

Using Basic Internet Tools

Charles Severance

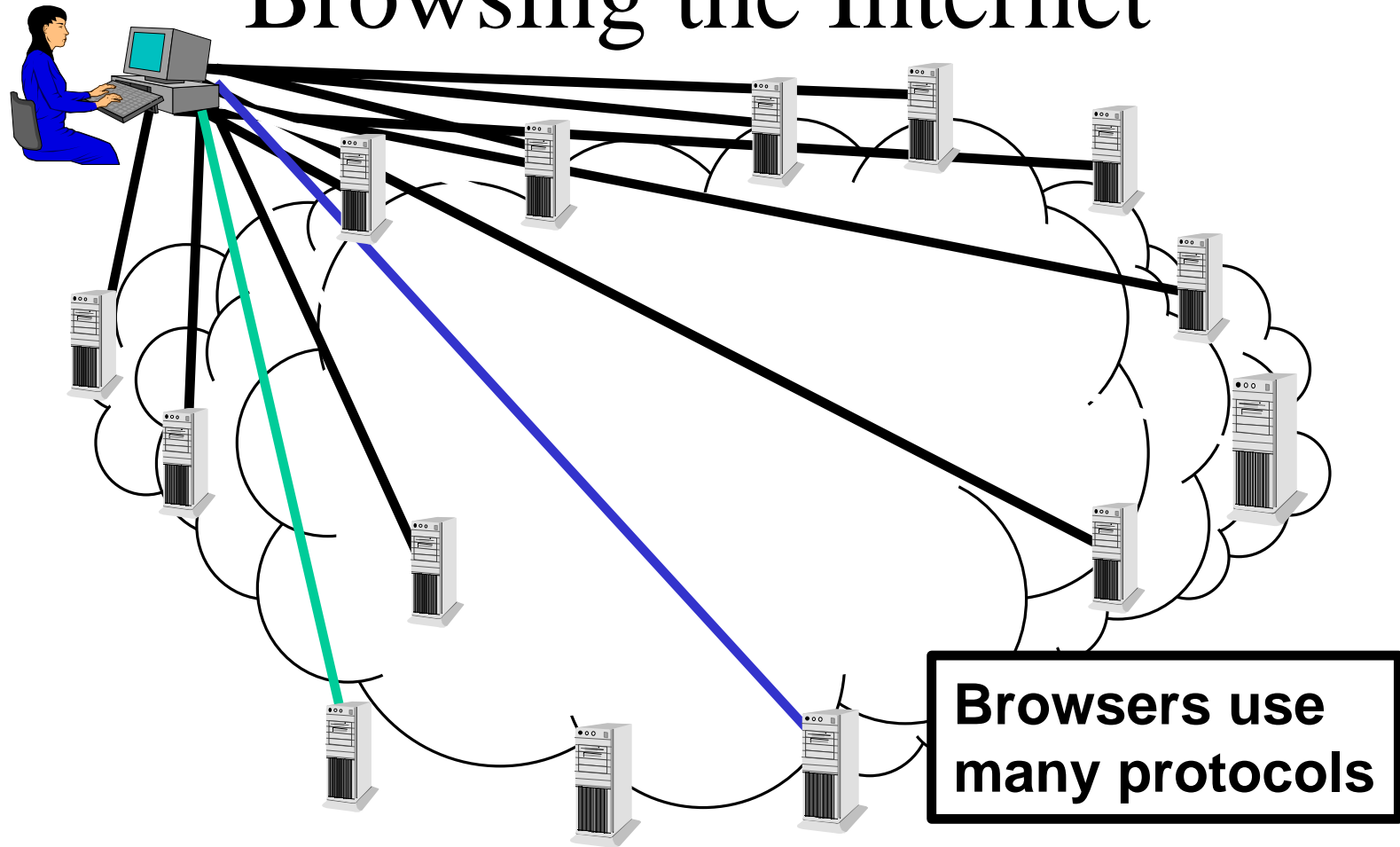
Basic Tools

- Web Browsers
- Telnet - log in to a computer - text mode
- Electronic mail - elm
- Electronic mail - POP
- FTP - File transfer
- Web Publishing

What is a Browser?

- Netscape Navigator/MS Explorer
 - Netscape includes a POP mail program
- Retrieves, Converts, and Displays
- It is our view of the Web
- It is a program (netscape.exe)
- It requires a working network connection (LAN, PPP, etc.)

