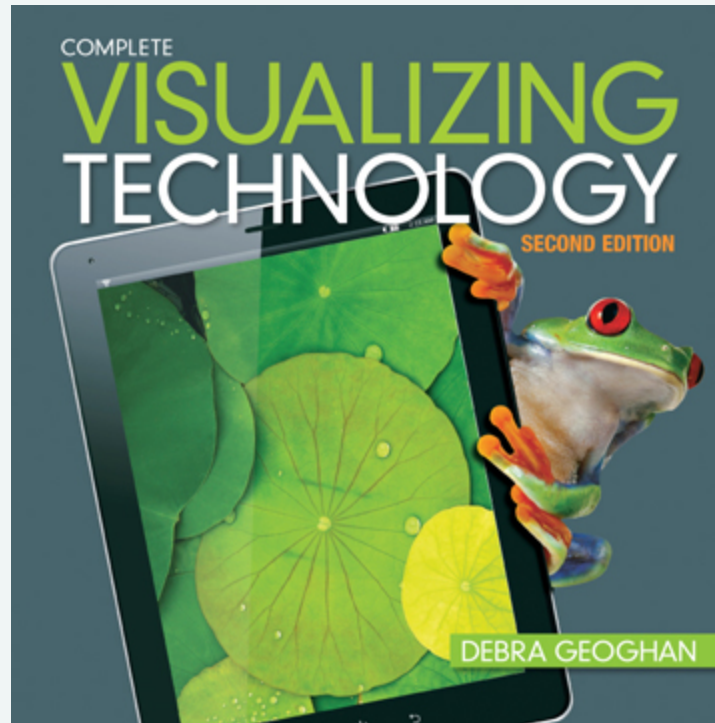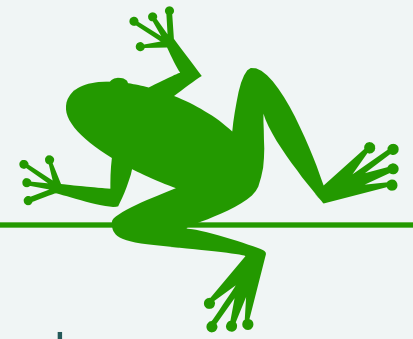# PowerPoint Presentation to Accompany

Chapter 7

The Internet

Objectives

1. Recognize the importance of the Internet.
2. Compare types of Internet connections.
3. Compare popular Web browsers.
4. Demonstrate how to navigate the Web.
5. Discuss how to evaluate the credibility of information found on the Web.

Objective 1: Overview

Internet Timeline

1. Discuss the origins of the Internet
2. Discuss the impact of hypertext and hyperlinks
3. Discuss Internet2 and why it was created

Key Terms

- ARPANET
- Hyperlink
- Hypertext
- Internet (net)
- Internet2
- Internet backbone
- Internet Exchange Points
- World Wide Web

Brief History of the Internet

- 1957 – Soviet Union launches Sputnik
- 1960s – U.S. Department of Defense develops the ARPA project
  - ARPANET – Advanced Research Projects Agency Network
  - Becomes the Internet
  - Multiple pathways for information to travel
  - Losing part of the system would not cripple the entire project

Brief History of the Internet

THE ARPA NETWORK

DEC 1969
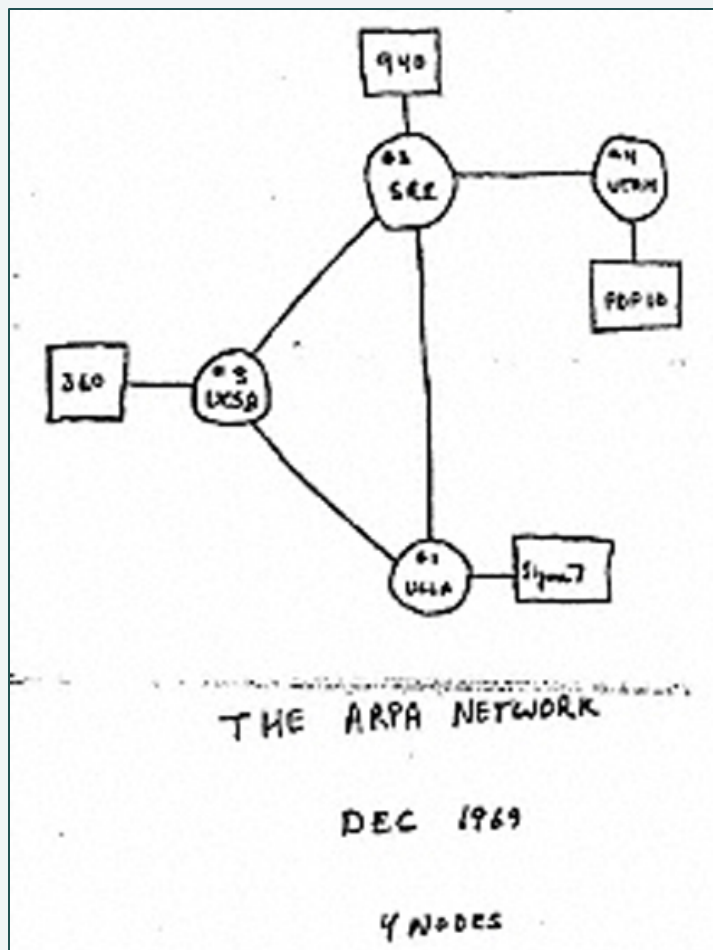
4 NODES

- ARPANET's 4 nodes:
  - UCLA
  - SRI
  - University of Utah
  - UCSB
- 1979 – NSF created CSNET
  - Connected universities
  - Used ARPANET technology

