

## OBJECTIVE:

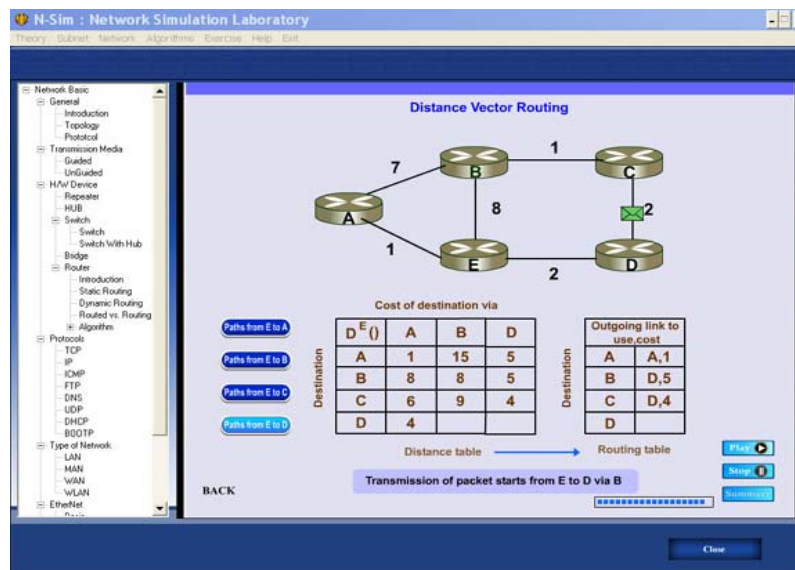
Implementation of distance vector routing algorithm.

## EQUIPMENTS:

- N-SIM
- Computer with win-2K / XP

## PROCEDURE:

1. Run N-SIM software from your computer.
2. To check working of distance vector routing algorithm in the form of animated representation click on distance vector routing under routing protocols.



3. You can study the working of distance vector routing algorithm through this animated movie.
4. To implement this algorithm click on algorithms under menu and click on distance vector routing.