Browsing the Internet



URL - All About Data

Where to
get the data



How to
Display the
data



<http://www.egr.msu.edu/~crs/crs.gif>

How to
retrieve the
data

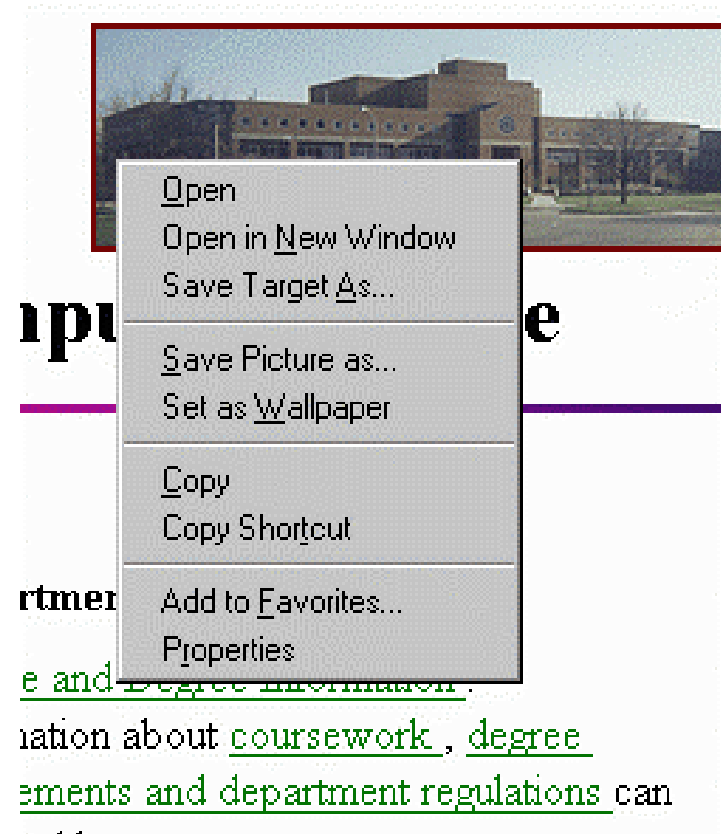


What data
to get



Browser Trick

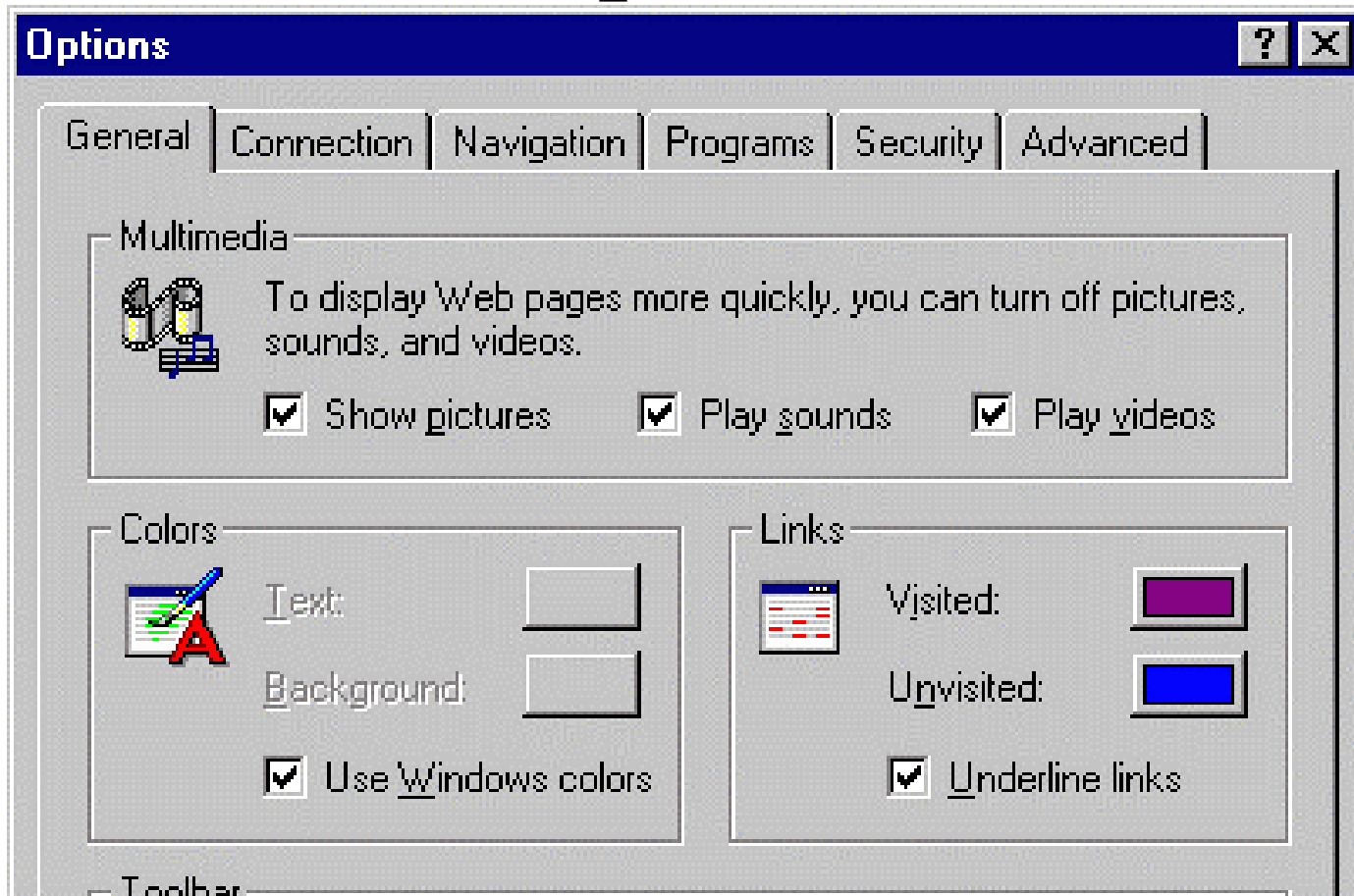
- Learn the “Right Finger Click” - Allows you to have flexibility in what you do with images or downloadable information



Configuring the Browser

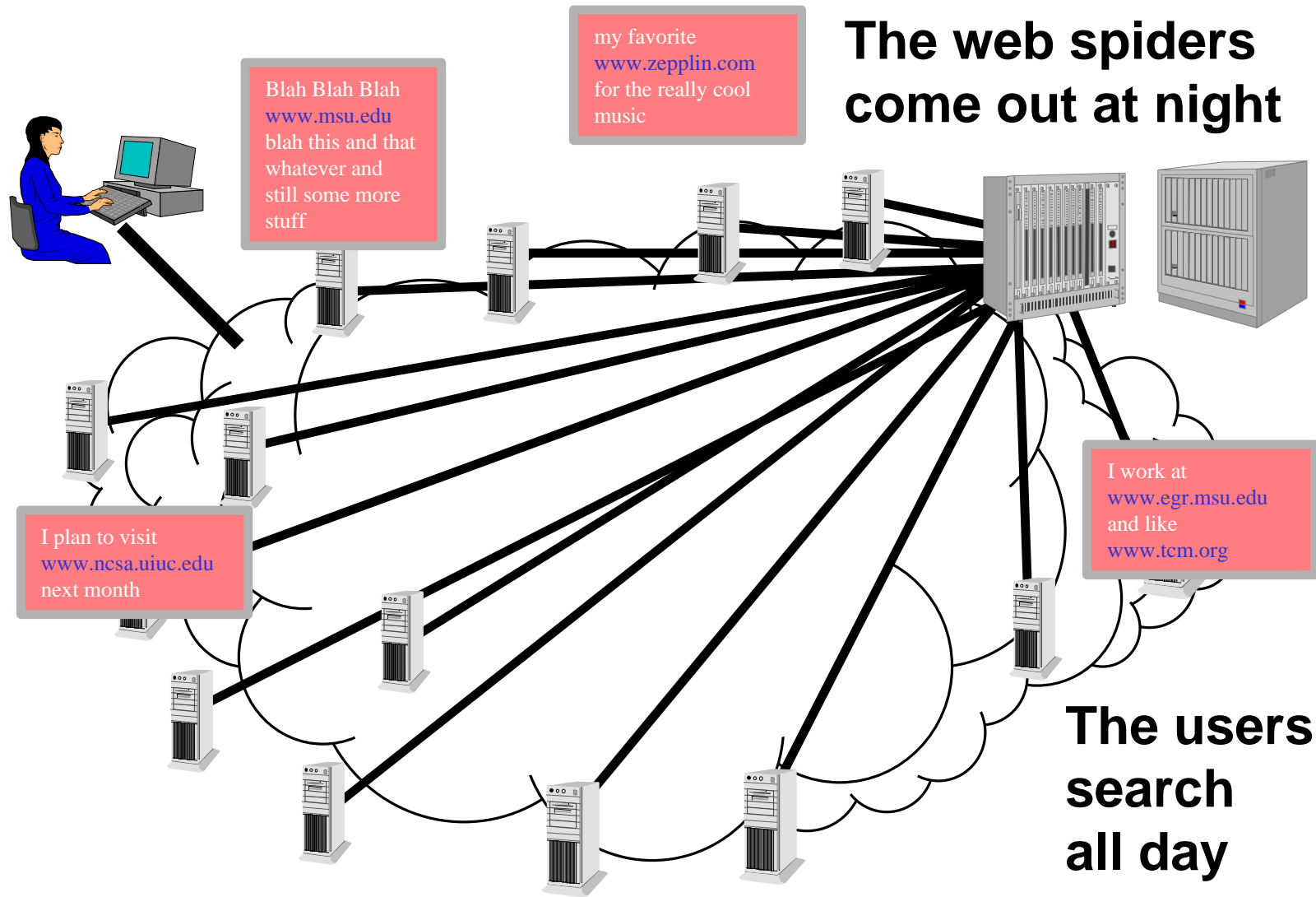
- Netscape - Options/Preferences
- Explorer - View/Options
- Change fonts, colors, security, start page, search page, network usage, proxy addresses, helper applications, viewers, screen layout, cache settings, image autoloading, etc..
- Configure the POP and NEWS settings

