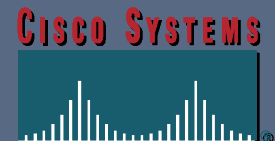
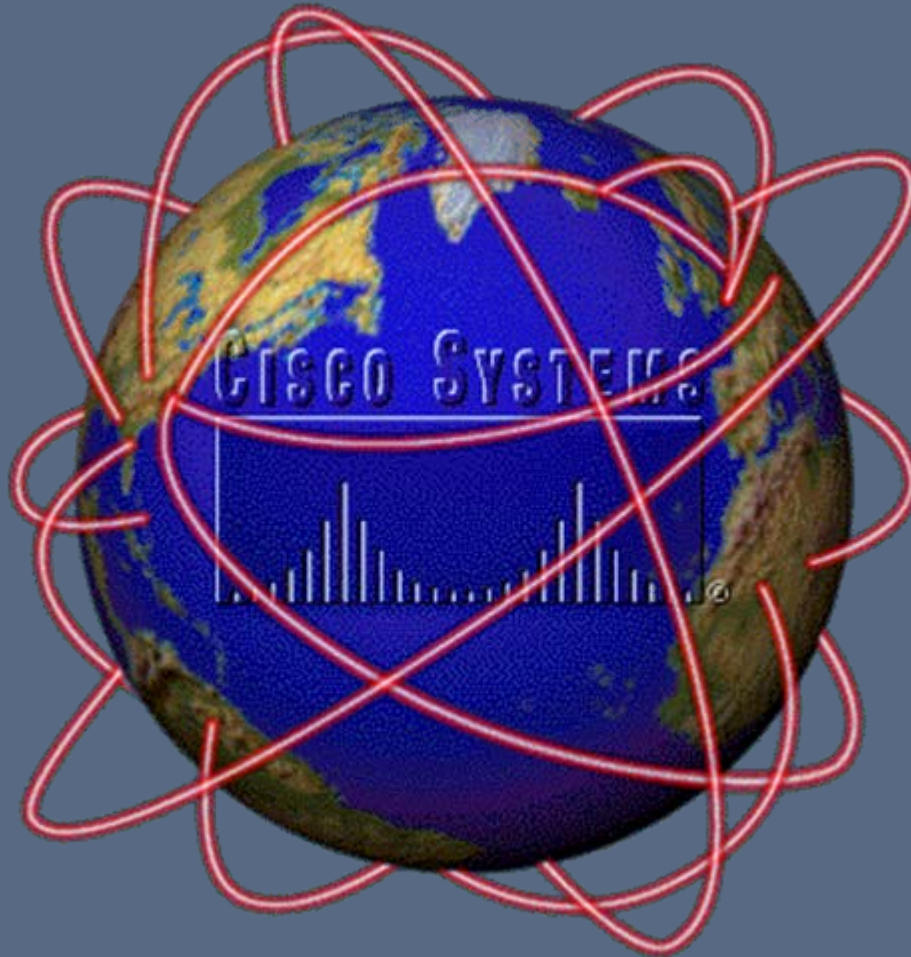


