APPENDIX 1

SCREENSHOTS OF SERVICE DISCOVERY SIMULATION

A1.1 COORDINATOR ELECTION

AP NODE 42 announces itself as leader to node 41 of zone 5
node 37 is elected as the AP for zone 6
AP NODE 37 announces itself as leader to node 16 of zone 6

A1.2 SERVICE REGISTRATION
A1.3  SERVICE ANNOUNCEMENT

A1.4  SERVICE REQUEST
A1.5 SERVICE COORDINATION
A1.6 SERVICE DISCOVERY
APPENDIX 2

SCREENSHOTS OF SERVICE DELIVERY SIMULATION

A2.1 TREE CONSTRUCTION
A2.2 GREEDY FORWARDING
A2.3 OCCURRENCE OF HOLE
APPENDIX 3

INITIAL CONFIGURATION FOR SERVICE DISCOVERY

- **Defining wireless options**
  
  # initial configuration
  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) 50 ;# number of mobilenodes
  set val(gc) AODV ;# routing protocol
  set val(x) 2400 ;# x dimension of topography
  set val(y) 2400 ;# y dimension of topography
  set val(seed) 2.0
  set val(stop) 100 ;# time of simulation end
  set val(sc) "output-50-scen"
  set val(intvallocal) 4
  set val(intvalglobal) 6
  set val(energymodel) EnergyModel
  set val(initialenergy) 0.5 # Joules
  set ns_ [new Simulator]
set tracefd [open tree.tr w]
$ns_trace-all $tracefd
set namtrace [open tree.nam w]
$ns_namtrace-all-wireless

- **set up topography object**
set topo [new Topography]
$topo load_flatgrid $val(x) $val(y)

- **Create God – General Operations Descriptor**
create-god $val(nn)

- **Configure node:**
$ns_node-config -adhocRouting $val(gc) \ 
   -lIType $val(lI) \ 
   -macType $val(mac) \ 
   -ifqType $val(ifq) \ 
   -ifqLen $val(ifqlen) \ 
   -antType $val(ant) \ 
   -propType $val(prop) \ 
   - phyType $val(netif) \ 
   -topoInstance $topo \ 
   -agentTrace ON \ 
   -routerTrace ON \ 
   -macTrace ON \ 
   -movementTrace OFF \ 
   -energyModel $val(energymodel)\ 
      -rxPower 0.3\ 
      # Watt
   -txPower 0.6\ 
      # Watt
   -initialEnergy $val(initialenergy)\ 
   -batteryModel RTBattery\ 
   -alpha 35220\ 