Explorer



Indexing and Searching

- The web grew too fast - can't keep track
 - 31 million pages, 476,000 servers, 23 million hits/day (Altavista Jan 1997)
- Search engines
 - Look at references to pages already stored
 - Retrieve those pages
 - Create keyword index
- Search = keyword index + “Intelligence”



Search Engines

- altavista.digital.com
- altavista.msu.edu
- www.infoseek.com
- www.excite.com
- www.search.com
- www.askjeeves.com

Netscape - [AltaVista Search: Main Page]

File Edit View Go Bookmarks Options Directory Window Help

Back Forward Home Reload Images Open Print Find Stop

Location:

What's New? What's Cool? Destinations Net Search People Software

digital

ALTA VISTA™ Search
OnSite Knowledge

Advanced Simple

FREE DOWNLOAD
Private eXtensions
Products Help

IBM Domino HR Access InfoMarket Commerce POINT
Internet Solutions

Search and Display the Results

Submit

Tip: To find how many pages point to a site (say, digital.com) you're interested in, try: **link:http://digital.com**

European Users: try AltaVista Europe!

Document: Done

Altavista Tricks

- “apple pie”
- +karaoke +lansing +michigan
- paris = paris, Paris, parIS, or PARIS
- host:*.msu.edu
- url:*.uk
- +”apple pie” +rec*pe -”in the face”
-Many more

Search .vs. Catalog

- Global search engines falling behind
 - Give up on “everything” try “useful info”
 - Search engines have real trouble determining “useful”
- Catalogs - www.yahoo.com
- Recent Developments
 - Directed Search Engines - Topical
 - Localized Search Engines - “Geographical”



NEM ONLINE

NETWORK FOR EXCELLENCE IN MANUFACTURING

- SEARCH
- BROWSE
- ASSISTANCE PROVIDERS
- R & D PARTNERS
- SUBJECT EXPERTS
- CONTENT PARTNERS
- CONFERENCE

Search for:

 [Search](#)

 [Browse](#)

NEM Online allows for different levels of searching. These include the ability to search NEM Online maintained resources, NEM Online's catalog of web sites, and targeted web sites using AltaVista.

Browse NEM Online's index according to various categories.

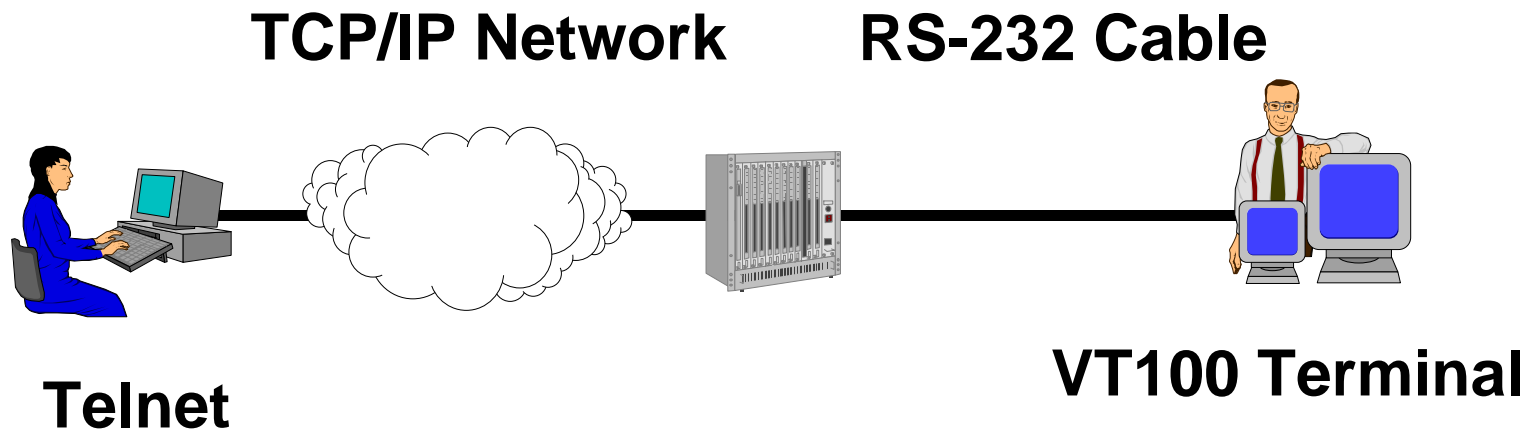
NEM Online has created a Default Directory for

