

Business on the Internet

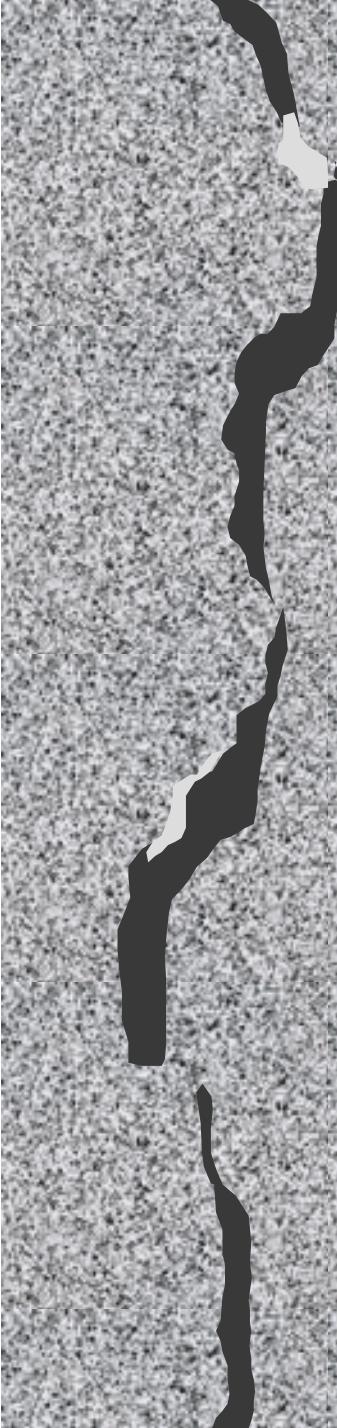
Charles Severance

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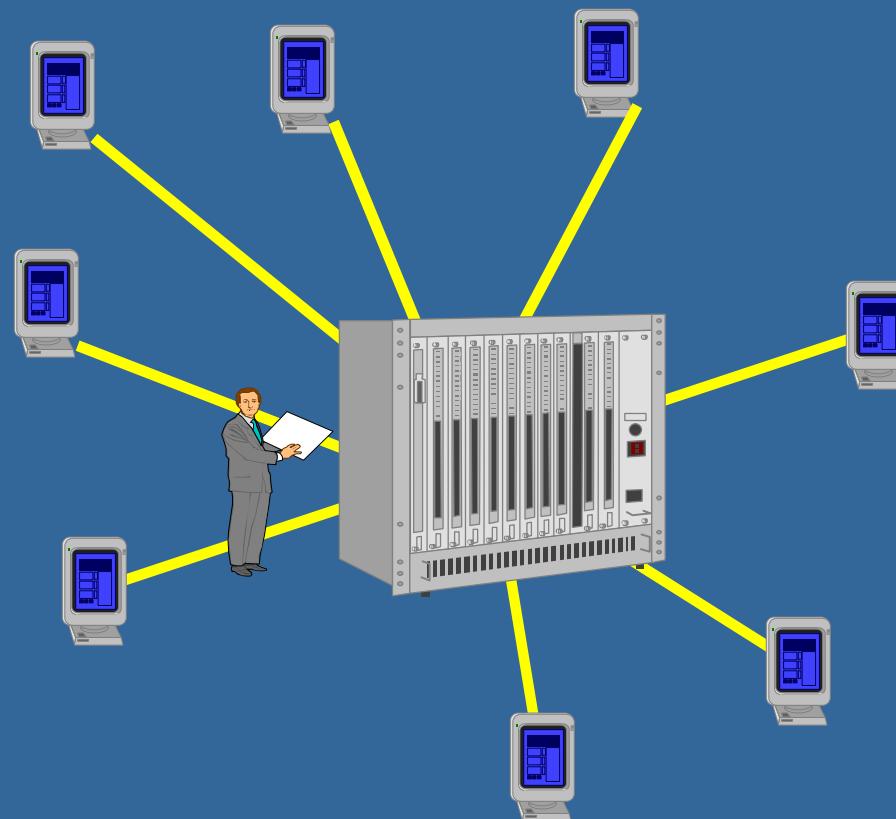


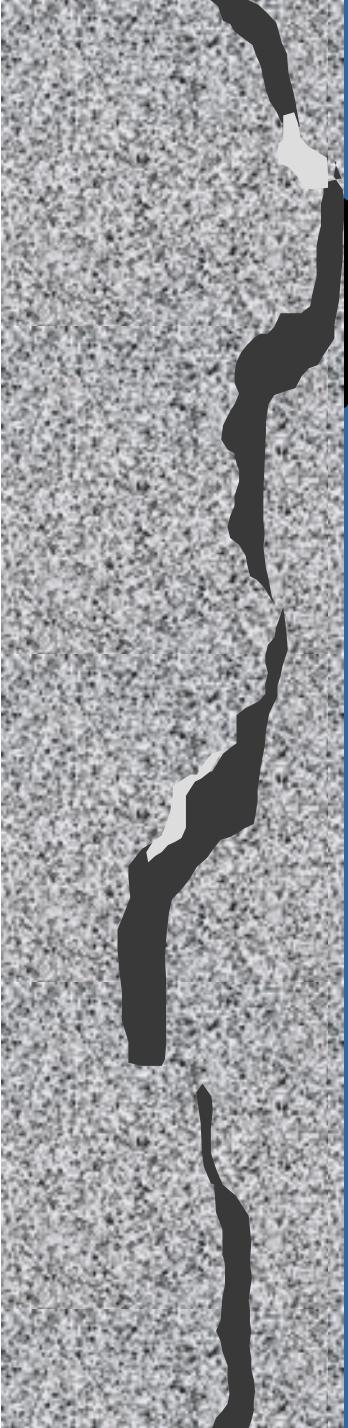
Business Networking

- **Business priorities are different**
 - Productivity of employees
 - Development of employees
 - Protection of proprietary data
 - Maintaining its image
 - Computer support costs