- N-SIM : Network Simulation Software

Theory Subnet Algorithms Exercise Help Exit

### Distance Vector Algorithm(Bellman Ford Algo)

Start    End    Weight

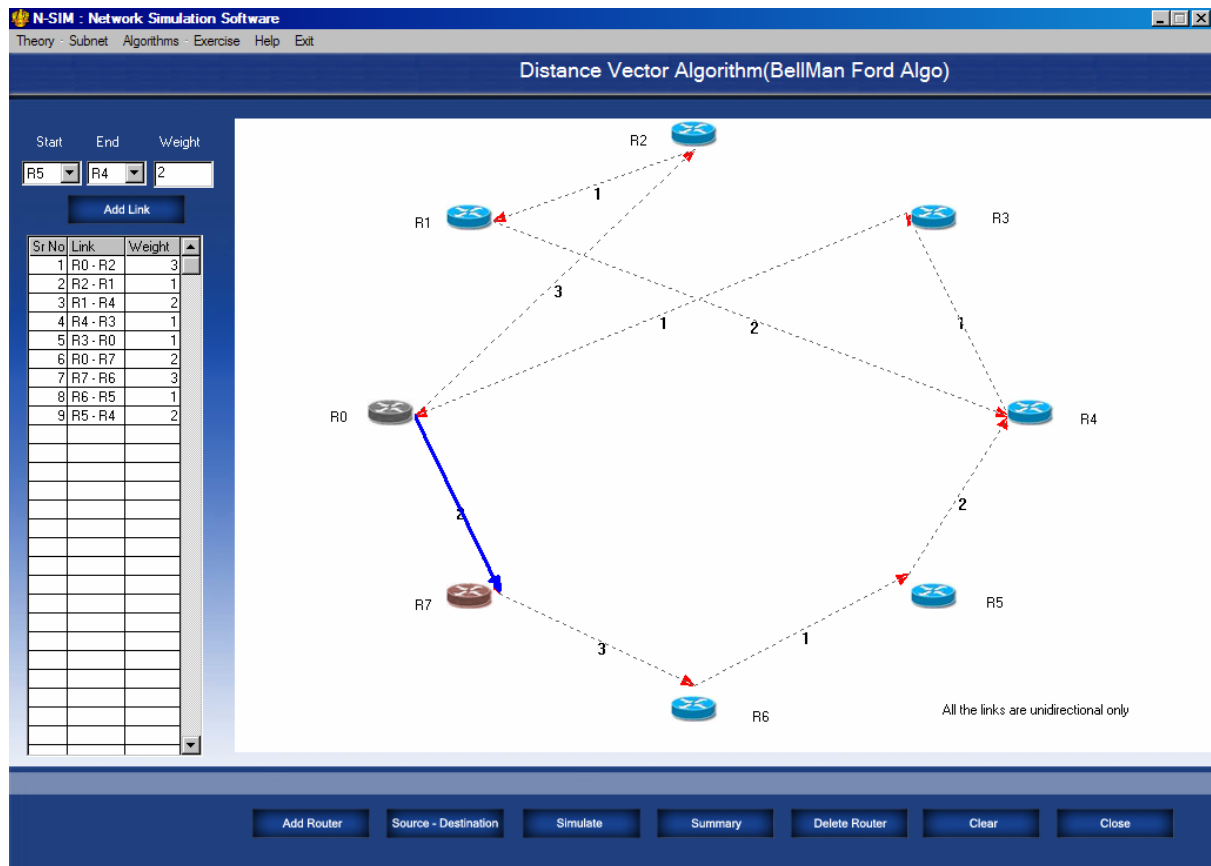