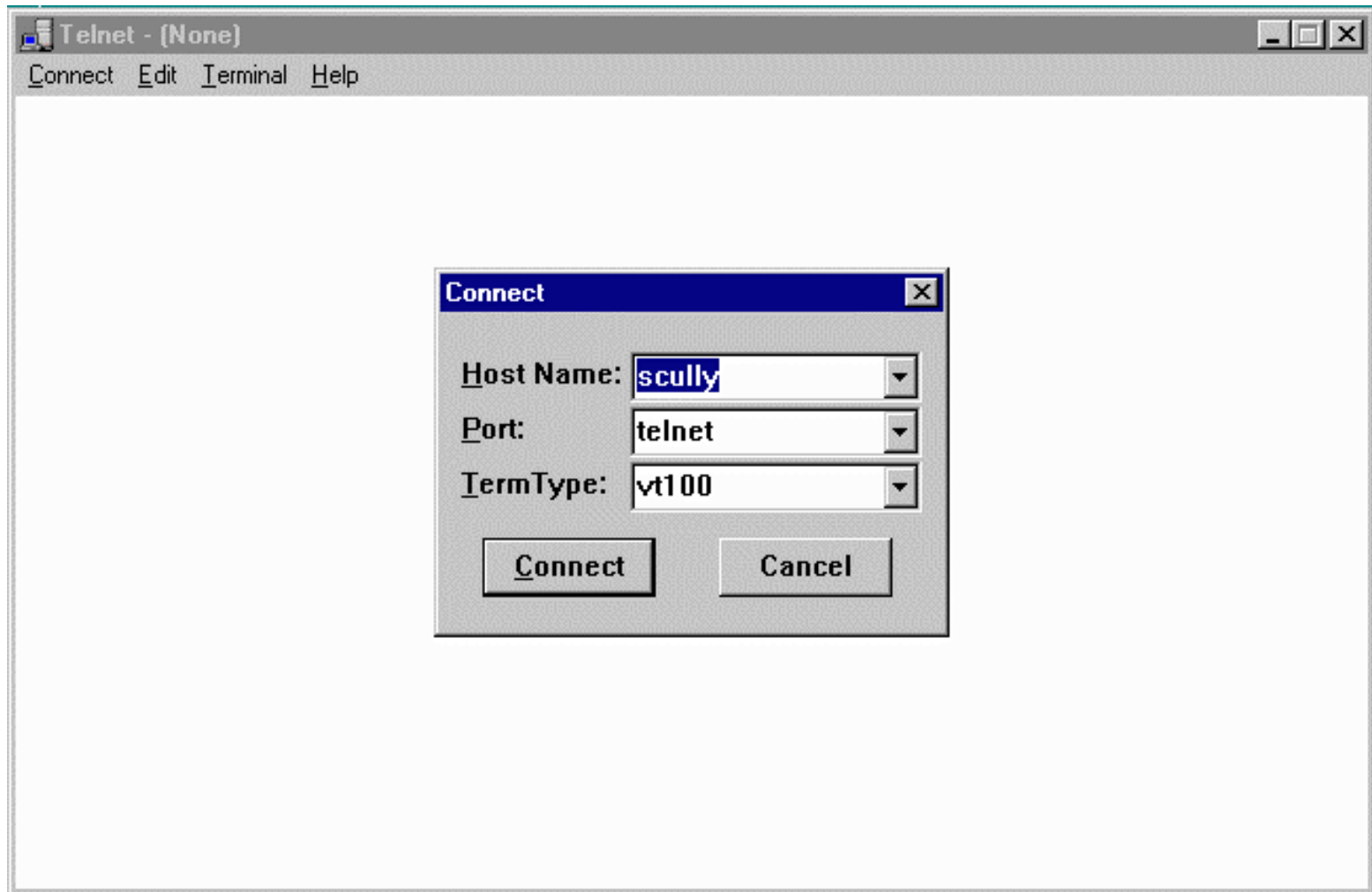
Up Next:
Using Telnet
Using E-Mail

Continue

Telnet - Connect Text Mode

- Telnet is one of the classic applications
- It is a terminal emulator which works over a network connection





The UNIX System

- Often telnet connects to a UNIX system
- Can be in line mode ala MS-DOS

```
SunOS/scully 3% ls
CSACMailList  calendar      ed              projects       tmp
LIST          cefile.hang   faculty        public         upload
Mail          cps291        manage         qqq           web
bin           download      phones         school

SunOS/scully 4% date
Tue Feb  4 09:06:55 EST 1997

SunOS/scully 5% uptime
 9:07am up 11 day(s), 45 min(s), 17 users, load average: 5.25

SunOS/scully 7% /usr/sbin/ping www.cs.stanford.edu
labrea.Stanford.EDU is alive

SunOS/scully 8% elm
```

```
Telnet - scully
Connect Edit Terminal Help

Mailbox is '/var/mail/crs' with 57 messages [ELM 2.4 PL24]

1 Feb 4 Mail Delivery Subs (70) Returned mail: Host unknown (Name se
2 Feb 4 Charles Henrich (29) Look at:
3 Feb 3 Bryan C. Pijanowsk (58) Re: EarthVision
4 Feb 3 Beth Rhodes (39) Re: Computer Conference
5 Feb 3 Piyarat Nanta (50) Thesis committee member
6 Feb 3 bcarlson@computer. (85) Standards idea
7 Feb 3 Tom Volkening (29) Building Renumbering
8 Feb 3 Dr. Anil Jain (37) Re: Fal Computing Conference
9 Feb 3 John Thayer Sun Ed (33) Re: F90
10 Feb 2 Dr. Anil Jain (34) annual report

You can use any of the following commands by pressing the first character;
d)elete or u)ndelete mail, m)ail a message, r)eply or f)orward mail, q)uit
To read a message, press <return>. j = move down, k = move up, ? = help

Command: █
```

Electronic Mail

- Largest use of Internet for many years
- Electronic Mail is very reliable
 - Delivered off-line if necessary
 - If a connection is down, E-Mail will be stored and retried later
- E-Mail only works when it is read regularly

E-Mail Addresses

- E-Mail addresses consist of a account name and an Internet Domain Name

crs@egr.msu.edu

Account Name **Domain Name**

- E-Mail addresses are like phone numbers - on your business card

Reading E-Mail

- Terminal-style interfaces
 - Read mail on the Internet connected server
 - Store folders on the server
 - Must use text editor on server to compose messages
- Post Office Protocol on PC's
 - Much more convenient - Mouse
 - PC's may be turned off or disconnected

E-Mail Settings @ MSU

- Pilot - Text based - uses elm
 - telnet pilot.msu.edu
- Pilot also supports POP access
 - POP server: pilot.msu.edu
 - SMTP server: pilot.msu.edu
 - POP account and password are the same as your pilot ID
- Other departments have other systems

Mailbox is '/var/mail/crs' with 57 messages [ELM 2.4 PL24]

1	Jan 18	Castillo Zacatelco	(32)	Help me ..!!!
2	Jan 18	Mark A. Hunter	(38)	IEEE/SEM Web Page
3	Jan 18	Marshall D. Hesten	(29)	Web Version of CPS 291
4	Jan 18	Marshall D. Hesten	(34)	Zoom Text in 220 Egr
5	Jan 18	Jeff Evans	(32)	Re: not making the 10:20
6	Jan 17	David J Fitzgerald	(90)	How to get the money!!??
7	Jan 17	David J Fitzgerald	(64)	Funding Proposal
8	Jan 17	Alejandro Diaz	(144)	Computing Services Advisory Committe
9	Jan 17	George.Van_Dusen	(25)	Engineering Fee
10	Jan 17	Bernie G Holmes	(54)	APP&R Budget Suggestions

You can use any of the following commands by pressing the first character;
d)delete or u)ndelete mail, m)ail a message, r)eply or f)orward mail, q)uit
To read a message, press <return>. j = move down, k = move up, ? = help

Command: Quit

Folder unchanged.