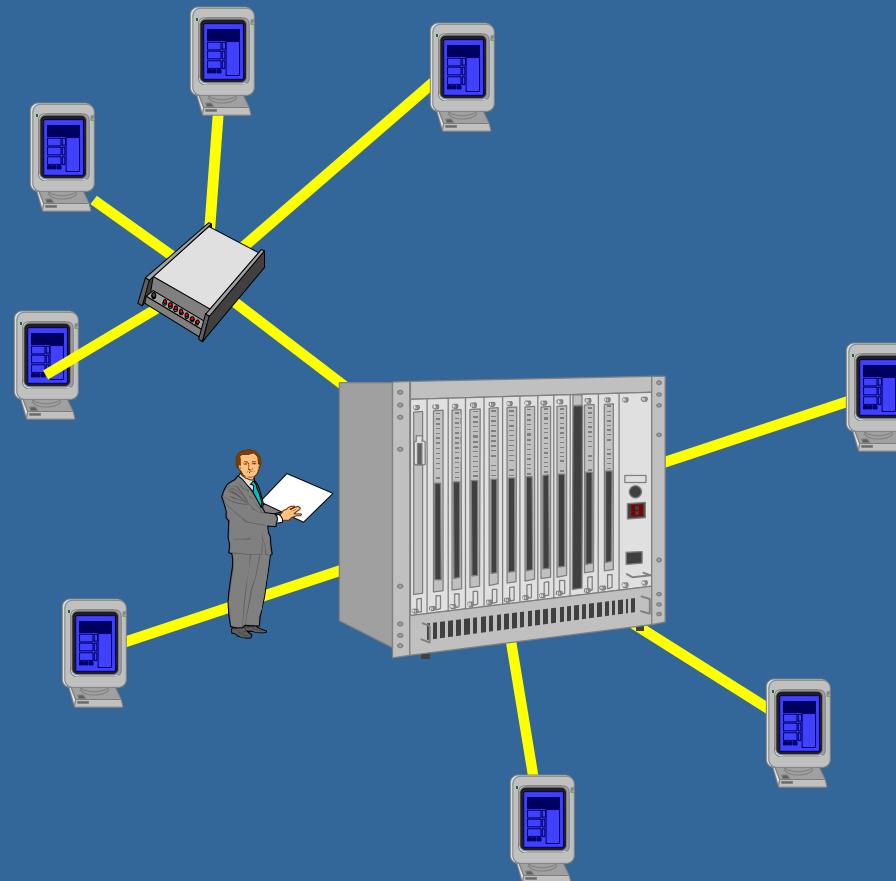


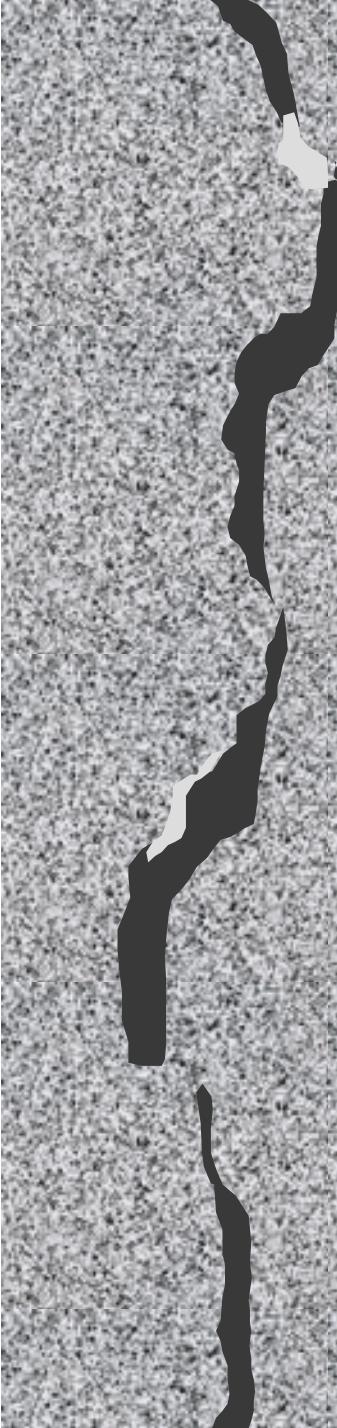
Early Computing



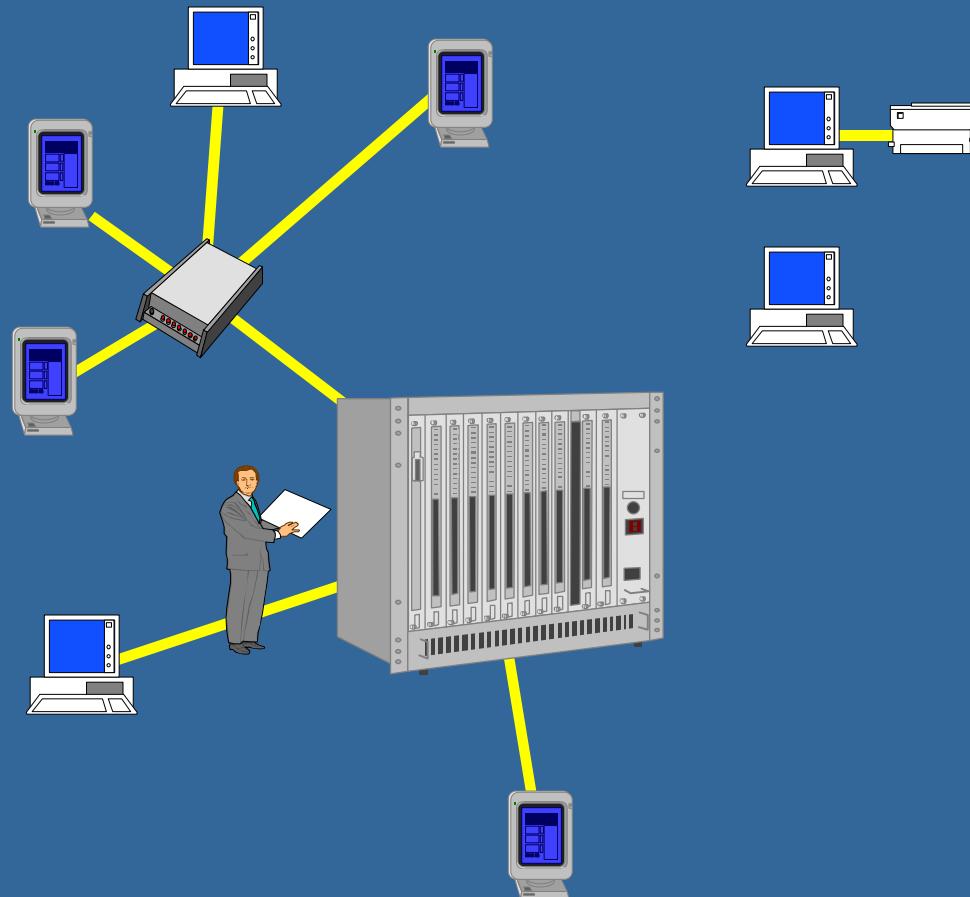


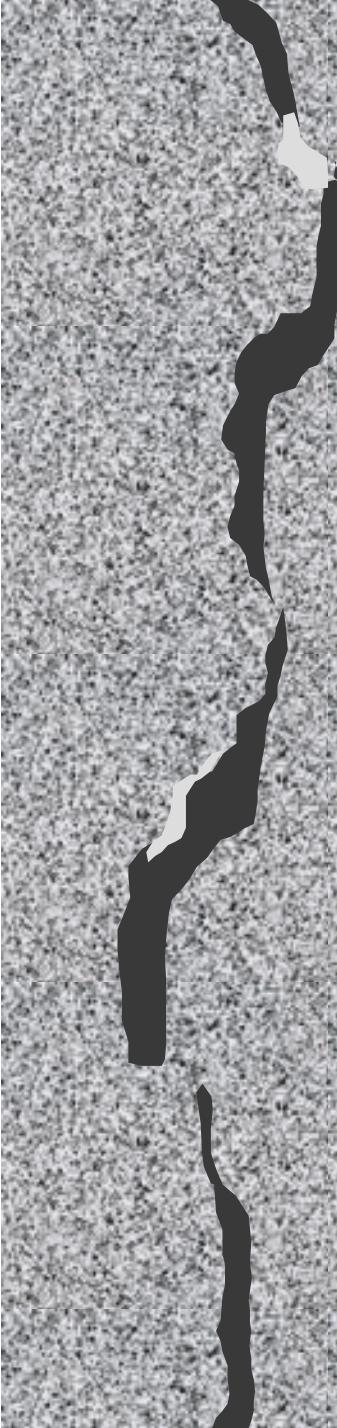
Early Networking



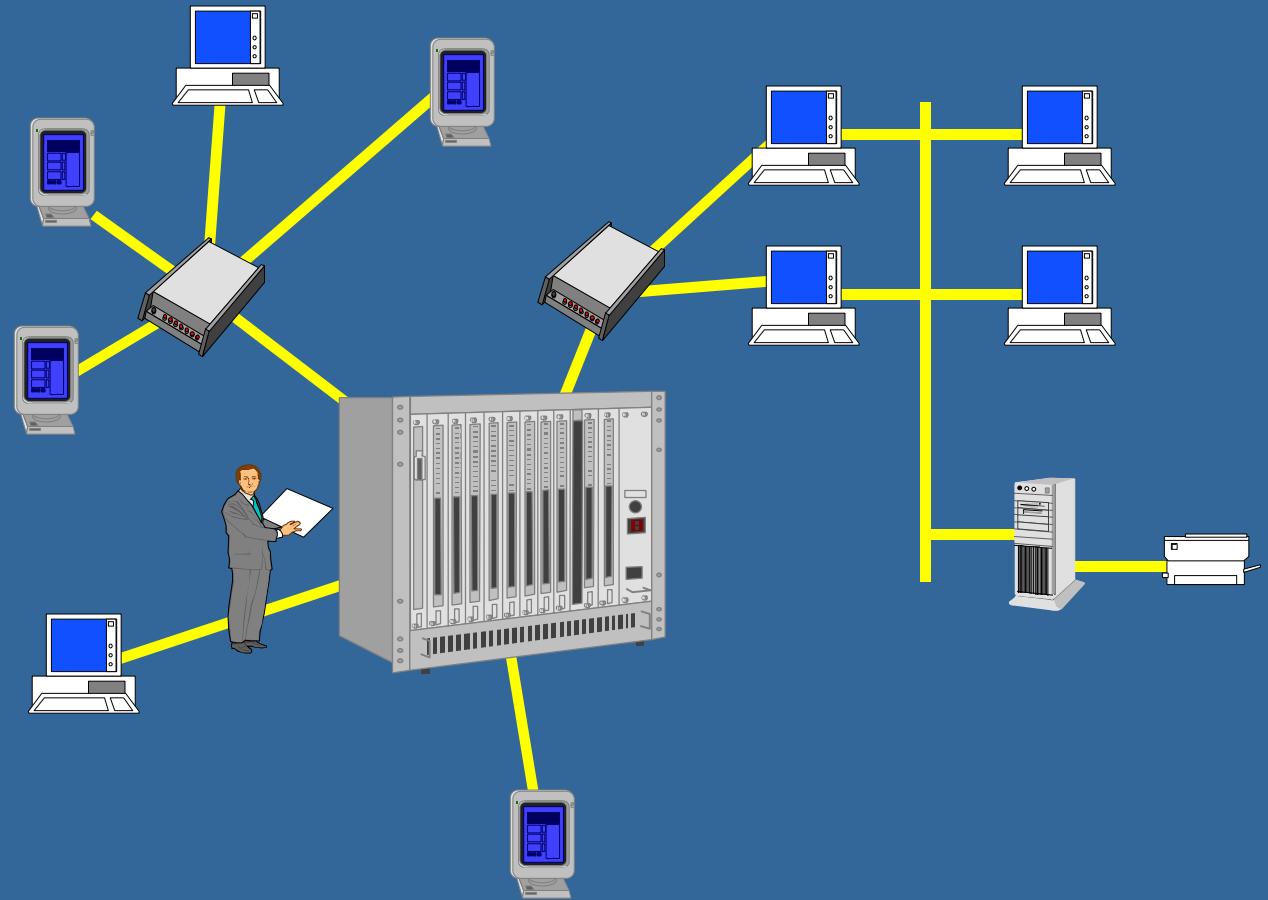


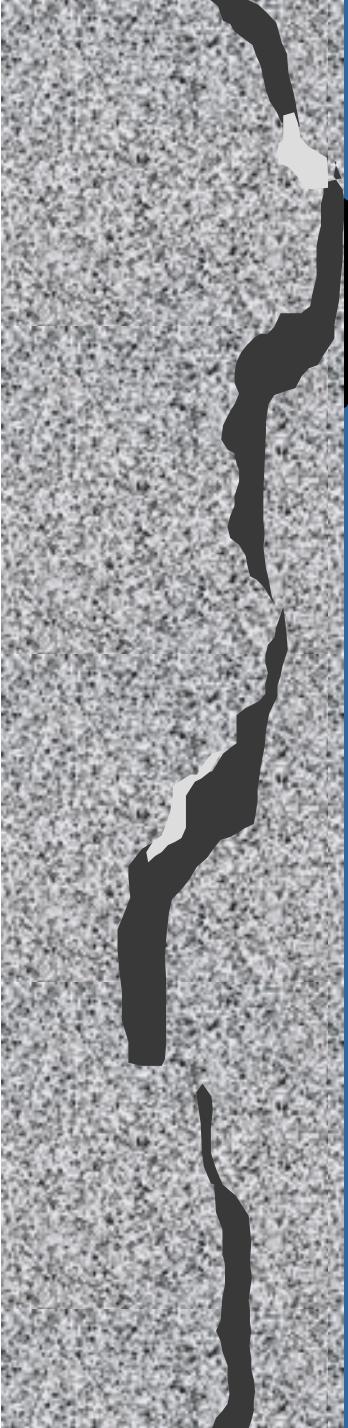
Adding PC's



