### OPNET

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### Overview

- Original work at MIT, now maintained and marketed by OPNET Inc.
- Discrete event simulator
- OPNET Modeler
  - Hierarchical modeling that mimics real life architecture:
    Network, Node, and Process Layer modeling
  - At Process Layer, a finite state machine representation is used for modeling, where state behavior is dictated by C code
  - Canned process models are supplied (open code) for many popular communication protocols
  - Decent capabilities for animation, GUI, analysis, debugging, etc.
- OPNET IT Guru: Deals with only Network Layer; other layers are pre-canned and invisible

# Setup

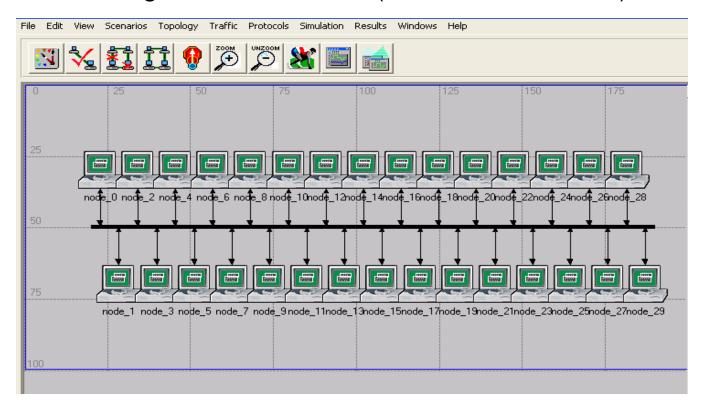
- Software and User Manual
  - Obtain OPNET IT Guru Academic Edition software from <u>http://www.opnet.com/services/university/itguru academic edition.html</u> (if installing on your own PC)
  - We will place the chapters of the manual needed on the class syllabus page (might also be available from the textbook website)
- OPNET IT Guru Academic Edition is installed on the EECS instructional Windows machines
  - Can be accessed using your EECS Windows account
  - Can also be accessed by remote terminal service
    - Remote Desktop Connection in Windows XP
    - Will need to know the IP address of the host to access from an off-campus location
  - Class accounts are available from the instructors

#### Introduction and Tutorials

- Required manual sections will be posted on the class website's syllabus link (available when an assignment is out)
- Go through the "Introduction" of the Experiments Manual to develop a good familiarity with the simulation tool
  - Should not have to change the OPNET preferences
  - Only answer the lab questions indicated for each assignment
- "Introduction" leads you to the following tutorials packaged with the software
  - Introduction
  - Small Internetworks

## Demonstration (Ethernet Lab)

Let's walk through the Ethernet lab (Lab 1 of the Manual):



 First OPNET assignment is the Ethernet lab (Lab 1 of the Manual) – Due back on Tuesday, February 27