# Human Capital: Our Competitive Advantage

John Morgridge  
Chairman, Cisco Systems



# The Internet Infrastructure



# The Internet Is Changing the Way We:



# Changing Role of Education





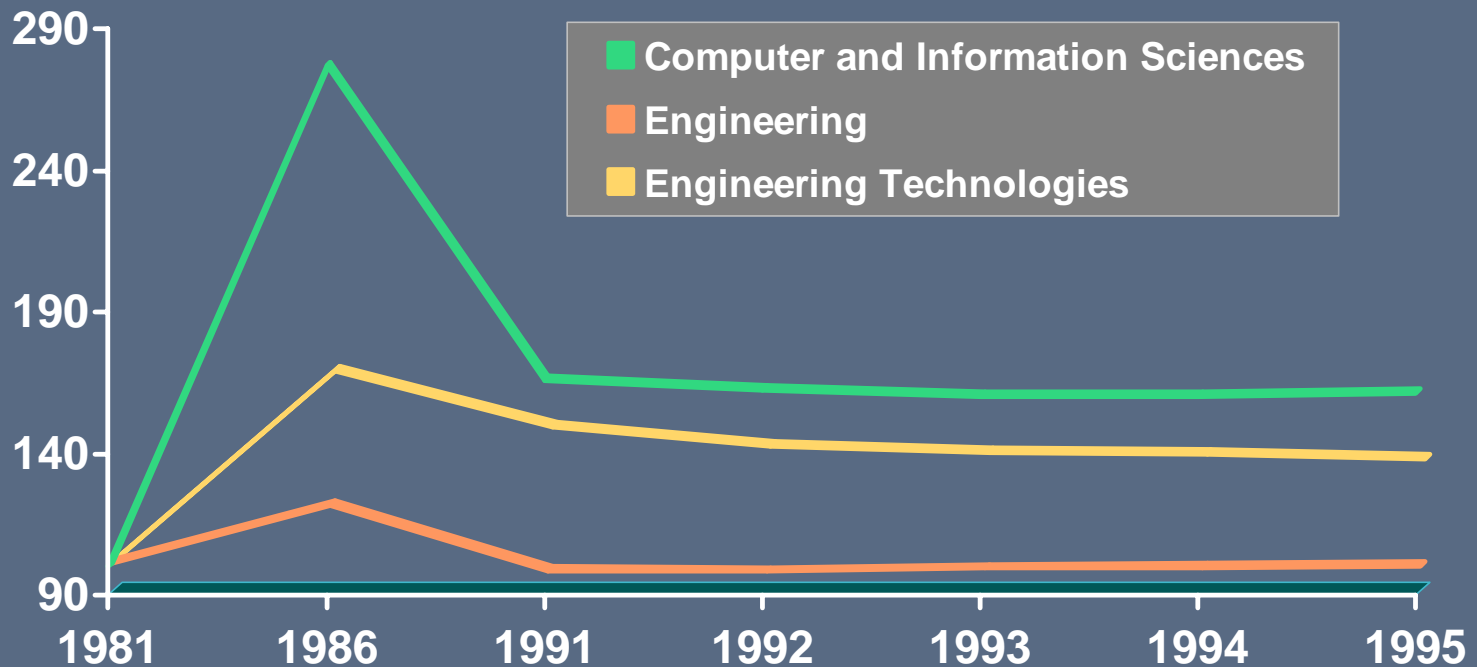
# The Challenge

- Schools don't have resources or time to design, build, and maintain networks
- Students are not receiving exposure to the benefits of networked technology



# Decline in Computer Science and Engineering Graduates

(Index Based on  
1981 = 100)



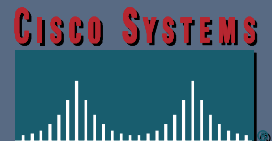
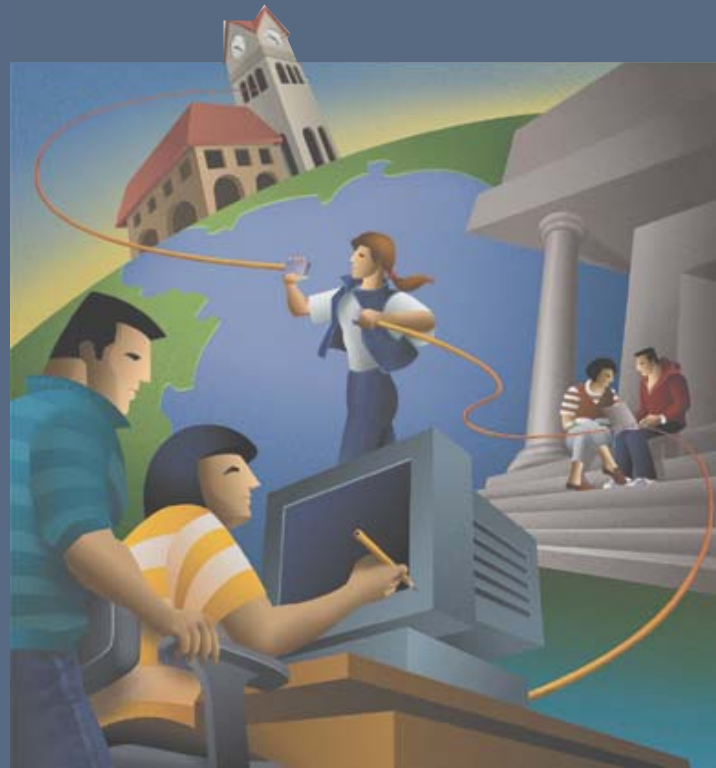
Source: U.S. DOE, National Center for Education Statistics,  
Digest of Education Statistics, 1997