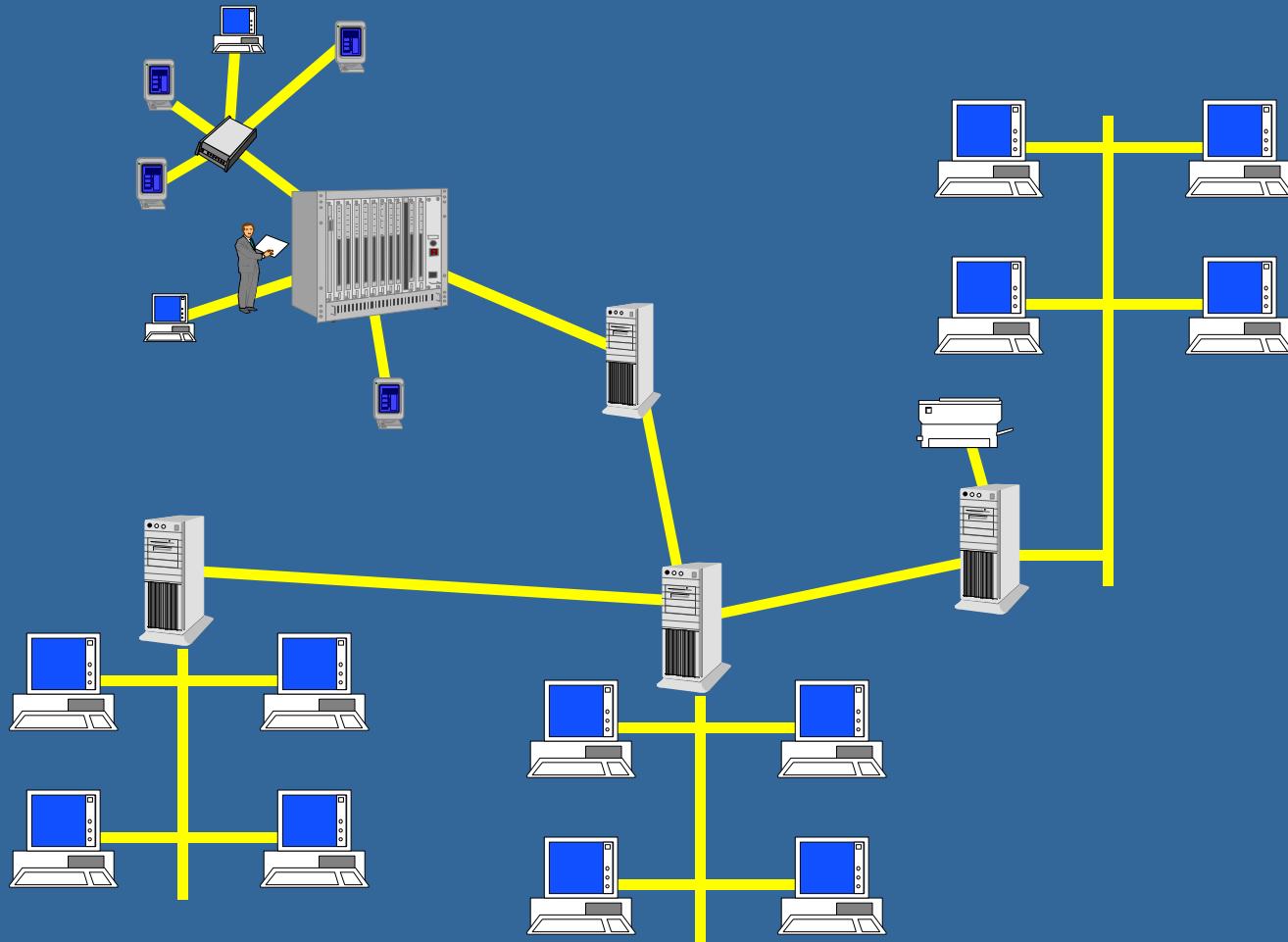


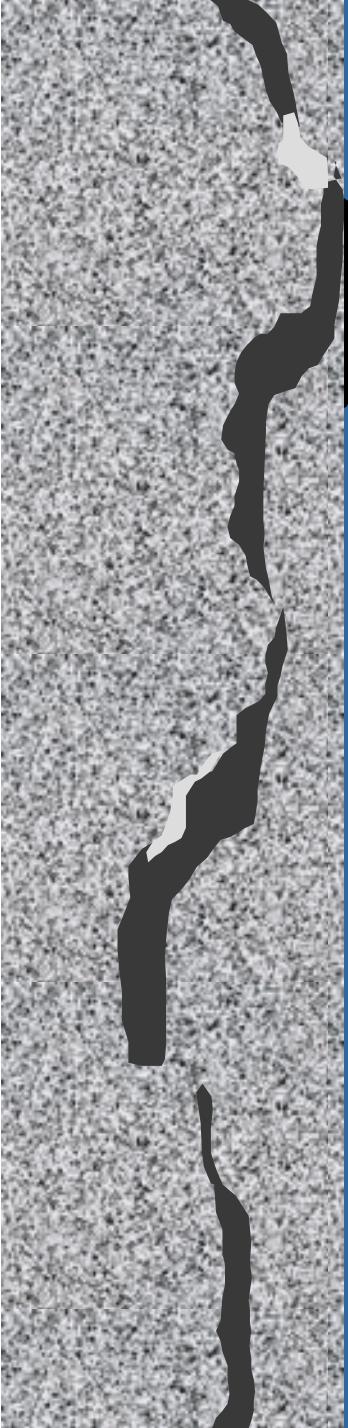
PC Networks



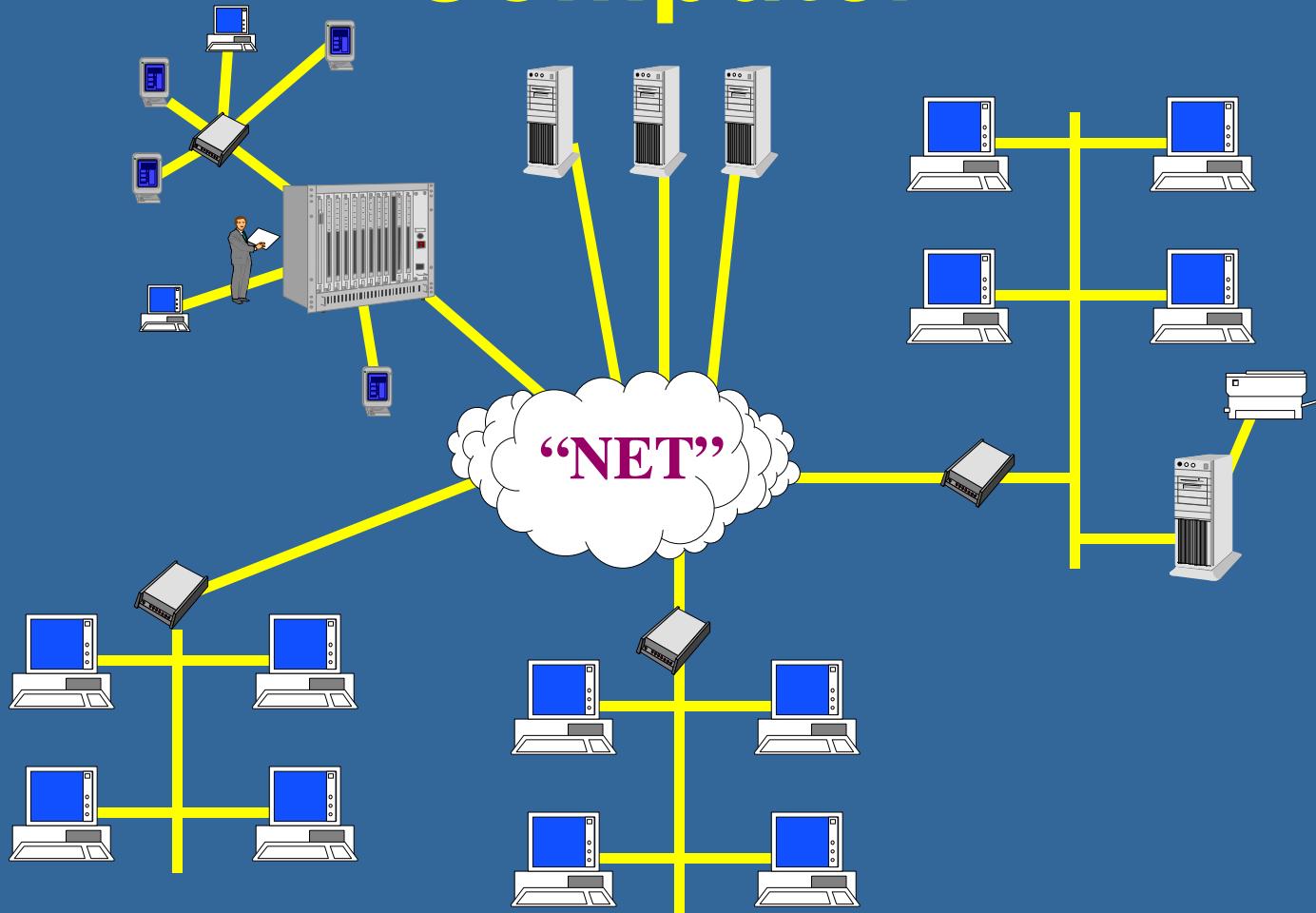


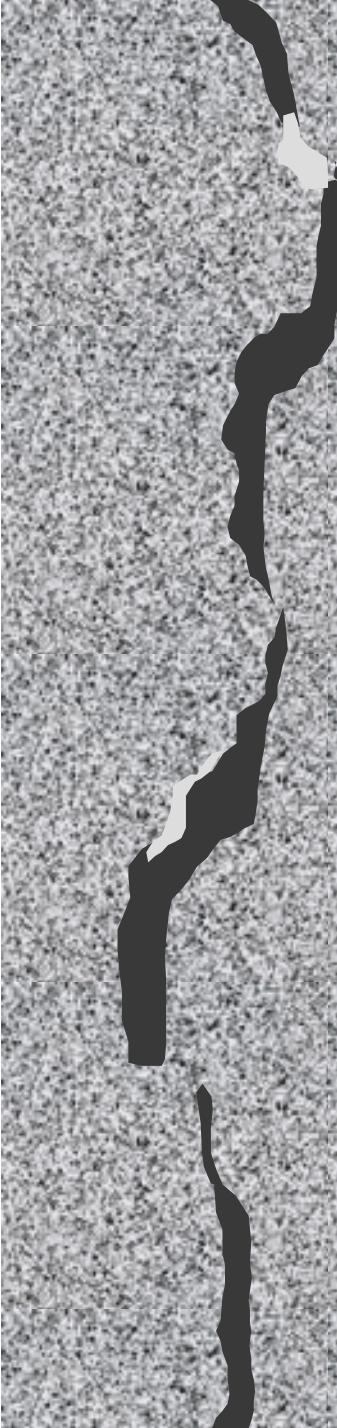
PC Networks Rule



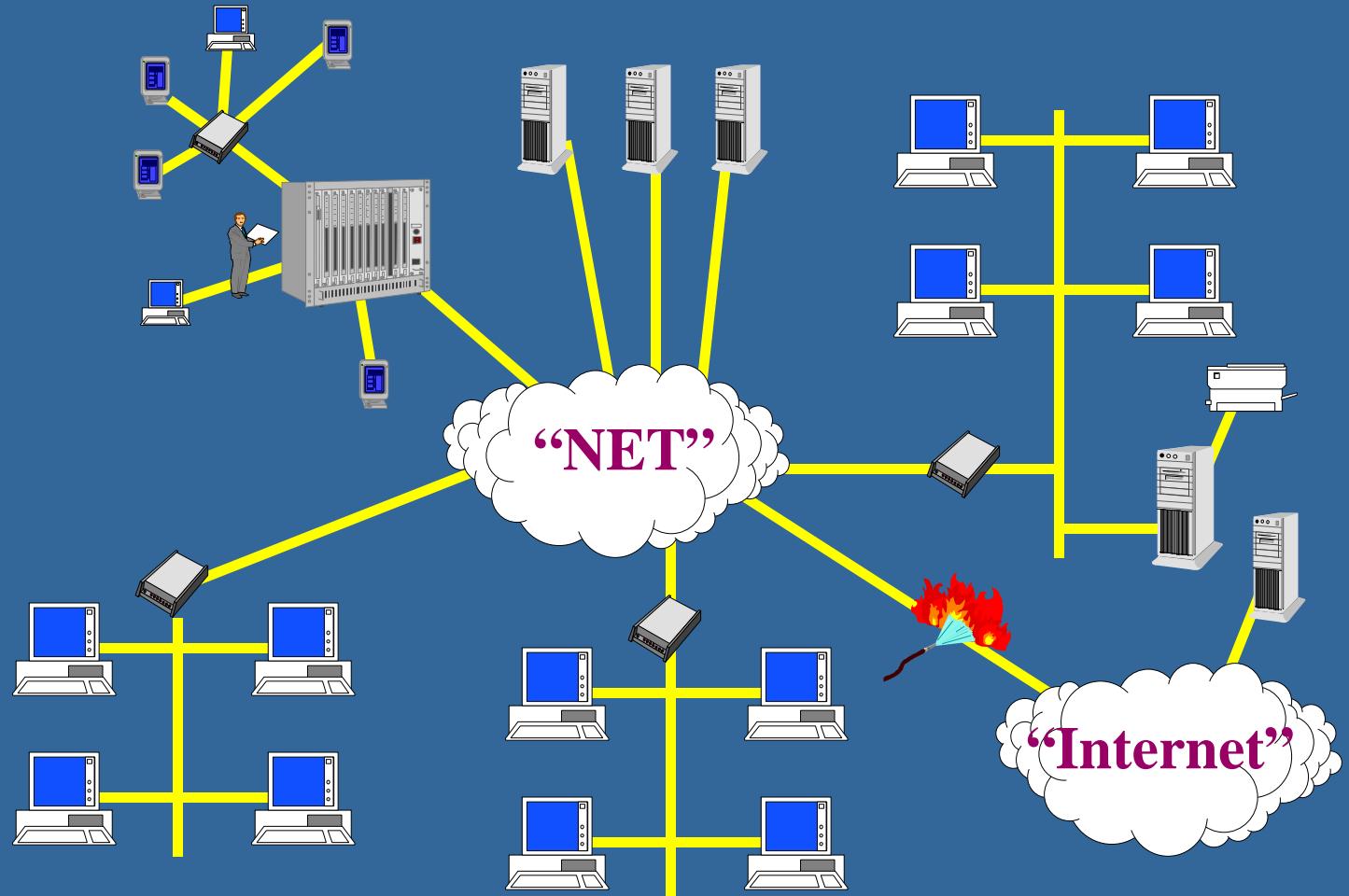


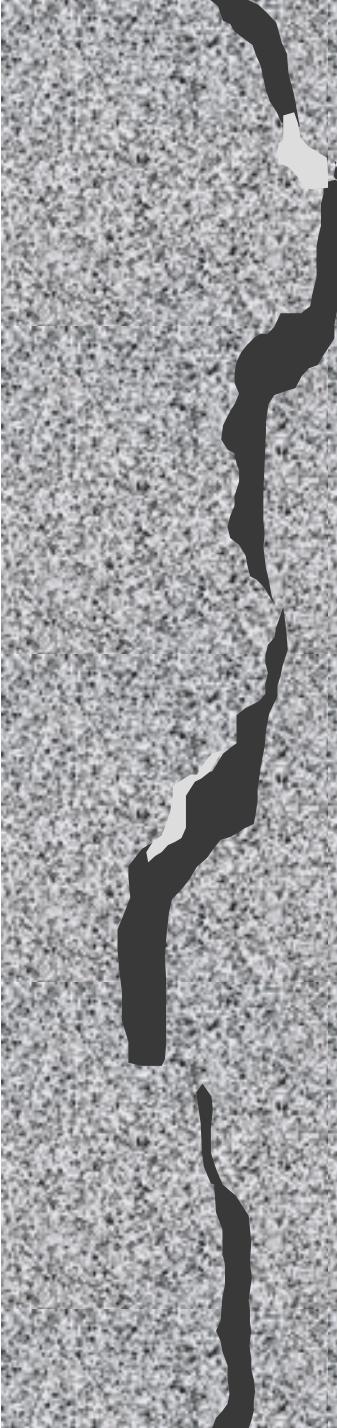
“The Network IS the Computer”