SunOS/scully 6%

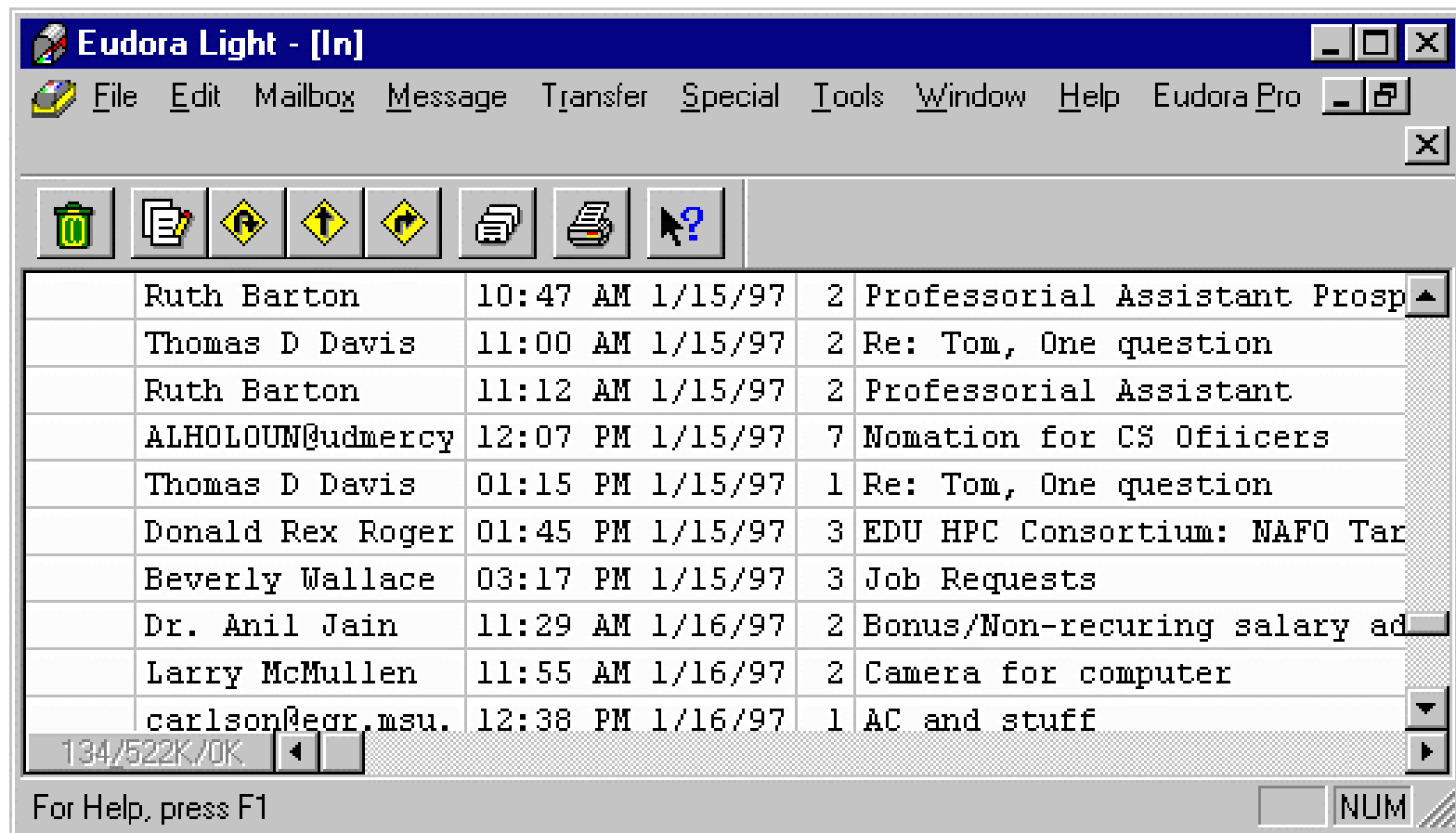
Post Office Protocol (POP)

- With PC's people like "pointy-clicky"
- PC's are not always ready to receive
- POP uses a server to accept mail
- When PC starts up, mail is downloaded from the server
- Ease of editing
- Attaching a binary file

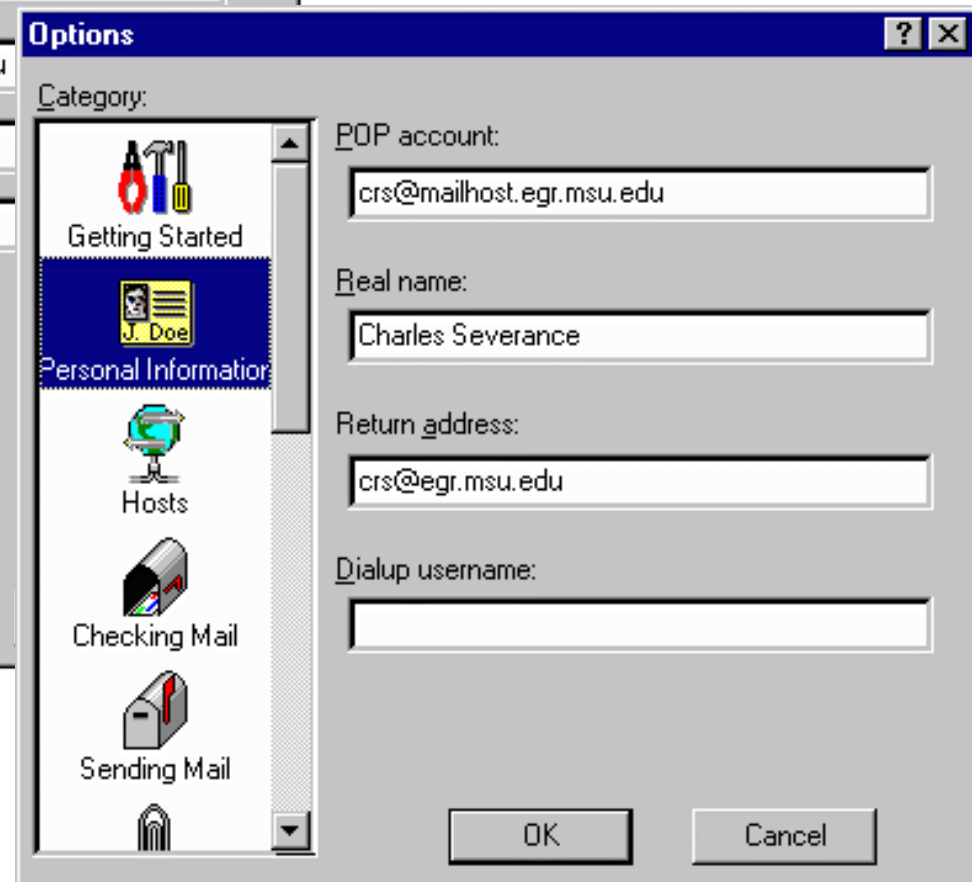
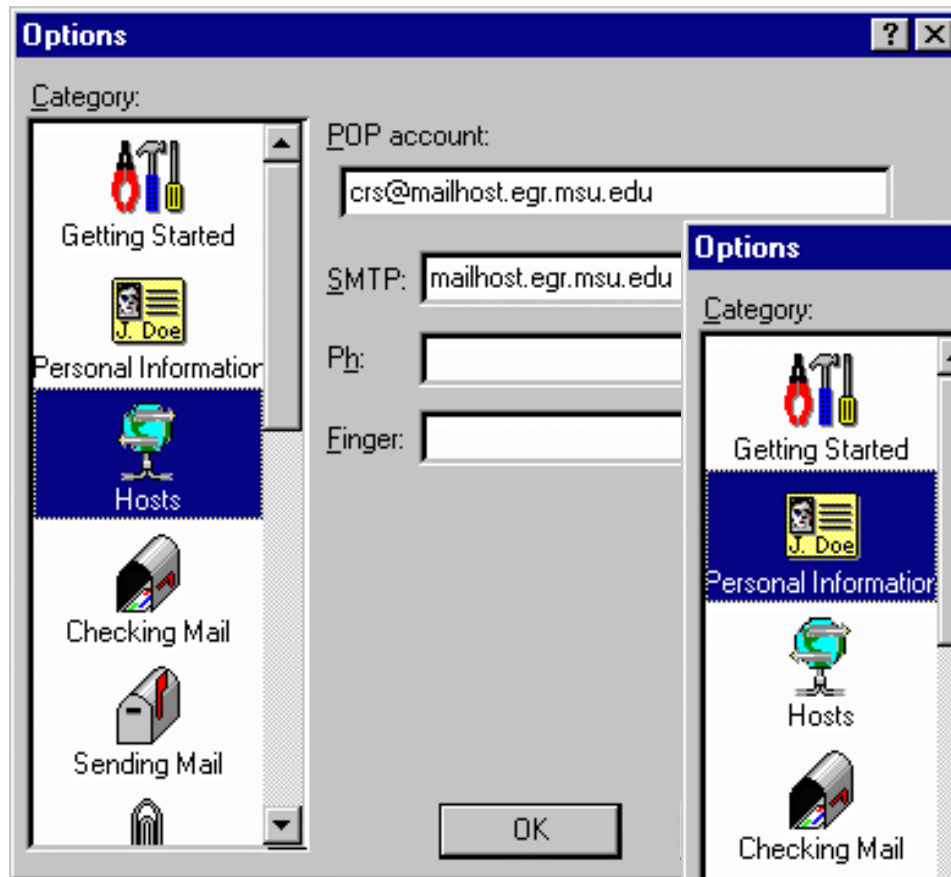
Software which Supports POP