R5 ▾ R4 ▾ 2

Add Link

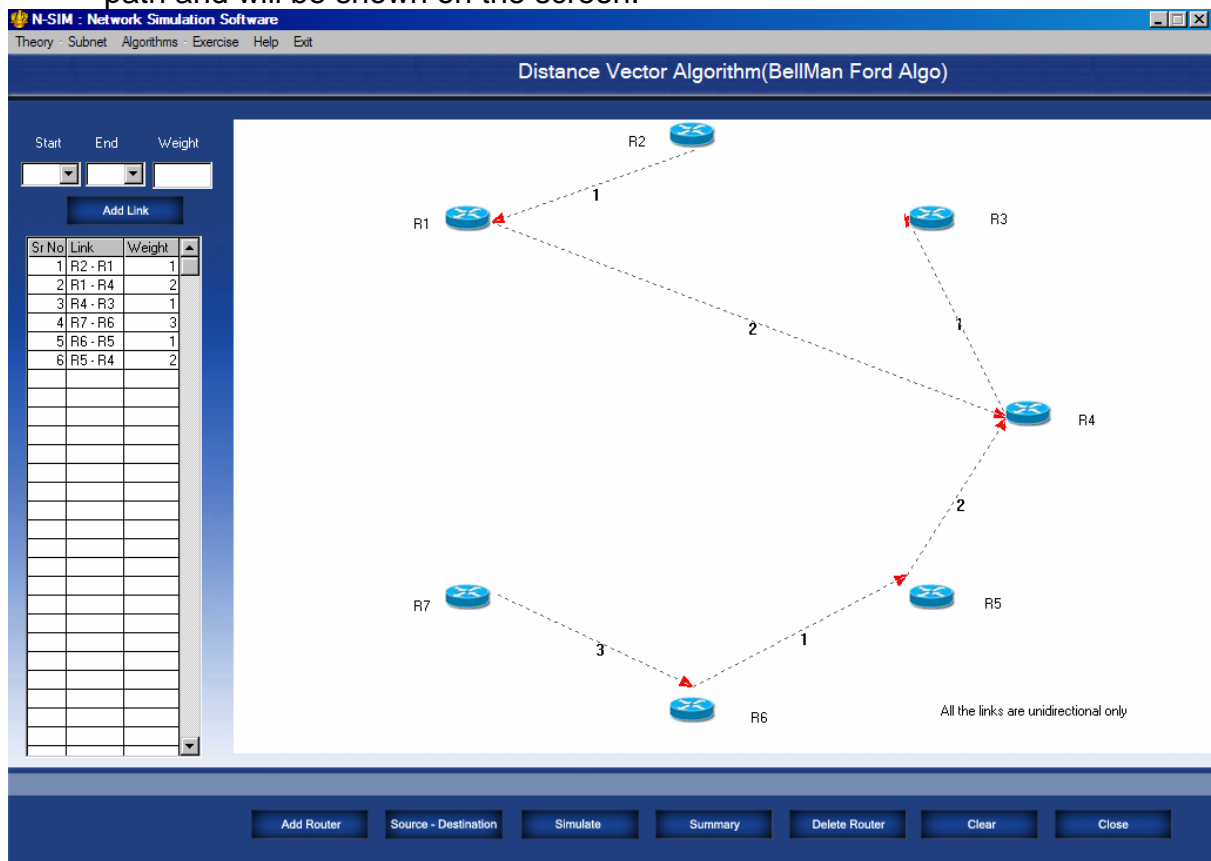
Sr No	Link	Weight
1	R0 - R2	3
2	R2 - R1	1
3	R1 - R4	2
4	R4 - R3	1
5	R3 - R0	1
6	R0 - R7	2
7	R7 - R6	3
8	R6 - R5	1
9	R5 - R4	2