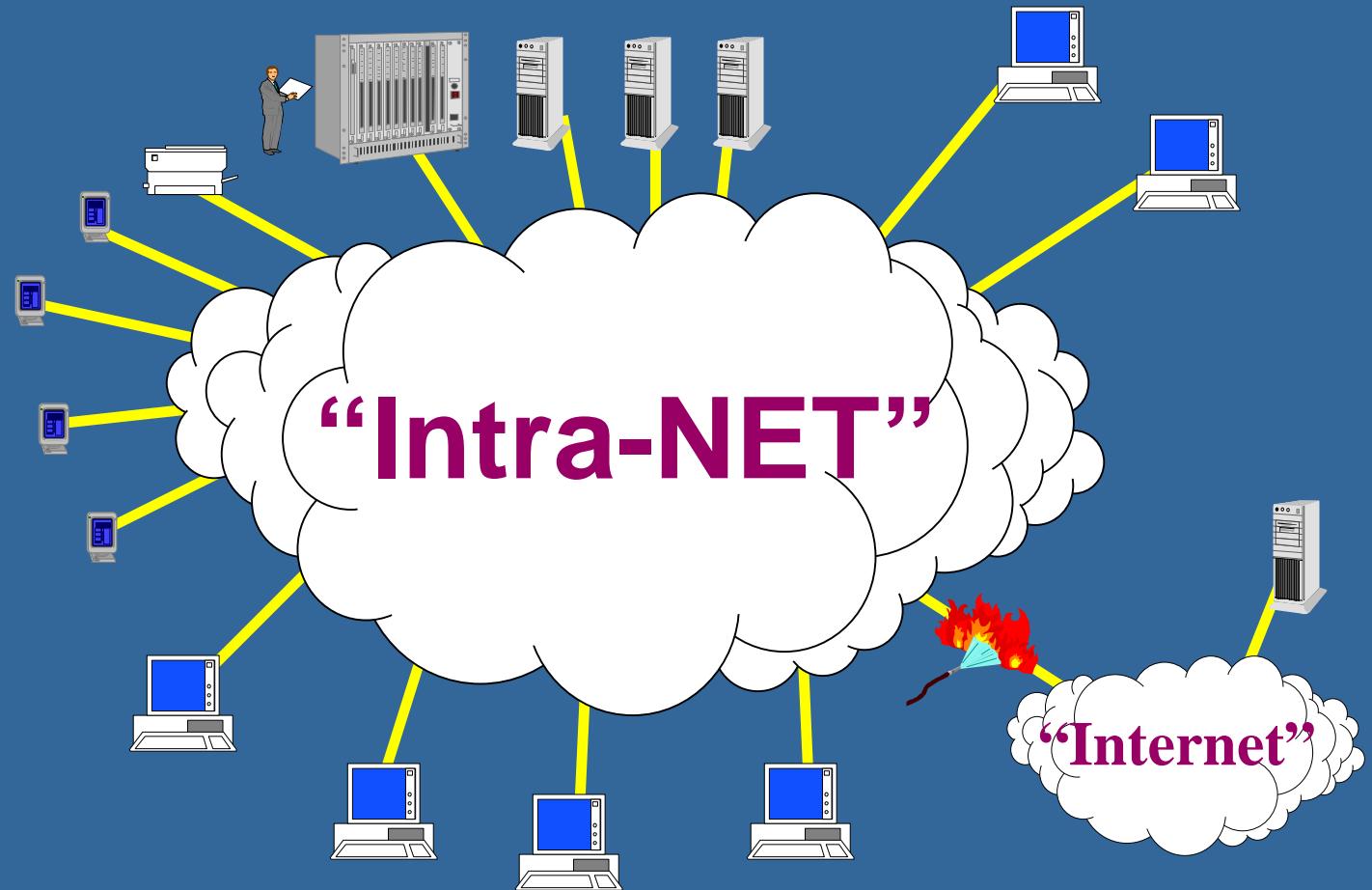


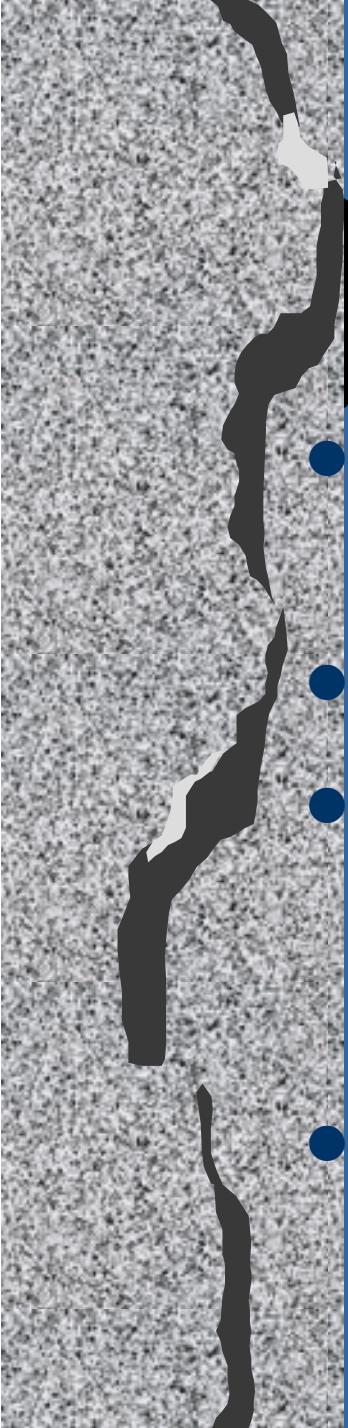
Add the Internet





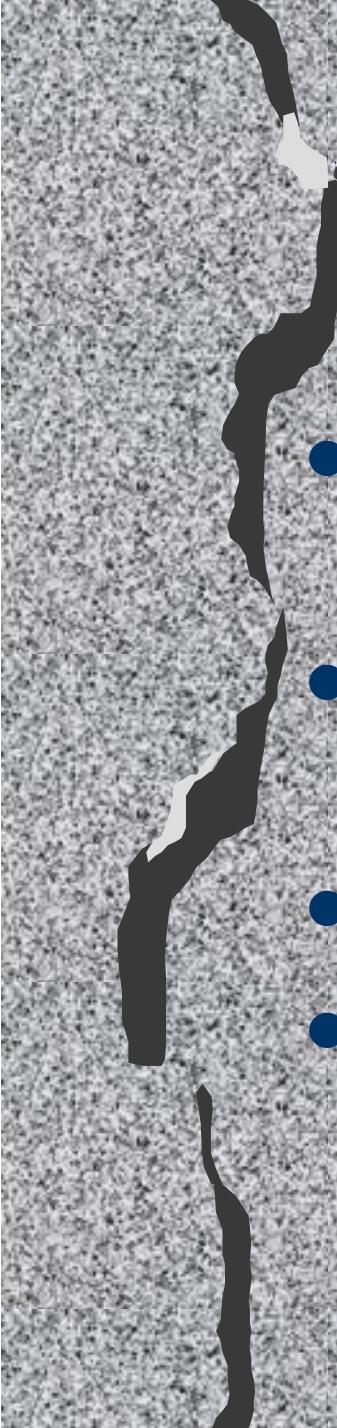
After a While...





Network Computers vs PC

- One of the goals of business is to minimize costs of technology
- A big cost is people/support
- The network can help in this area
 - Remote update of computers
 - Sharing of Printers
- Recently, network computers were introduced to save \$\$

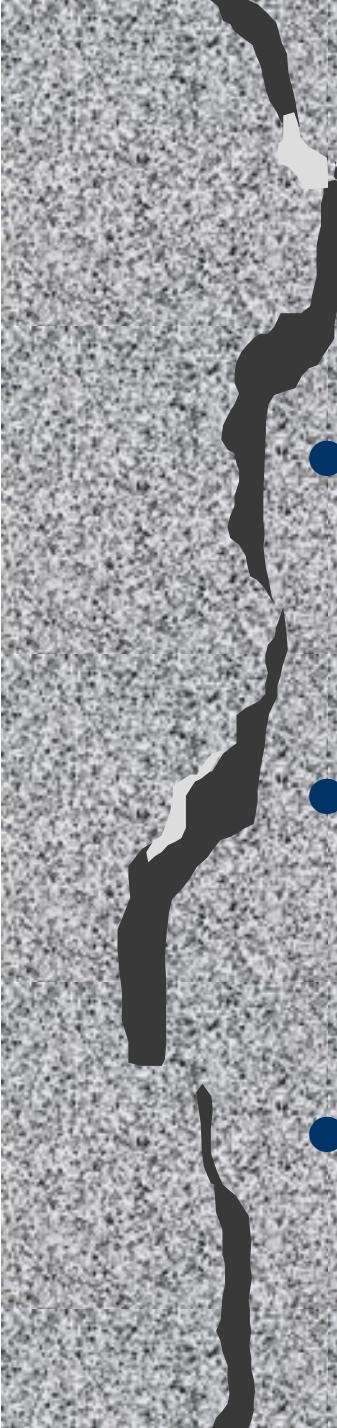


Network Computer

- No local software - downloaded across the network (JAVA)
- No local configuration - retrieved from the net at boot time
- Low cost (\$300-\$1000)
- When one breaks, simply replace it

