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Experiment No 8

Title :

Simulation and Analysis of Wireless attacks Flooding using ns2.

Theory :

Flooding attack is characterized by sending more data than the available bandwidth. In flooding_attack.tcl, data transmission from source to destination is carried out via intermediate nodes with excessive data. Attacker drains the energy of its neighbors by sending more data than their available bandwidth.

Malicious Node will create a more no of RREQ to a node, which is even doesn't exist in the network topology. This is how malicious node, start to flood the request in the network. The purpose of this attack is to consume the network bandwidth and to exhaust the network resources all the time.



The worm's code is compatible with mobile phones using ARM series processors with Symbian operating system. Normally, by default the Bluetooth communication feature is off on mobile phones. Mobile phone users might exchange some little programs, and in doing so they open up the Bluetooth communication channel to Cabir-like worms as well.

Procedure/ Algorithm :

FLOODING:

```
cris@cris-VirtualBox:~/ns2/Exp 7 Worm$  
cris@cris-VirtualBox:~/ns2/Exp 7 Worm$ cd ..  
cris@cris-VirtualBox:~/ns2$ cd Exp\ 8\ Wireless\ flooding/  
cris@cris-VirtualBox:~/ns2/Exp 8 Wireless flooding$ ls  
floodingDoc.odt          wireless-flooding-DumbAgent.tr  
wireless-flooding-DumbAgent.nam  wireless-flooding.tcl
```

Results :

FLOODING:

```
cris@cris-VirtualBox:~/ns2/Exp 8 Wireless flooding$ ns wireless-flooding.tcl  
num_nodes is set 24
```

INITIALIZE THE LIST xListHead

channel.cc:sendUp - Calc highestAntennaZ_ and distCST_

highestAntennaZ_ = 1.5, distCST_ = 550.0

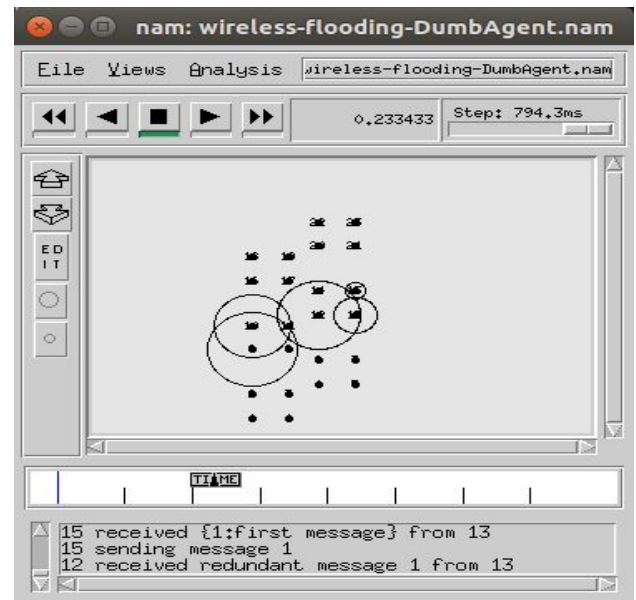
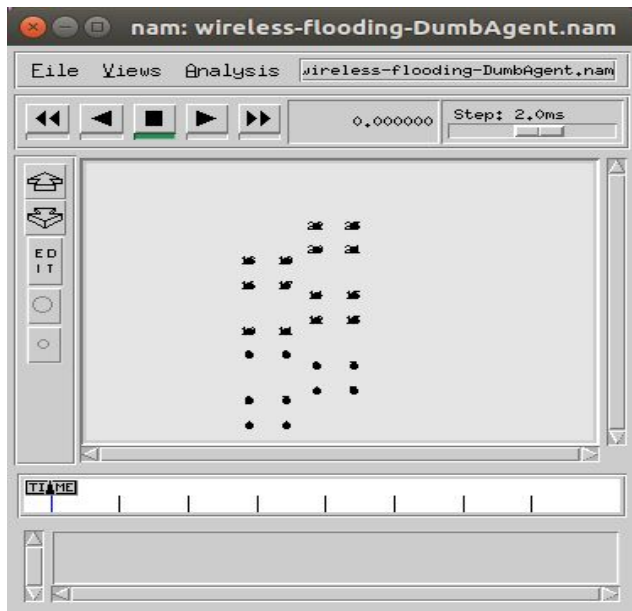
SORTING LISTS ...DONE!

Node 3 got message 1	Node 20 got message 1
Node 0 got message 1	Node 21 got message 1
Node 4 got message 1	Node 22 got message 1
Node 6 got message 1	Node 20 got message 1
Node 3 got message 1	Node 23 got message 1
Node 5 got message 1	Node 14 got message 2
Node 9 got message 1	Node 11 got message 2
Node 11 got message 1	Node 13 got message 2
Node 6 got message 1	Node 9 got message 2
Node 8 got message 1	Node 10 got message 2
Node 9 got message 1	Node 20 got message 3
Node 12 got message 1	Node 23 got message 3
Node 10 got message 1	Node 21 got message 3
Node 10 got message 1	Node 22 got message 3
Node 13 got message 1	Node 19 got message 3
Node 15 got message 1	Node 17 got message 3
Node 12 got message 1	Node 20 got message 3
Node 13 got message 1	Node 18 got message 3
Node 14 got message 1	Node 19 got message 3
Node 12 got message 1	Node 14 got message 3
Node 17 got message 1	Node 16 got message 3
Node 15 got message 1	Node 15 got message 3
Node 19 got message 1	Node 13 got message 3
Node 14 got message 1	Node 14 got message 3
Node 16 got message 1	Node 15 got message 3
Node 18 got message 1	Node 12 got message 3
Node 17 got message 1	Node 14 got message 3
Node 17 got message 1	Node 11 got message 3
Node 20 got message 1	Node 13 got message 3
Node 18 got message 1	Node 9 got message 3
Node 16 got message 1	Node 12 got message 3
Node 21 got message 1	Node 10 got message 3
Node 23 got message 1	

cris@cris-VirtualBox:~/ns2/Exp 8 Wireless flooding\$ Warning: Tracefile events are not sorted by time.

+ -t 0.205250533 -s 3 -d -1 -p message -e 200 -c 2 -a 0 -i 1 -k AGT

The above event should occur at or after -t 0.205251.



References :

1. Tutorial for ns2
<https://www.isi.edu/nsnam/ns/tutorial/ns.html>