All the links are unidirectional only

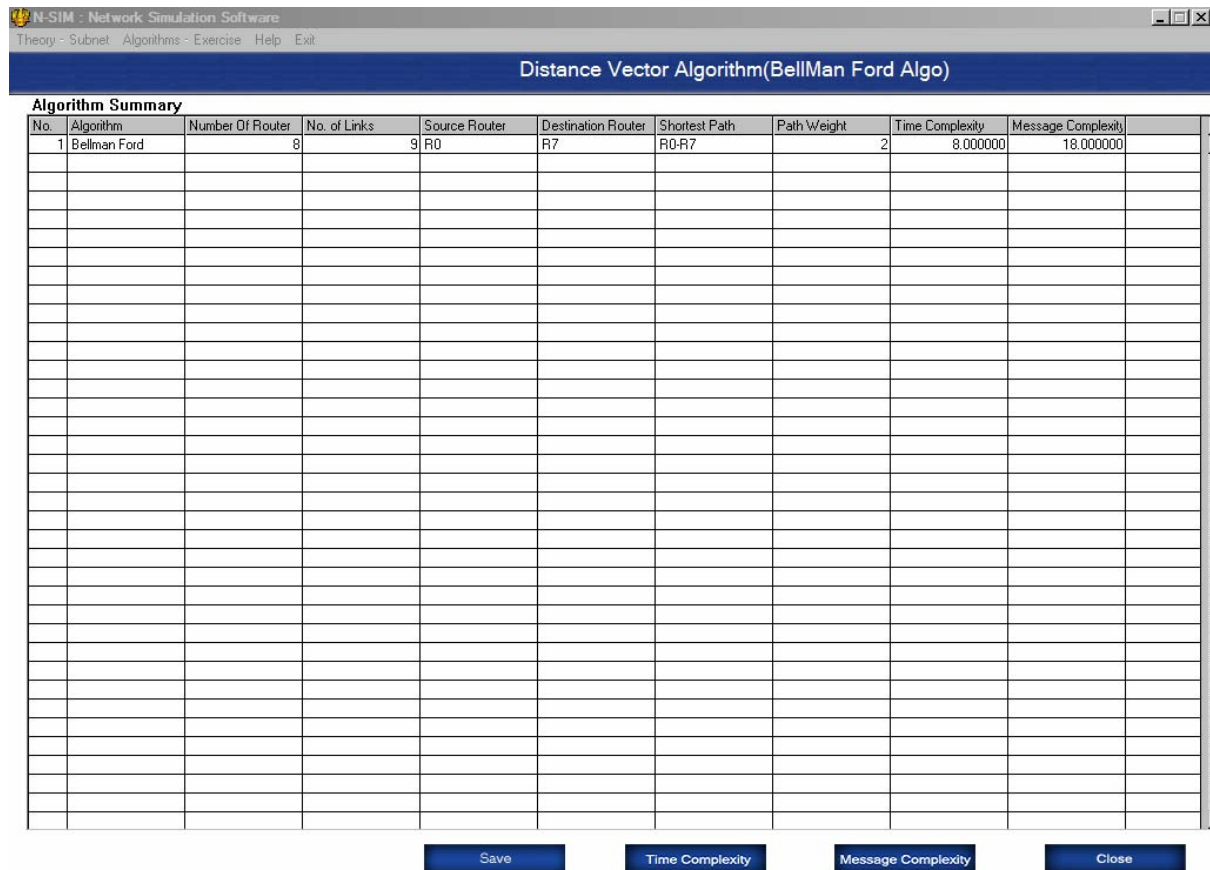
Add Router   Source - Destination   Simulate   Summary   Delete Router   Clear   Close