- Eudora
- Netscape
- Microsoft Outlook
- Microsoft Outlook Express
- Many others...

Eudora



Configuration



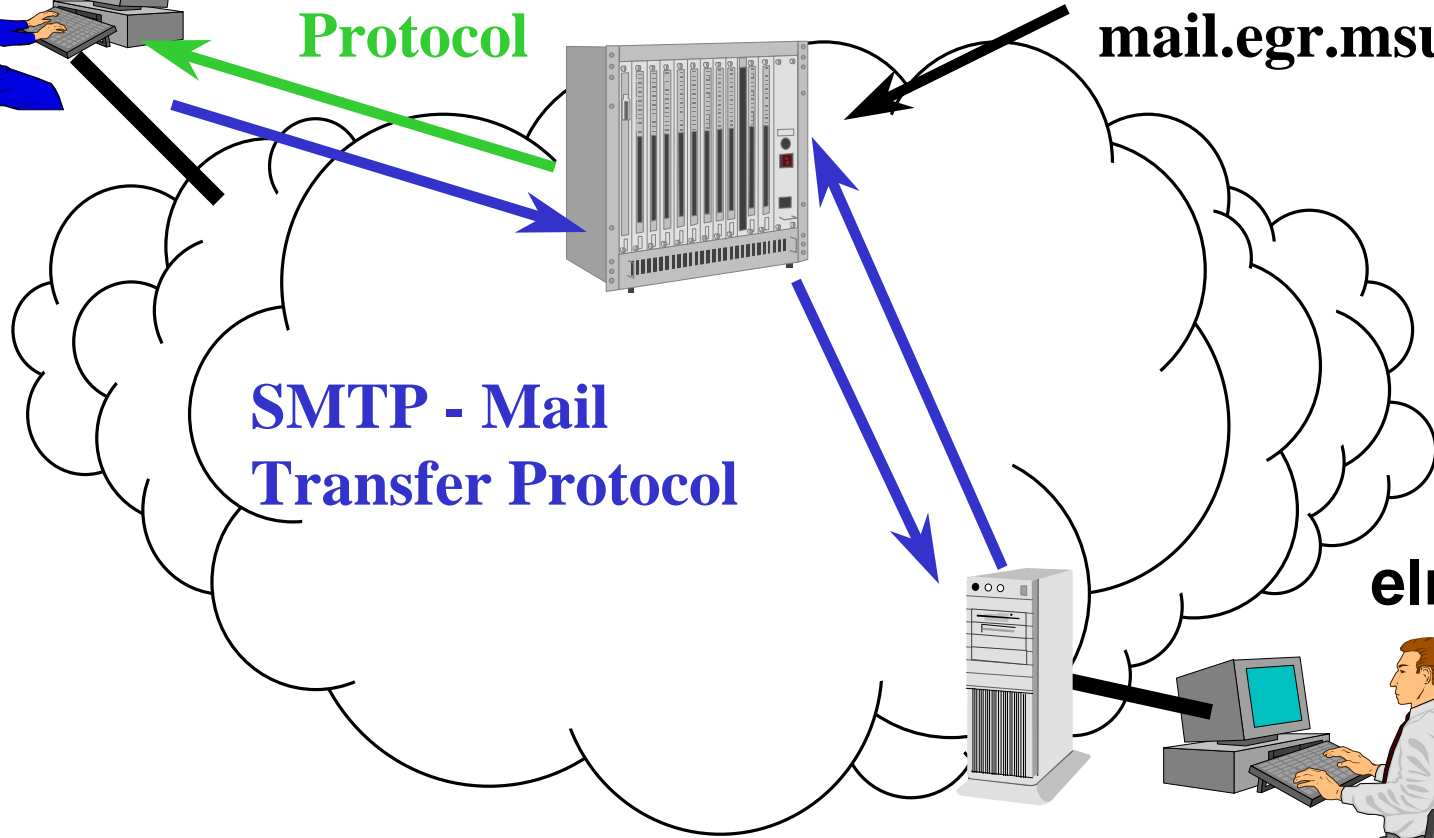
Eudora



POP Operation

Post Office
Protocol

“Post Office”
mail.egr.msu.edu



SMTP - Mail
Transfer Protocol

elm



Attachments

- An advantage of using POP for both sender and receiver
- Similar to sending a file on a floppy
- MIME - Good for PC - Use when unsure
- binhex - Good for Mac
- uuencode - Good for UNIX
- Can have viruses - JUST like a floppy