PC

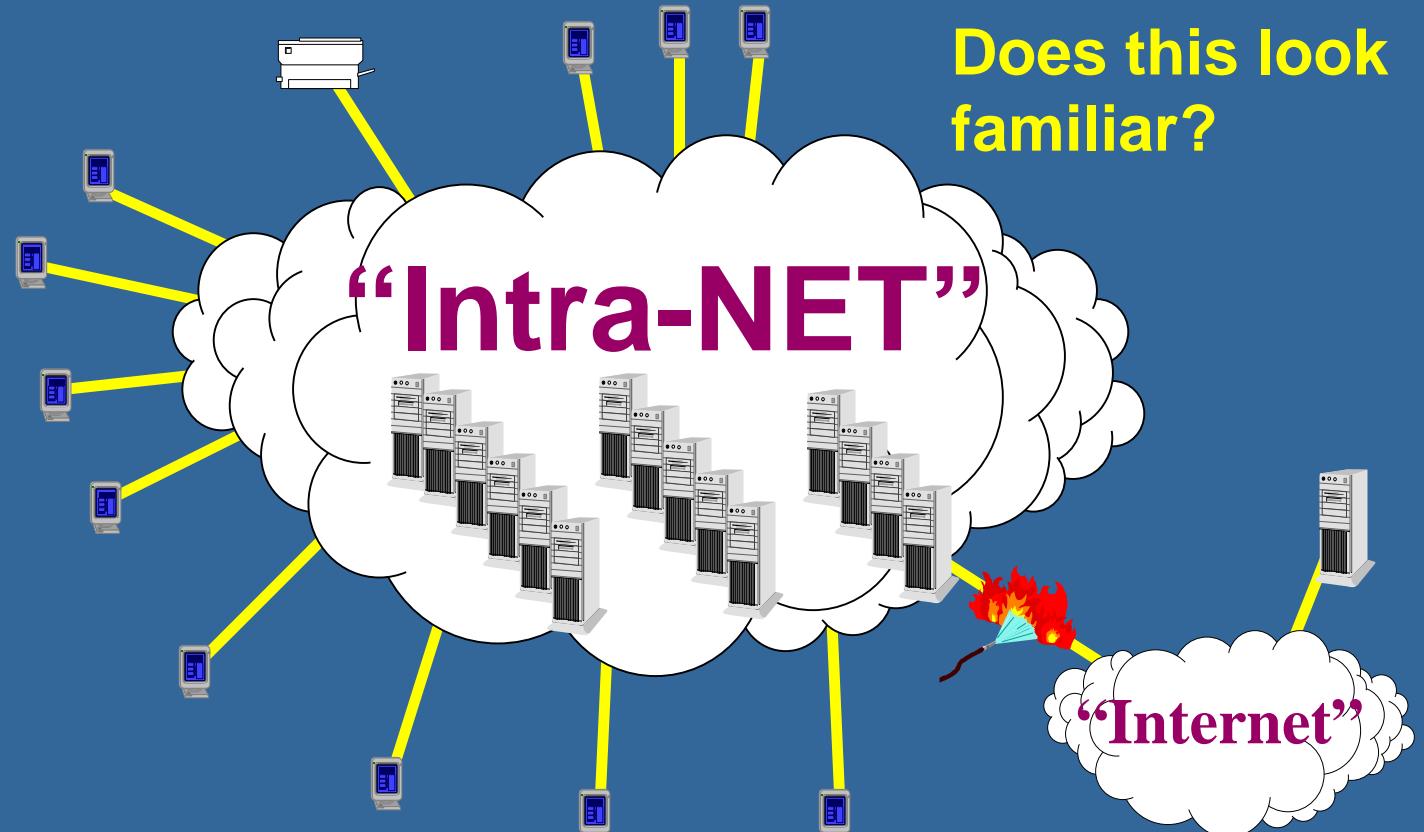
- Local hard disk with software, configuration and data
- Must be backed up
- To replace failed PC, must restore the data (assuming it was backed up)
- Less dependent on the network
- \$1000-\$5000

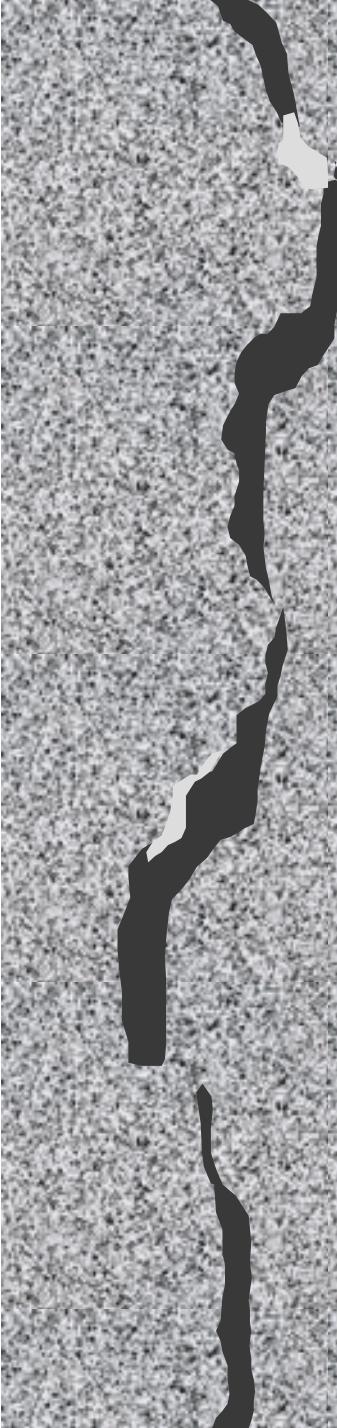


The Debate

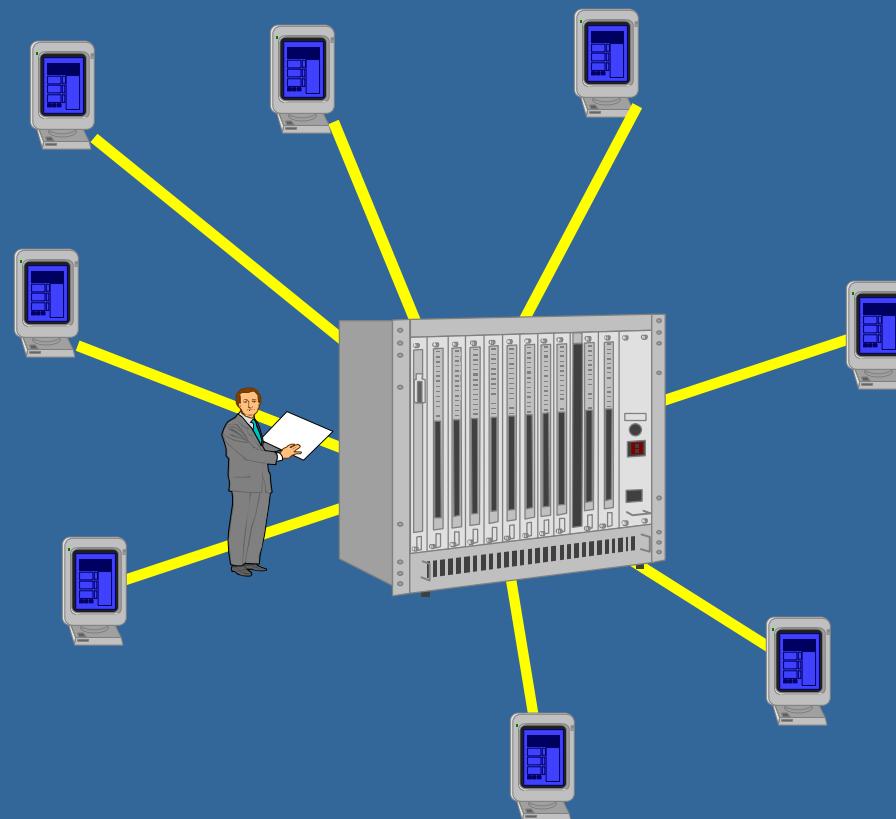
- **Network Computers**
 - depend on a fast reliable network
 - few applications
- **PC**
 - Higher support cost (being worked on)
 - Still require fast reliable network
- **For a while Netputers will stay in speialized applications**

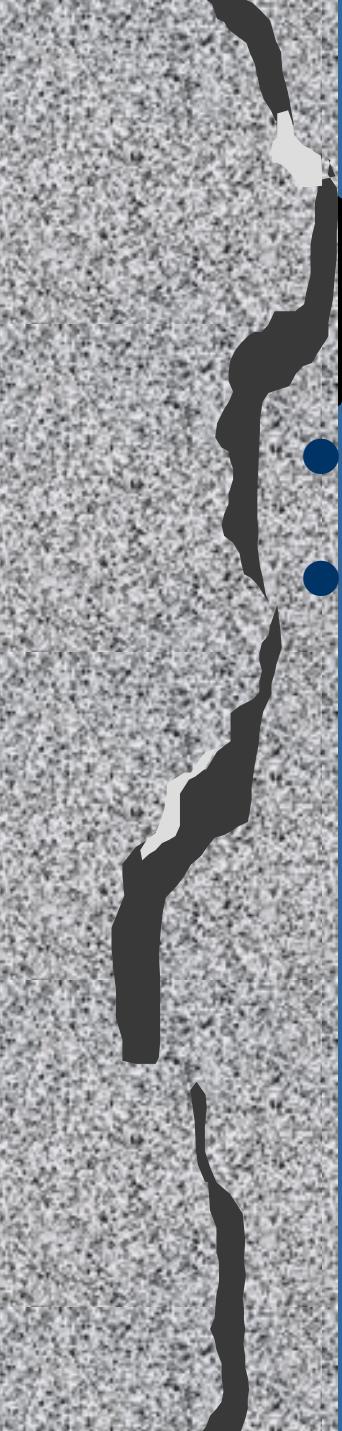
With Network Computers





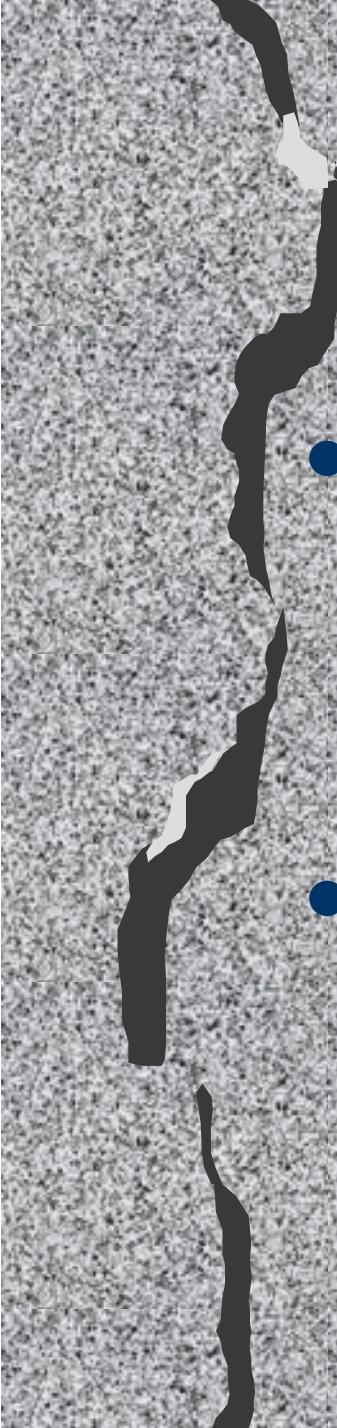
Early Computing





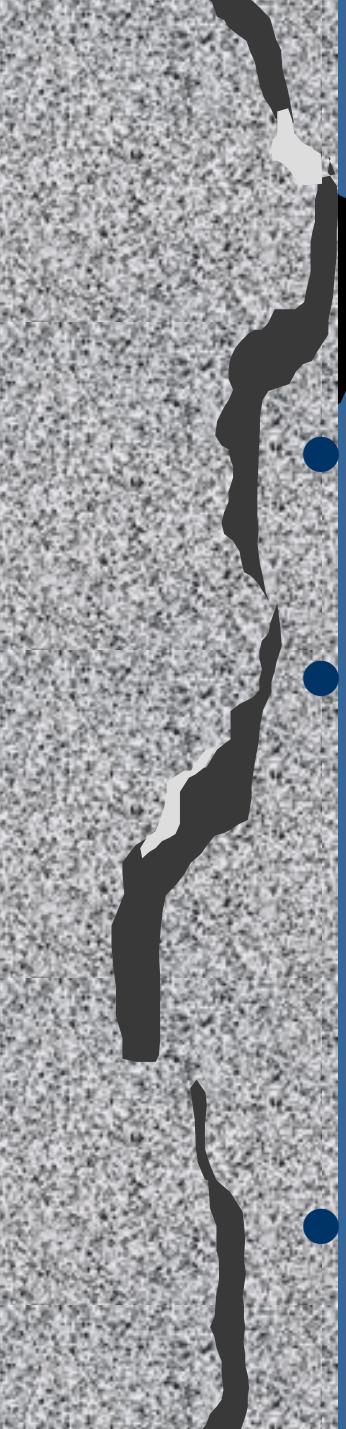
Intranet Ideas

- **Web-Browser becoming standard**
- **Internal Communication**
 - Daily Newsletter
 - On-Line Forms
 - Policy Statements / Procedures
 - Departmental Publishing
 - Web Search Engines - Find Resources