# Cisco Education Programs

- Cisco Networking Academy Program
- Cisco Education Archive (CEARCH), Education World Sponsorship
- International Schools Cyberfair
- GlobaLearn, Computer Learning Month
- NetDay to Nextday, TECH CORPS
- Internet2

Details at [www.cisco.com/edu](http://www.cisco.com/edu)



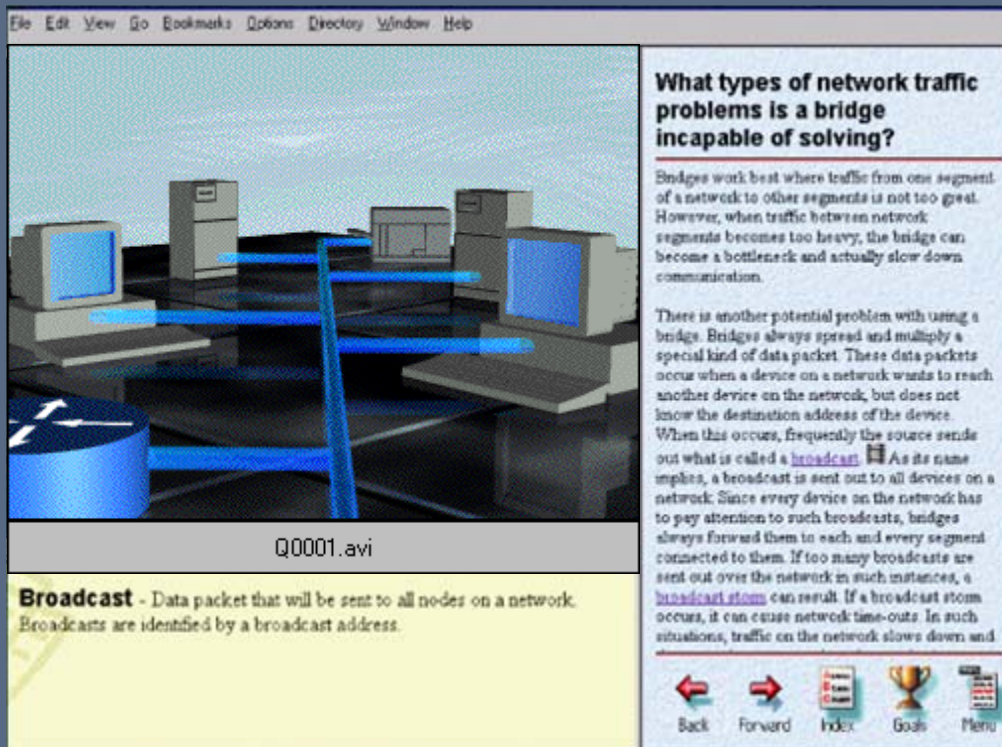
# Cisco Networking Academy Program Skills for the 21st Century





# Web-Based Curriculum

- 280 hours: CCNA  
Cisco Certified  
Networking  
Associate
- 280 hours: CCNP  
Cisco Certified  
Networking  
Professional
- Online  
assessment
- Industry  
standard  
certification



