 [$ns node]

$n1 set X\_ 527

$n1 set Y\_ 301

$n1 set Z\_ 0.0

$ns initial\_node\_pos $n1 20

set n2 [$ns node]

$n2 set X\_ 748

$n2 set Y\_ 300

$n2 set Z\_ 0.0

$ns initial\_node\_pos $n2 20

set n3 [$ns node]

$n3 set X\_ 952

$n3 set Y\_ 299

$n3 set Z\_ 0.0

$ns initial\_node\_pos $n3 20

set n4 [$ns node]

$n4 set X\_ 228

$n4 set Y\_ 500

$n4 set Z\_ 0.0

$ns initial\_node\_pos $n4 20

set n5 [$ns node]

$n5 set X\_ 305

$n5 set Y\_ 72

$n5 set Z\_ 0.0

$ns initial\_node\_pos $n5 20

#===================================

# Generate movement

#===================================

$ns at 2 " $n5 setdest 900 72 75 "

#===================================

# Agents Definition

#===================================

#Setup a TCP connection

set tcp0 [new Agent/TCP]

$ns attach-agent $n4 $tcp0

set sink1 [new Agent/TCPSink]

$ns attach-agent $n5 $sink1

$ns connect $tcp0 $sink1

$tcp0 set packetSize\_ 1500

#===================================

# Applications Definition

#===================================

#Setup a FTP Application over TCP connection

set ftp0 [new Application/FTP]

$ftp0 attach-agent $tcp0

$ns at 1.0 "$ftp0 start"

$ns at 10.0 "$ftp0 stop"

#===================================

# Termination

#===================================

#Define a 'finish' procedure

proc finish {} {

global ns tracefile namfile

$ns flush-trace

close $tracefile

close $namfile

exec nam out.nam &

exit 0

}

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

$ns at $val(stop) "\$n$i reset"

}

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

$ns at $val(stop) "finish"

$ns at $val(stop) "puts \"done\" ; $ns halt"

$ns run