027\_Abhishek\_Ojha

Advanced Computer Network

PRACTICAL NO 7

**Practical 7:**

**Aim:** Create Simple Adhoc Network.

**Source Code:**

**Scenario.ned**

**package** inet.examples.adhoc.hostautoconf;

**import** inet.world.radio.ChannelControl;

**network** Scenario

{

**parameters**:

**double** hosts;

**submodules**:

channelControl: ChannelControl;

host[hosts]: Host;

}

**omnetpp.ini**

[General]

debug-on-errors = **true**

network = Scenario

sim-time-limit = 60min

cmdenv-express-mode = **true**

\*.hosts = 3

\*\*.constraintAreaMinX = 0m

\*\*.constraintAreaMinY = 0m

\*\*.constraintAreaMinZ = 0m

\*\*.constraintAreaMaxX = 600m

\*\*.constraintAreaMaxY = 400m

\*\*.constraintAreaMaxZ = 0m

\*\*.debug = **true**

\*\*.coreDebug = **false**

\*\*.host\*.\*\*.channelNumber = 0

*# channel physical parameters*

\*.channelControl.carrierFrequency = 2.4GHz

\*.channelControl.pMax = 2.0mW

\*.channelControl.sat = -110dBm

\*.channelControl.alpha = 2

\*.channelControl.numChannels = 1

*# mobility*

\*\*.host\*.mobilityType = "MassMobility"

\*\*.host\*.mobility.initFromDisplayString = **false**

\*\*.host\*.mobility.changeInterval = truncnormal(2s, 0.5s)

\*\*.host\*.mobility.changeAngleBy = normal(0deg, 30deg)

\*\*.host\*.mobility.speed = truncnormal(20mps, 8mps)

\*\*.host\*.mobility.updateInterval = 100ms

\*\*.host\*.ac\_wlan.interfaces = "wlan0"

*# UDPBasicApp / UDPSink*

\*\*.numUdpApps = 1

\*\*.udpApp[0].typename = "UDPBasicApp"

\*\*.udpApp[0].destAddresses = "host[0]"

\*\*.udpApp[0].localPort = 9001

\*\*.udpApp[0].destPort = 9001

\*\*.udpApp[0].messageLength = 100B

\*\*.udpApp[0].startTime = uniform(10s, 30s)

\*\*.udpApp[0].sendInterval = uniform(10s, 30s)

*# nic settings*

\*\*.wlan[\*].mgmtType = "Ieee80211MgmtAdhoc"

\*\*.wlan[\*].bitrate = 2Mbps

\*\*.wlan[\*].mgmt.frameCapacity = 10

\*\*.wlan[\*].mac.address = "auto"

\*\*.wlan[\*].mac.maxQueueSize = 14

\*\*.wlan[\*].mac.rtsThresholdBytes = 3000B

\*\*.wlan[\*].mac.retryLimit = 7

\*\*.wlan[\*].mac.cwMinData = 7

\*\*.wlan[\*].mac.cwMinBroadcast = 31

\*\*.wlan[\*].radio.transmitterPower = 2mW

\*\*.wlan[\*].radio.thermalNoise = -110dBm

\*\*.wlan[\*].radio.sensitivity = -85dBm

\*\*.wlan[\*].radio.pathLossAlpha = 2

\*\*.wlan[\*].radio.snirThreshold = 4dB

\*\*.udpapp.\*.vector-recording = **true**

\*\*.vector-recording = **true**

**Output:**