The screenshot displays a web browser window with a menu bar (File, Edit, View, Go, Bookmarks, Options, Directory, Window, Help). The main content area features a 3D network diagram on the left and explanatory text on the right. The diagram shows several desktop computers connected to a central blue cylindrical router. Blue lines represent data packets being broadcast from the router to all connected devices. Below the diagram, the text reads: "Broadcast - Data packet that will be sent to all nodes on a network. Broadcasts are identified by a broadcast address." To the right of the diagram, a section titled "What types of network traffic problems is a bridge incapable of solving?" explains that bridges work best when traffic between segments is not too great, but can become a bottleneck when traffic is too heavy. It also discusses the problem of broadcast storms, where a device sends out a broadcast packet to all devices on the network, and if too many are sent, it can cause network time-outs. At the bottom right, there are navigation buttons: Back, Forward, Index, Goals, and Menu.

File Edit View Go Bookmarks Options Directory Window Help

**What types of network traffic problems is a bridge incapable of solving?**

Bridges work best where traffic from one segment of a network to other segments is not too great. However, when traffic between network segments becomes too heavy, the bridge can become a bottleneck and actually slow down communication.

There is another potential problem with using a bridge. Bridges always spread and multiply a special kind of data packet. These data packets occur when a device on a network wants to reach another device on the network, but does not know the destination address of the device. When this occurs, frequently the source sends out what is called a **broadcast**. As its name implies, a broadcast is sent out to all devices on a network. Since every device on the network has to pay attention to such broadcasts, bridges always forward them to each and every segment connected to them. If too many broadcasts are sent out over the network in such instances, a **broadcast storm** can result. If a broadcast storm occurs, it can cause network time-outs. In such situations, traffic on the network slows down and

Q0001.avi

**Broadcast** - Data packet that will be sent to all nodes on a network. Broadcasts are identified by a broadcast address.

Back Forward Index Goals Menu

# Cisco Networking Academy Global Expansion



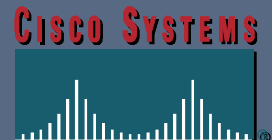
**“... the Cisco Networking Academy [program] is a fine example of combining local and overseas resources to add to and strengthen Taiwan’s education system... the project is sure to enhance the University’s educational work.”**

**Mr. Chen Wei-Jao**  
**Chairman of National Taiwan University**



**“The inclusion of  
the Cisco Networking Academy  
curriculum in our high school  
and college syllabus... will enable  
us to produce not only technically  
trained graduates, but also technically  
competent management  
practitioners and decision makers.”**

**Brother Rafael S. Donato  
President of De la Salle Lipa, Philippines**



# The Competitive Advantage of the Future



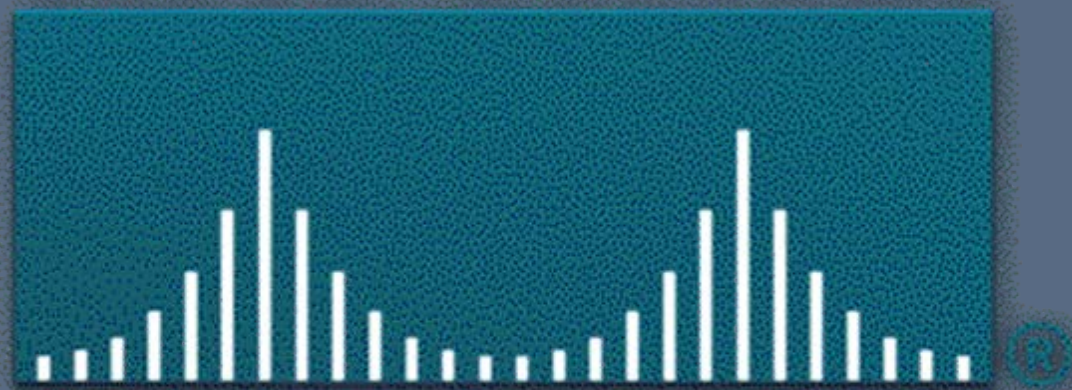




Are  
You  
Ready?



# CISCO SYSTEMS



EMPOWERING THE  
INTERNET GENERATION<sup>SM</sup>