- Click on simulate button to start the algorithm, this will calculate the shortest path and will be shown on the screen.



- Click on "Delete Router" to delete the router and its entire links.



13. Click on the “Summary” button to see the parameters for shortest path.
14. Click on “Save” button to save the summary in excel sheet.

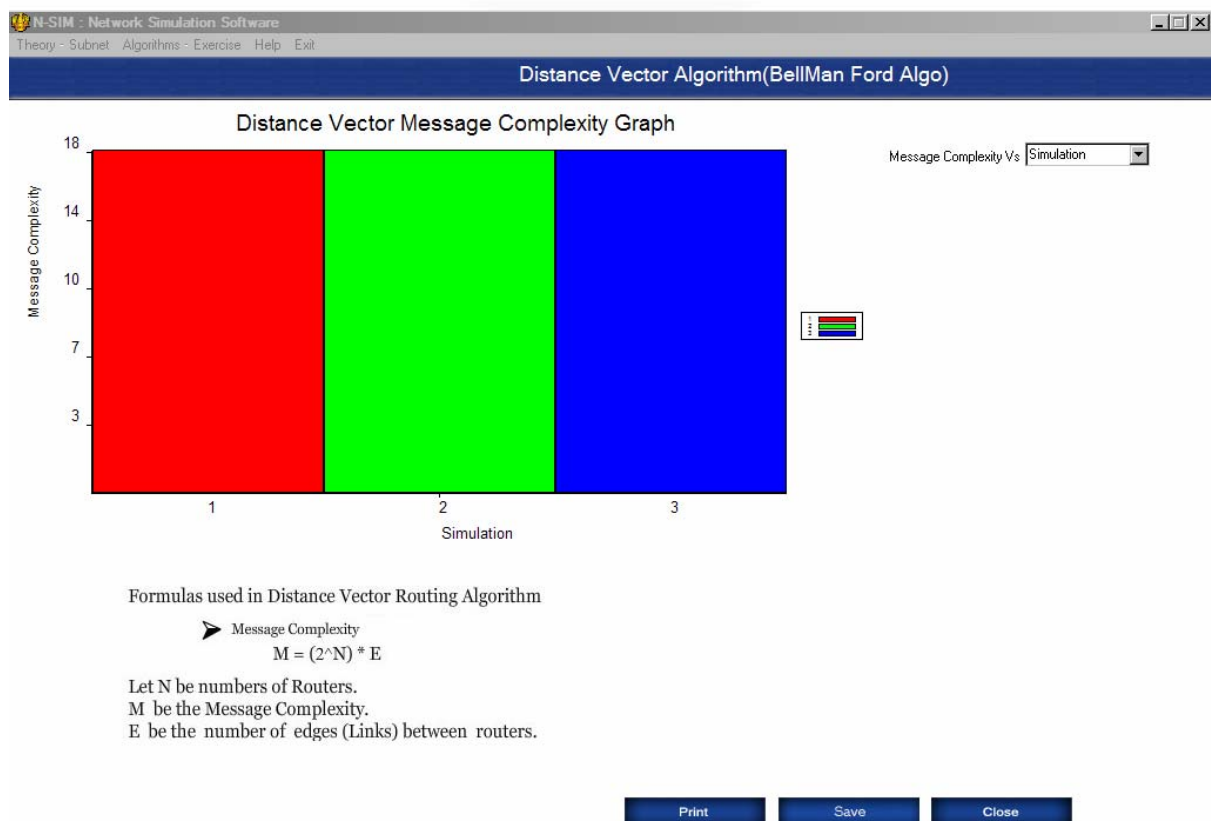
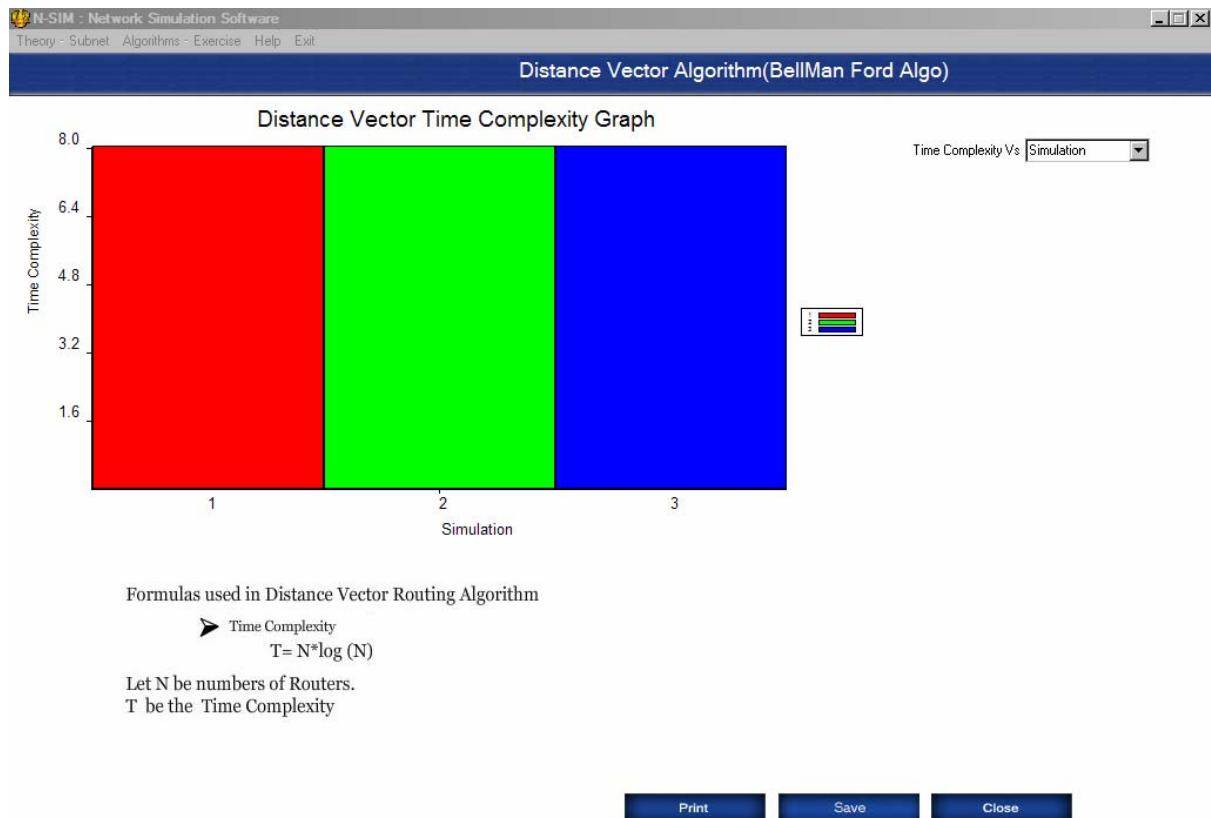
### Generic Definition of Time Complexity:

The way in which the number of steps required by an algorithm varies with the size of the problem it is solving. Time complexity is normally expressed as an order of magnitude, e.g.  $O(N^2)$  means that if the size of the problem ( $N$ ) doubles then the algorithm will take four times as many steps to complete

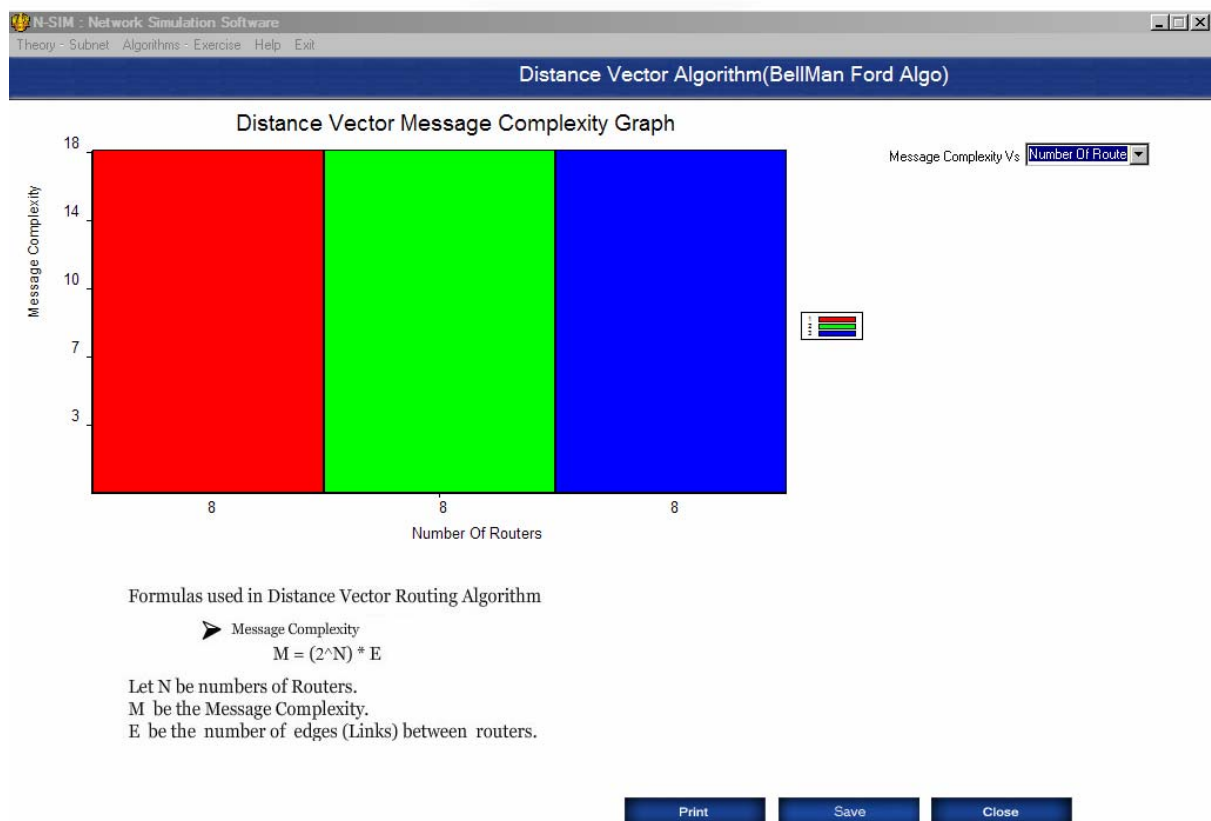
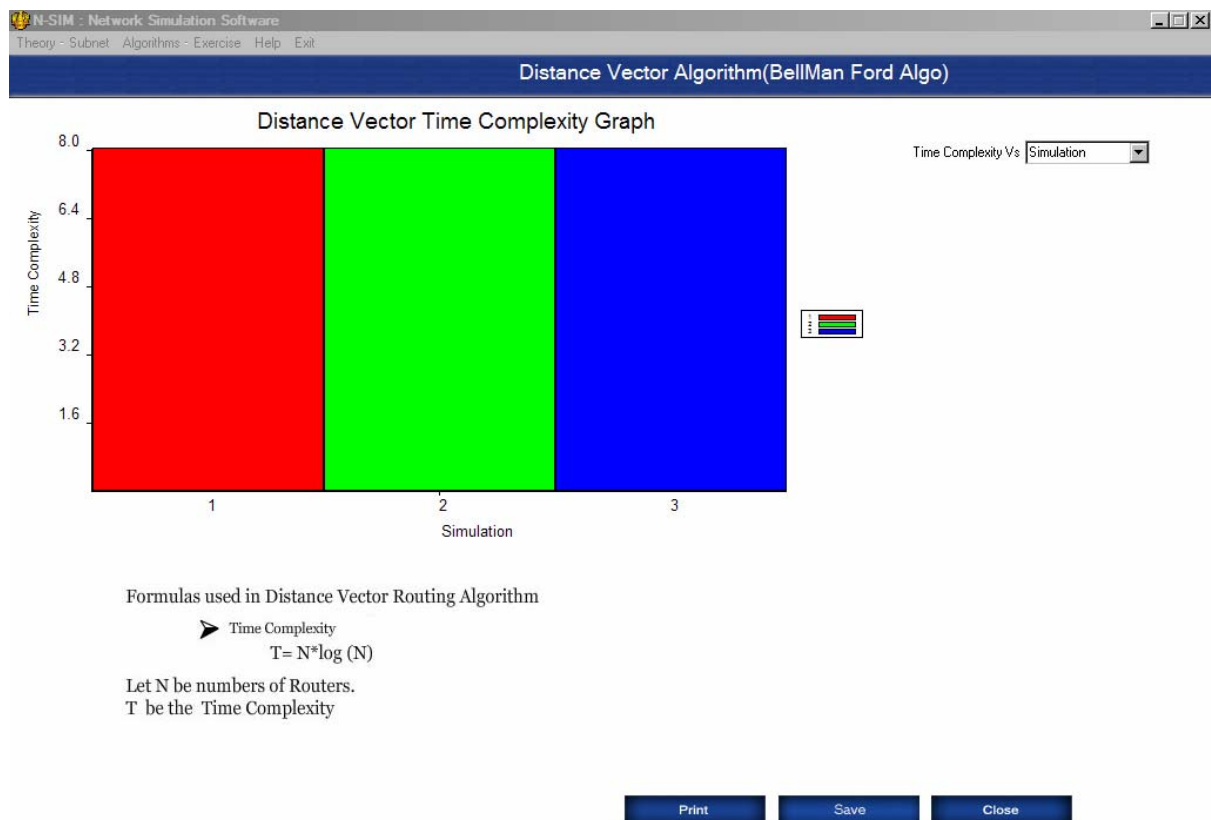
### Generic Definition of Message Complexity:

Number of messages sent between nodes called connection communication complexity

15. Click on “Time Complexity” or “Message Complexity” button to plot the readings against the various parameters.



- Select the parameters from Combo Box on top "Time Complexity Vs Number Of Router" or "Message Complexity Vs Number Of Router".



17. Select Number of Link from Combo box same as Router.
18. Click on "Save" button to save the Graph.
19. Click on "Print" button to print the Graph.