Problem with POP

- Incoming messages
 - Copied to Hard Disk - If you use one PC
 - Leave on Server - If move from PC to PC
- Folders - “All my mail from Wiggins”
 - Kept on Hard Disk
- A protocol called IMAP keeps both folders and incoming mail on the server

Up Next:
Using FTP
Publishing Web Pages

Continue

FTP - File Transfer Protocol

- Used to transfer files
- Can be used to convert text files
 - ASCII <-> EBCDIC (Mainframe)
 - Line-Ending - DOS/Mac/UNIX/VMS
- Many programs do FTP
 - Netscape - downloads - <ftp://ftp.msu.edu/>
 - Win-95 ftp.exe - simple command mode
 - WS_FTP32 - Nifty screen mode FTP

FTP Commands

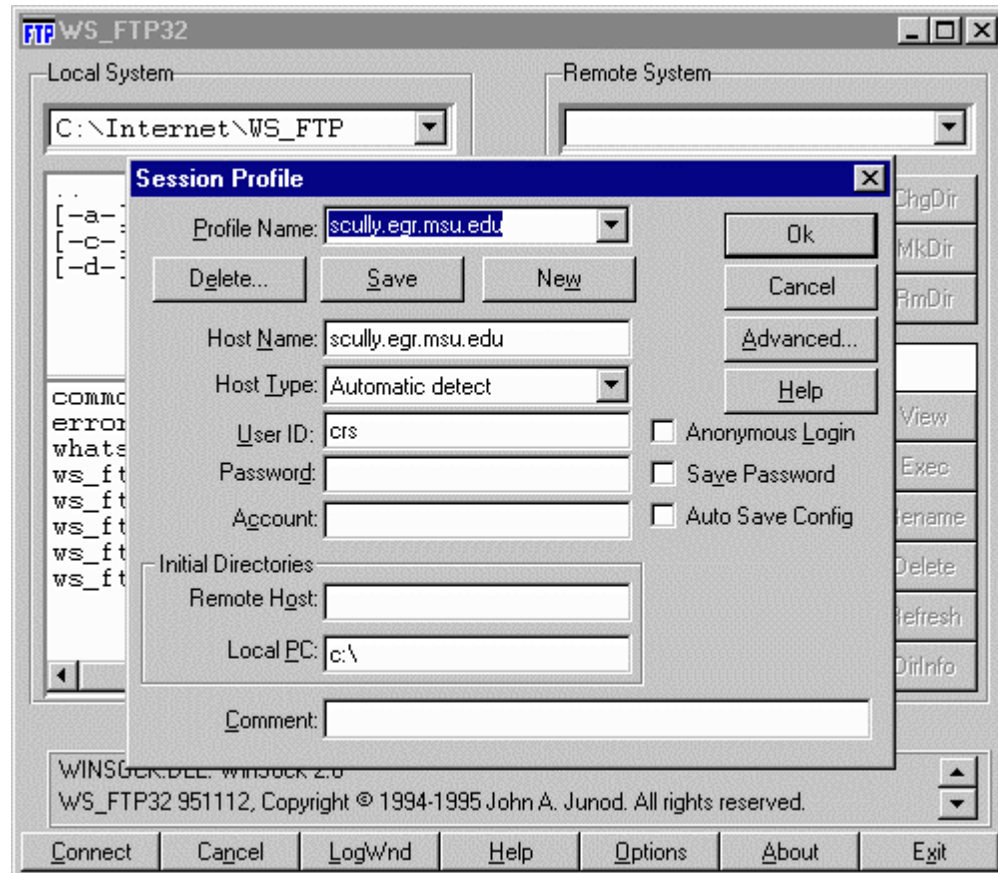
- **open pilot.msu.edu**
- **cd dir**
- **lcd directory**
- **put localfile [remotefile]**
- **get remotefile [localfile]**
- **ascii (use for .html .txt .c files)**
- **binary (use for .gif .jpg .doc .zip files)**
- **mput *.c**
- **pwd**
- **bye**

FTP to Pilot Space

```
C:\ > ftp pilot.msu.edu
Connected to pilot. msu.edu.
220 pilot.msu.edu FTP server (Version wu-2.1c(17) Fri Jan 21)
Name (pilot:sparty): sparty
331 Password required for sparty.
Password: [Type in your password. It will not be displayed.]
230 User sparty logged in.
ftp> cd web
ftp> put index.htm
200 PORT command successful.
150 Opening ASCII mode for index.htm (9286 bytes).
226 Transfer complete.
9286 bytes transferred in 0.0724 seconds (133.9 Kbytes/s)
ftp> quit
221 Goodbye.
```

WS_FTP32

- Full Screen
- Can send an entire directory
- Very convenient



Personal Publishing

- First Web Servers supported “User Pages”
- As many styles of user pages as there are people
 - Serious publications
 - “My Favorite Stuff”
 - My views on whatever
 - Family pictures

Kevin Allen Kowalkowski

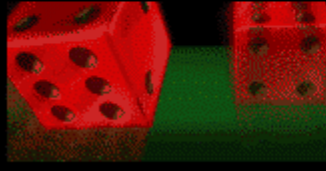
File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit

Address <http://www.egr.msu.edu/~kowalkow/>

Links [Best of the Web](#) [Channel Guide](#) [Customize Links](#) [Free HotMail](#) [Internet Start](#) [Microsoft](#) [RealPlayer](#) [Windows Update](#)

Kevin Allen Kowalkowski




Here are my links:

- [My Resume](#)
- [Life](#)
- [Janean](#)
- [College of Engineering](#)
- [My EGR Map](#)
- [DECS](#)
- [Michigan State](#)
- [A Great View!](#)
- [My VRML Creations](#)

(plug-in necessary)

- [Castle](#)
- [Engineering Building](#)
- [My room](#)
- [The solar system](#)
- [Janean in a cube](#)
- [My Computer](#)
- [A chair](#)



Welcome To My World

Internet zone

Katy Luchini's Homepage

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit

Address <http://www.cse.msu.edu/~luchinik/page/>

Links [Best of the Web](#) [Channel Guide](#) [Customize Links](#) [Free HotMail](#) [Internet Start](#) [Microsoft](#) [RealPlayer](#) [Windows Update](#)

Welcome

About Me

Activities

Friends







Garden

Links

Projects

Resume

How do I spend my time? I'm...