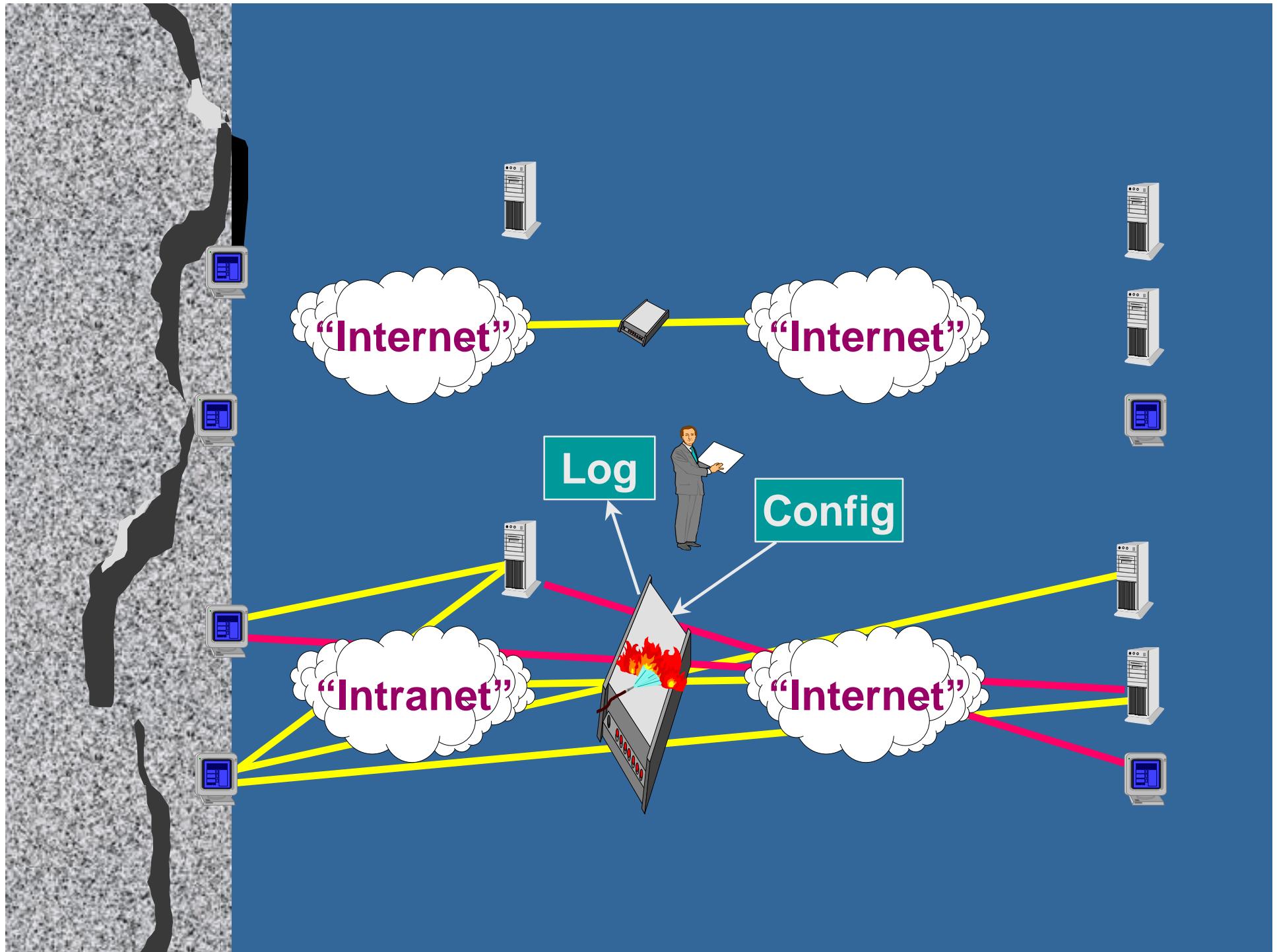
Business Networking

- Much of the networking details for business are the same
 - Network Cable, Bridges
 - Phone Lines, Routers
- The biggest challenge is to allow desktops to do the approved activities without unlimited access



Adding a Firewall

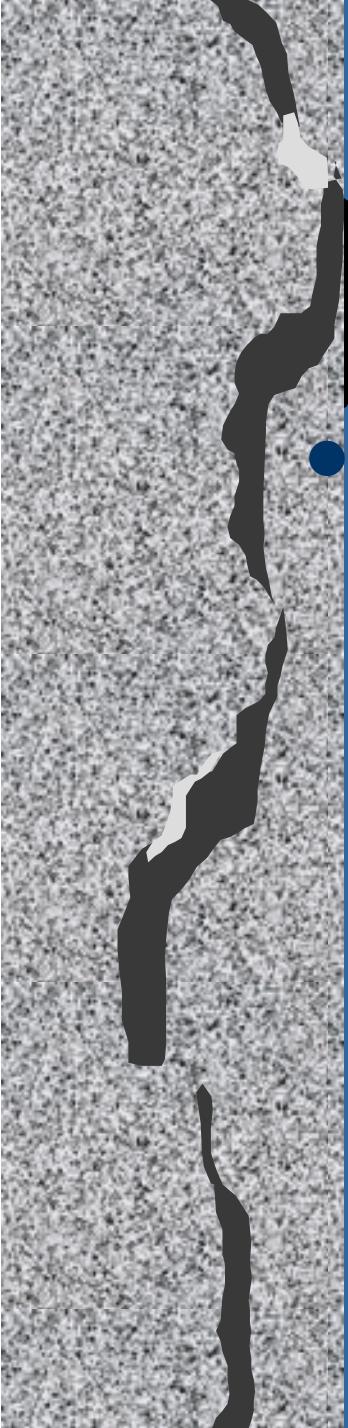
- **The purpose of a gateway router is to connect a LAN to the Internet**
- **A firewall is a router which controls and monitors access to the Internet**
 - Who can use the Internet
 - What types of access
 - Log all transfers
- **Companies may use two or more**





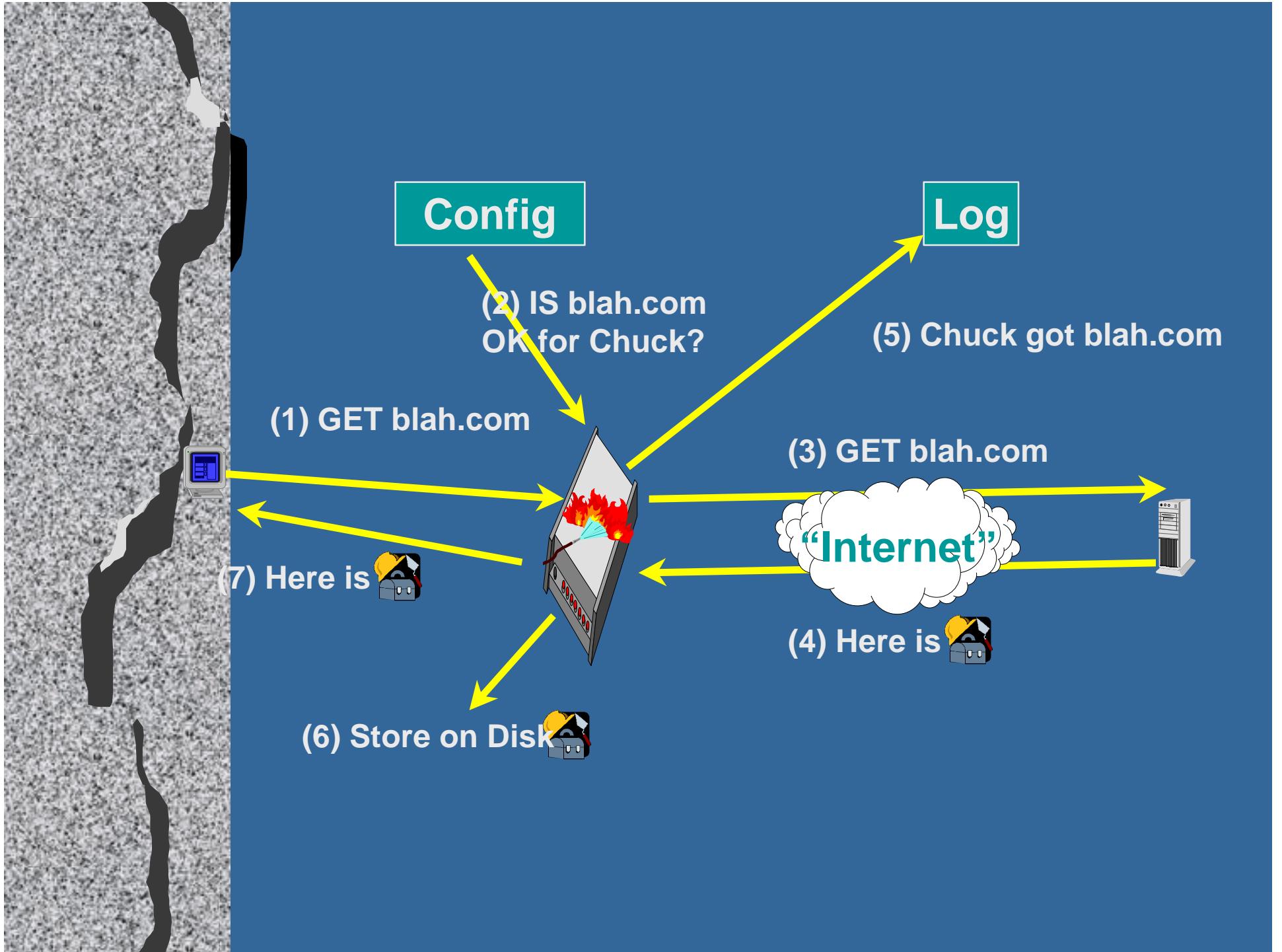
Firewall Operation

- **Firewalls start allowing no access**
- **Then the desired access is added**
 - E-Mail
 - Corporate Web Server
- **Access through firewalls**
 - Proxy access
 - Transparent forwarding