	...Chairperson of the MSU Student Chapter of the Association for Computing Machinery
	...Communications Chair for the MSU Chapter of Tau Beta Pi , the National Engineering Honor Society
	...Co-Chair of the Honors College Student Advisory Committee
	...Treasurer of the Spartan Handbell Choir
	...a junior at Michigan State University in East Lansing, Michigan, USA
	...getting a B.S. in Computer Science
	...in the MSU College of Engineering
	...also getting a B.A. in Political Theory

Internet zone

Your First Web Page

- Develop your HTML (HyperText Markup Language)
- Upload to the web space (use FTP)
- Test your web page
- There are easier ways to do this but this way will work

Create index.htm

- Type this into a file C:\index.htm

```
<h1>A Very Simple Home Page</h1>
<p>
Welcome to my home page. This page
is just a test to see if I can actually get
something to upload. Here is
<a href="http://www.msu.edu/"> MSU! </a>
</p>
<p>This page is under construction</p>
```

FTP to Pilot Space

- Start | Run | [ftp pilot.msu.edu](ftp://pilot.msu.edu) | OK

```
220 pilot.msu.edu FTP server (Version wu-2.1c(17) Fri Jan 21)
Name (pilot:sparty): sparty
331 Password required for sparty.
Password: [Type in your password. It will not be displayed.]
230 User sparty logged in.
ftp> cd web
ftp> put C:\index.htm index.htm
200 PORT command successful.
150 Opening ASCII mode for index.htm (9286 bytes).
226 Transfer complete.
9286 bytes transferred in 0.0724 seconds (133.9 Kbytes/s)
ftp> quit
221 Goodbye.
```

View Your New Page!

- Test the page using your browser
 - <http://www.msu.edu/user/sparty/>



```
<h1>A Very Simple Home Page</h1>
<p>
Welcome to my home page. This page
is just a test to see if I can actually get
something to upload. Here is
<a href="http://www.msu.edu/"> MSU! </a>
</p>
<p>This page is under construction</p>
```



Publishing Pages

- Your web site will consist of more than just one file
 - Multiple html files
 - Images (*.jpg, *.gif)
 - Subdirectories
- We will cover this in more detail

The “web” Subdirectory

- Typically you have a home directory on each system for your files
 - /afs/msu/user/c/r/crs
 - /user/crs
 - /home/uo/crs
- Unless your account is specially setup for web pages only, there is a subdirectory called “web” which is used to store pages

Putting a file on the Web

- To publish a file, you must get the file into your web directory (typically with FTP)
- The name of the file becomes the last part of the URL

[/afs/msu/user/c/r/crs/web/crs.gif](#)

<http://www.msu.edu/user/crs/crs.gif>

Sub-Directories

- Below the web subdirectory, you can create your own directory structure. The directory structure is reflected in the URL.

[/afs/msu/user/c/r/crs/web/photos/crsgrad.gif](#)

<http://www.msu.edu/user/crs/photos/crsgrad.gif>

The index.html (or .htm) File

- When you specify a directory in the URL, the web server looks for a *default* file
 - index.html or index.htm on Pilot
 - index.html on CPS and EGR
 - index.htm Windows index.html on UNIX

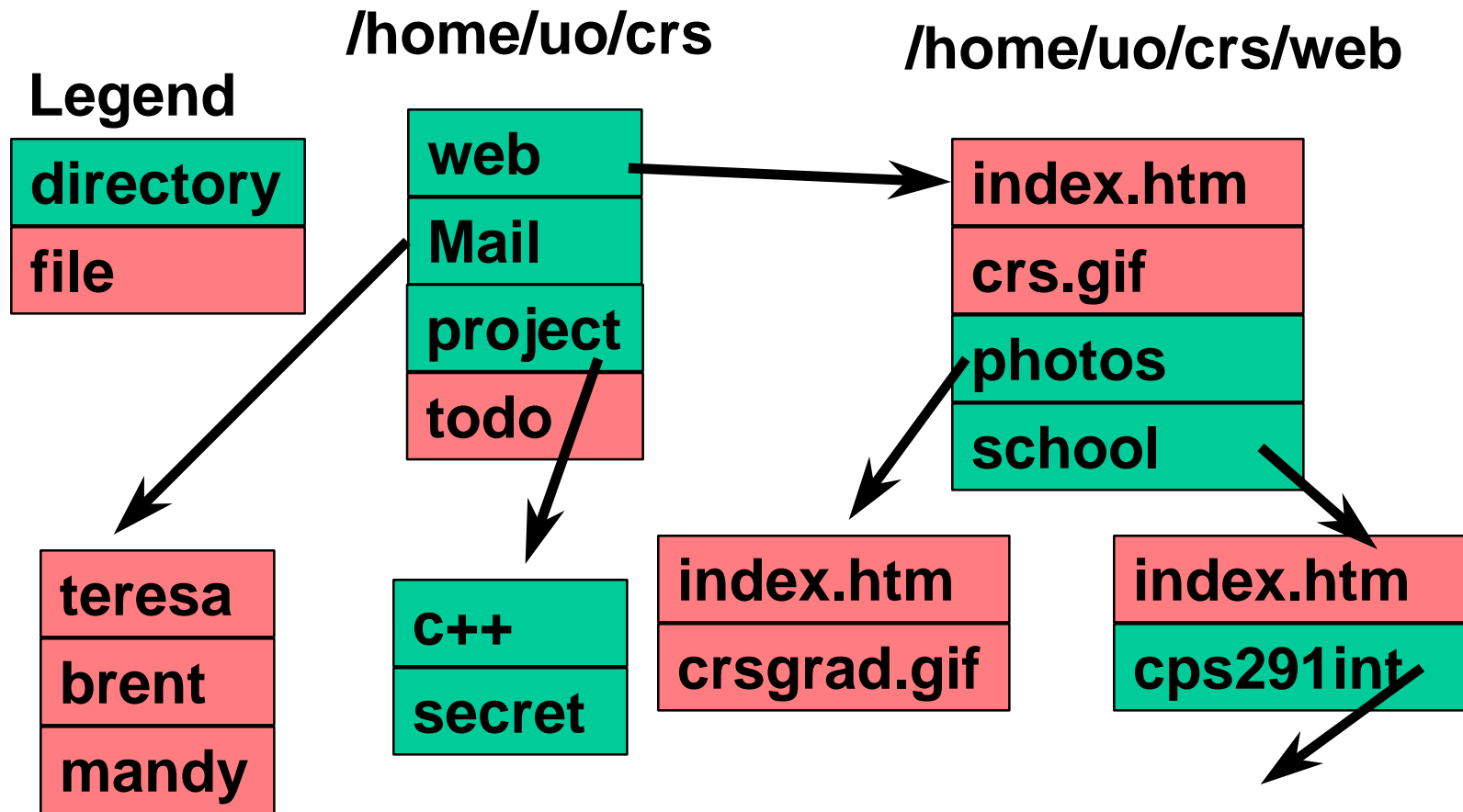
<http://www.msu.edu/user/crs/photos/>

</afs/msu/user/c/r/crs/web/photos/index.htm>

Added



A Web Structure



HTML Tools

- Converters
 - Microsoft Word
 - Microsoft PowerPoint
- Editors
 - Microsoft Frontpage
 - Netscape Composer
- One-button publishing is possible

Summary

- Fundamental Internet tools
 - Netscape Navigator/Microsoft Explorer
 - telnet
 - ftp
 - HTML
- These tools are a great improvement over the previous tools