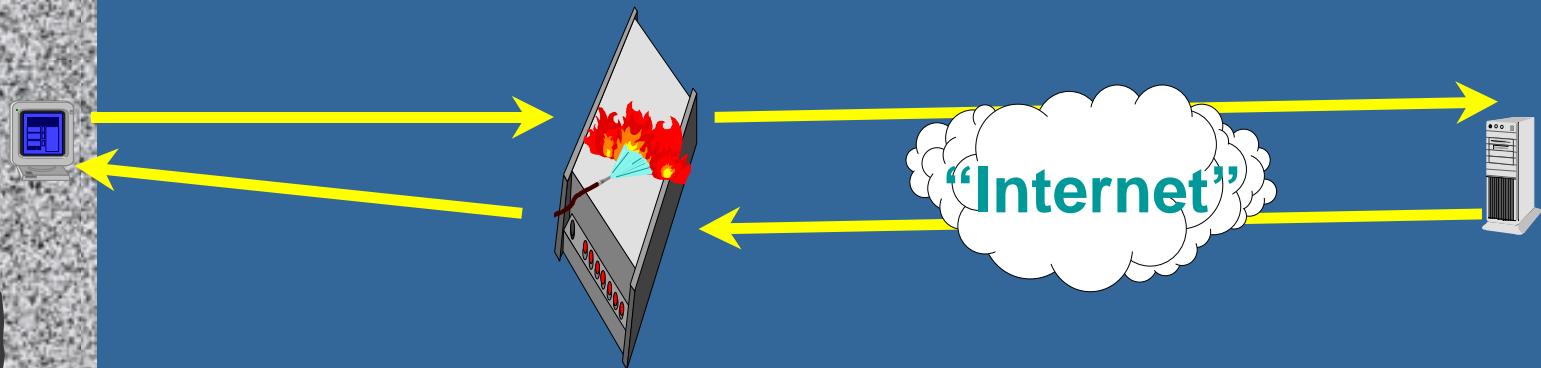
Proxy Access

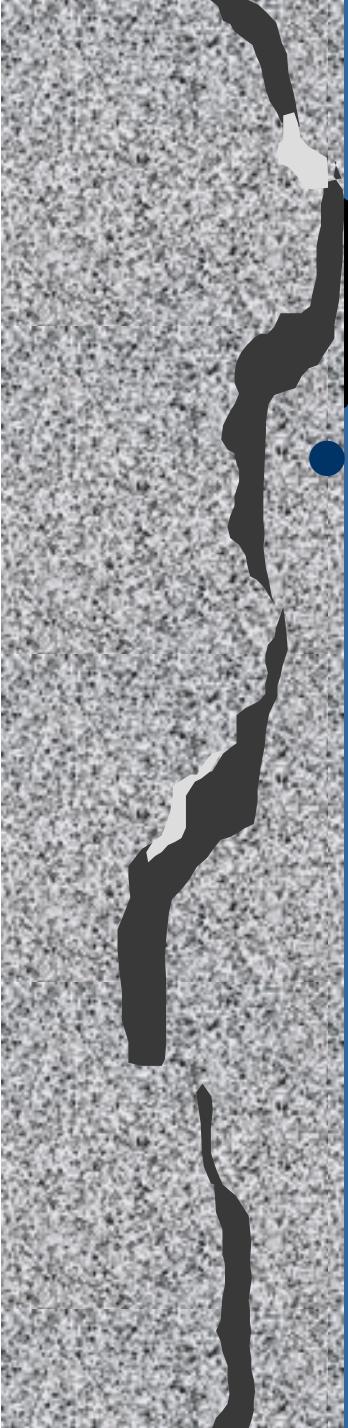
- In Proxy Access, the client uses a special proxy protocol to the firewall
 - Client requests firewall to retrieve page
 - Firewall decides if the page is OK
 - Firewall might send back a cached copy
 - Firewall gets page across Internet
 - Adds log entry - perhaps caches page
 - Returns page to client



Transparent Forwarding

- In transparent forwarding, the client uses its normal protocols, but each connection is still intercepted, authorized, and possibly logged in the firewall





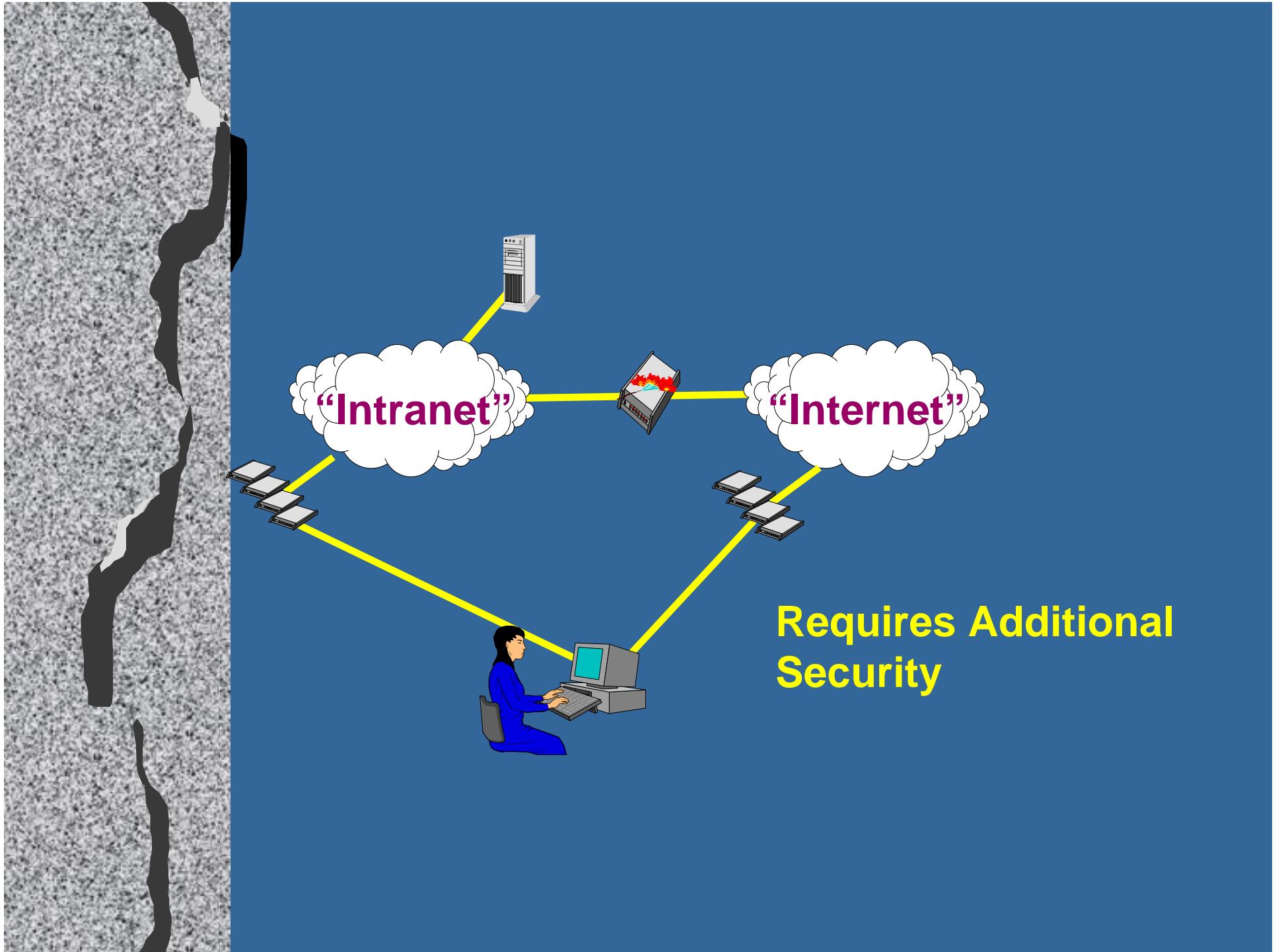
Internet Commerce

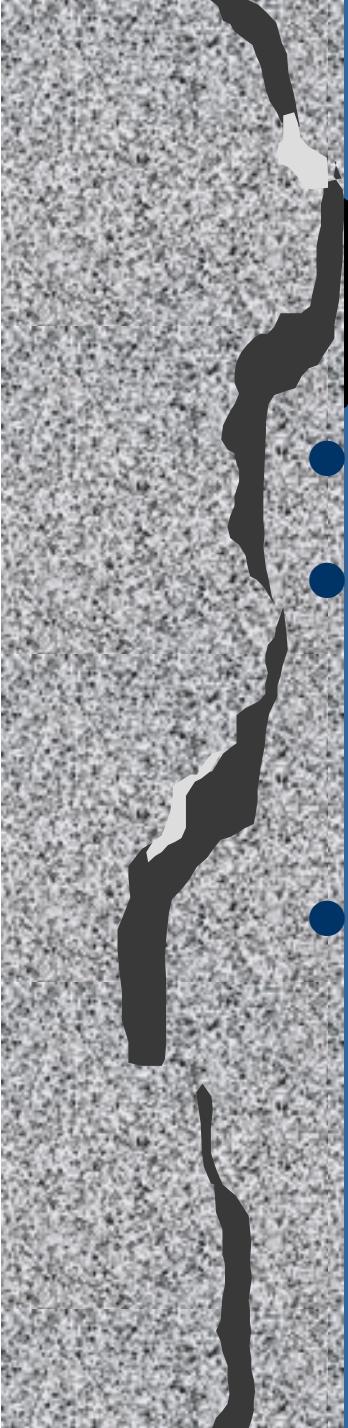
- **Internet Commerce is a broad topic**
 - Secure Sockets Layer SSL - Encrypts connection from client to server
 - Encrypting connection is not only problem
 - Keyboard viruses
 - Security breaches on the server
 - Digital Cash
 - Micropayments



Home Access to Business

- **Home access for employees**
 - Modems “behind” the firewall
 - Requires “long-distance” out-of-town
 - Clean solution -security
 - Company must support services
 - Use the Internet
 - Requires additional security
 - Provides employees with Internet Access





Business Web Sites

- **Becoming a necessity**
- **On-site or off-site server?**
 - On-site server is a **BIG responsibility**
 - Off-site servers are a bargain often
- **Content is the key**
 - Must have graphic artists and designers
 - In addition to motivated geeks



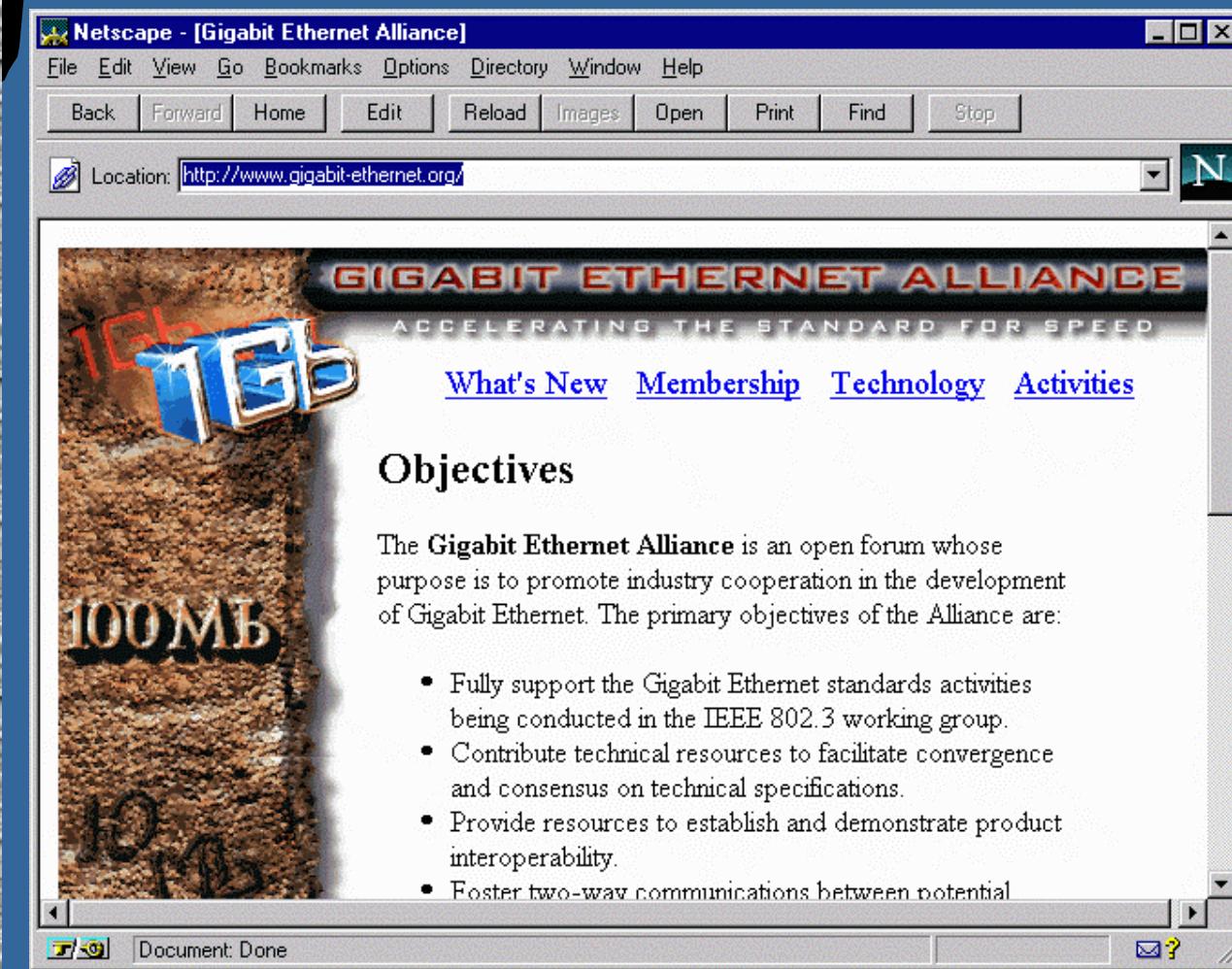
Evolution of a Business Site

- Name, Phone Number and Picture
- On-line press releases and other info
- Lookup Static Information
- Some connection to corporate database
- Full catalog - better than paper
- “Wired”

<http://travelassist.com/reg/mi002s.html>



<http://www.gigabit-ethernet.org/>



<http://www.prosing.com/>

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Location: <http://www.prosing.com/cdg/sc.htm>

Spotlight Series

- [CDSC8347](#) - Hits of Neil Diamond - Vol 01 Expected to be Available March/97
- [CDSC8346](#) - Headbanger's Hits - Vol 03 Expected to be Available March/97
- [CDSC8345](#) - 80's Male Country Hits - Vol 03 Expected to be Available March/97
- [CDSC8344](#) - Country Hits - Volume 80 Expected to be Available February/97
- [CDSC8343](#) - Pop Hits - Volume 51 Expected to be Available February/97
- [CDSC8342](#) - 70's Male Country Hits - Vol 02 Expected to be Available February/97
- [CDSC8341](#) - Country Hits - Volume 79 Expected to be Available February/97
- [CDSC8340](#) - Pop Hits - Volume 50 Expected to be Available February/97
- [CDSC8339](#) - Legends of the Blues - Vol 02 Expected to be Available February/97
- [CDSC8338](#) - No Men Allowed - Vol 03 Expected to be Available February/97
- [CDSC8337](#) - Pop Hits - Volume 49 Expected to be Available February/97
- [CDSC8336](#) - Country Hits - Volume 78 Expected to be Available February/97
- [CDSC8335](#) - 70's Male Country Hits - Vol 01 Expected to be Available January/97
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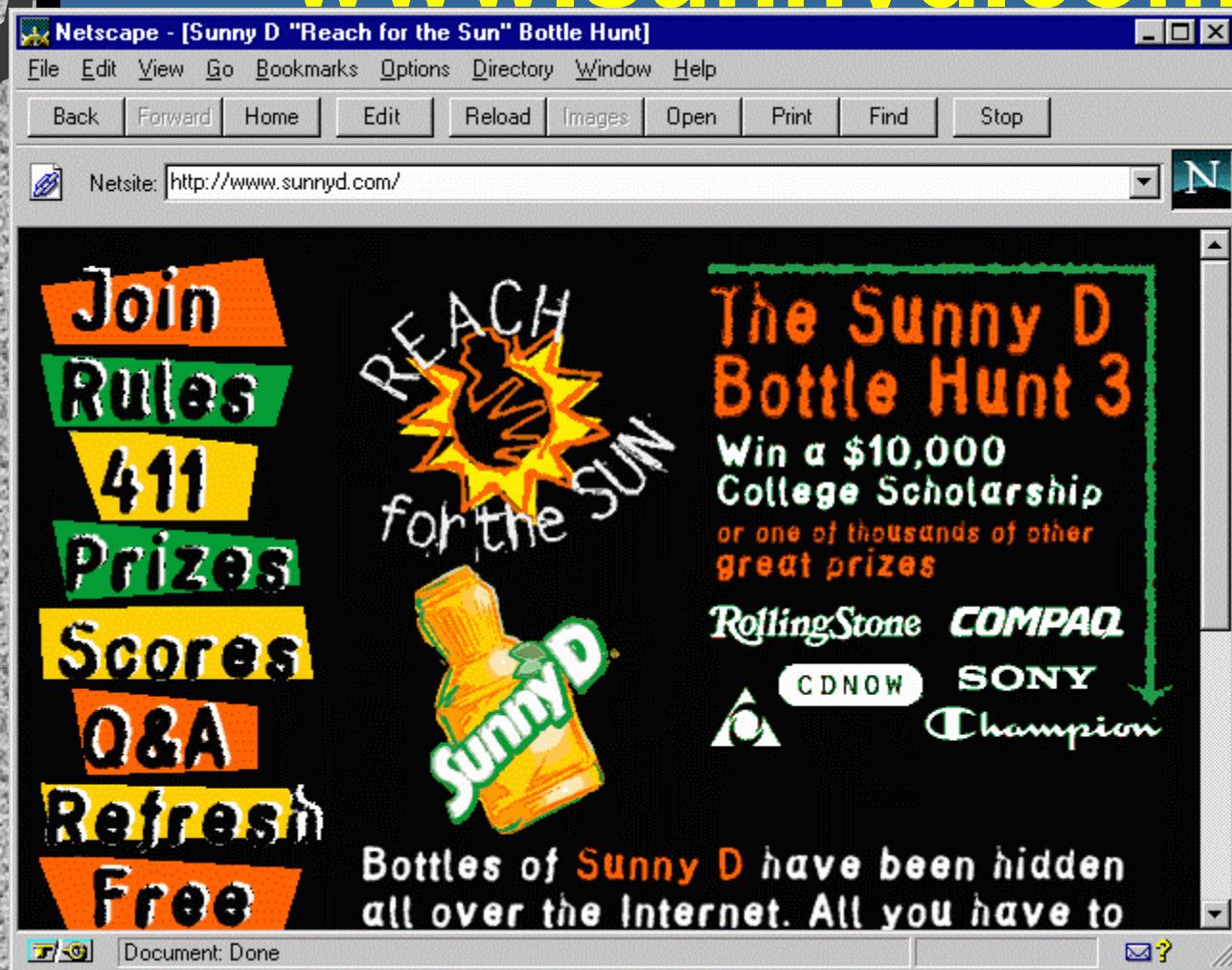
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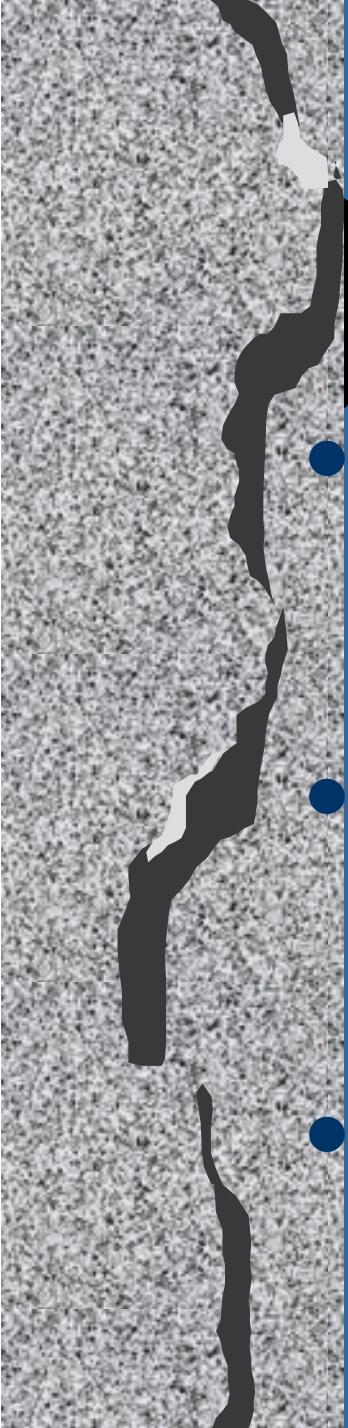
Web Presence Choices

- **In-House**

- **In-House**
 - Forces 24x7 support
 - May force larger connection
 - Only for large organizations

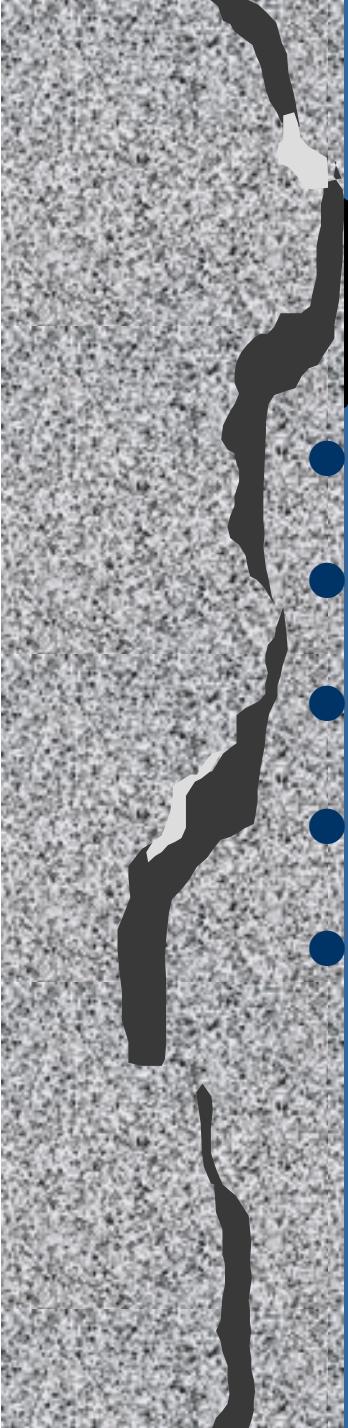
- **Virtual host**

- **Virtual host**
 - Higher reliability - leave it to the “pros”
 - Faster connection
 - Small/Medium organizations



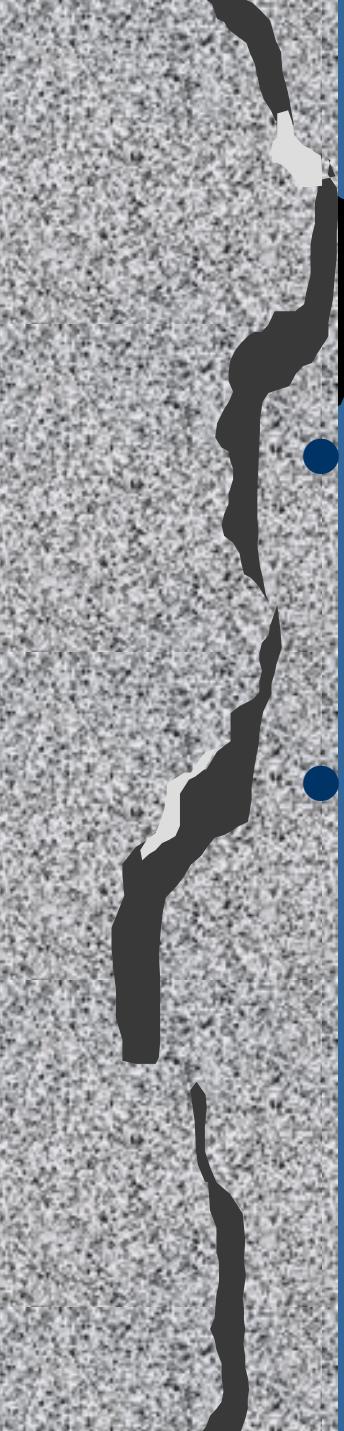
Web Design Choices

- **In House**
 - Cost of content is lower - easy update
 - Can access in-house databases
- **Contracted Work**
 - Visually pleasing - technically sound
 - Engineers are seldom graphic artists
- **Tough to develop “top quality” site without a combination**



Other Business Issues

- **E-Mail Privacy**
- **Free Speech**
- **Personal Use .vs. Business Use**
- **Fair-Use**
- **Copyright**



Summary

- **While universities have had the Internet for 10+ years, many businesses are just getting started.**
- **Businesses need to answer several questions regarding the Internet: Why do we need it? Who needs the Internet? What will they do? How will it save or make money?**