Brief History of the Internet

Backbone – high-speed connection points between networks

- Mid-1980s – NSF created NSFNET
- Late1980s – NSFNET was the primary Internet backbone
- 1995 – NSF backbone was decommissioned and privatized
- Today – backbone is composed of Internet Exchange Points around the world

The Internet
The Physical Entity: A Network of Computers

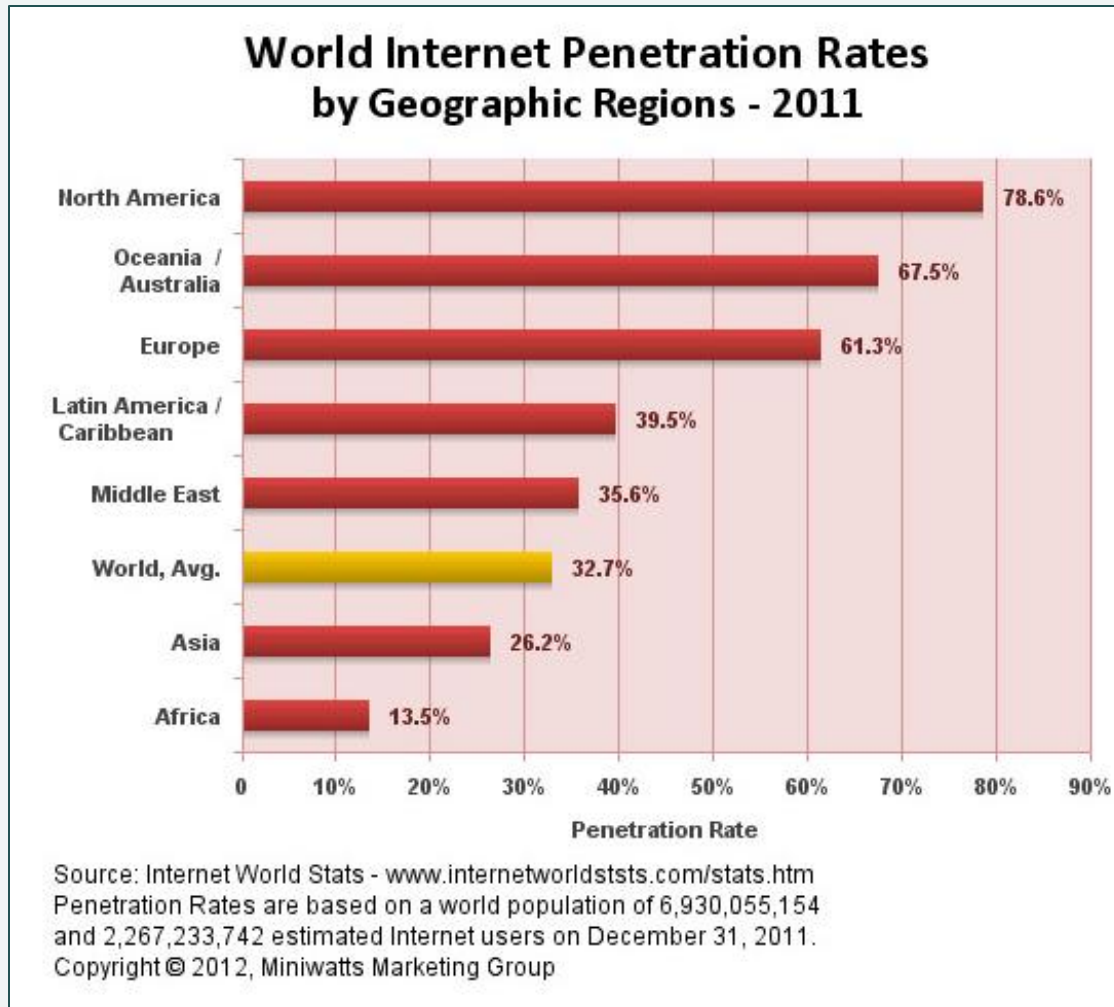- IM
- Email
- VoIP
- FTP
- P2P
- WWW

The Internet
The Physical Entity: A Network of Computers

- **Hypertext**:
  - Text that links to other text
- **Hyperlinks:**
  - Provide navigation through pieces of information
- 1991 – Tim Berners-Lee and CERN released the hypertext system
- 1992 – A million Internet nodes; commercial sites appeared
- 1993 – Mosaic GUI browser released; becomes Netscape
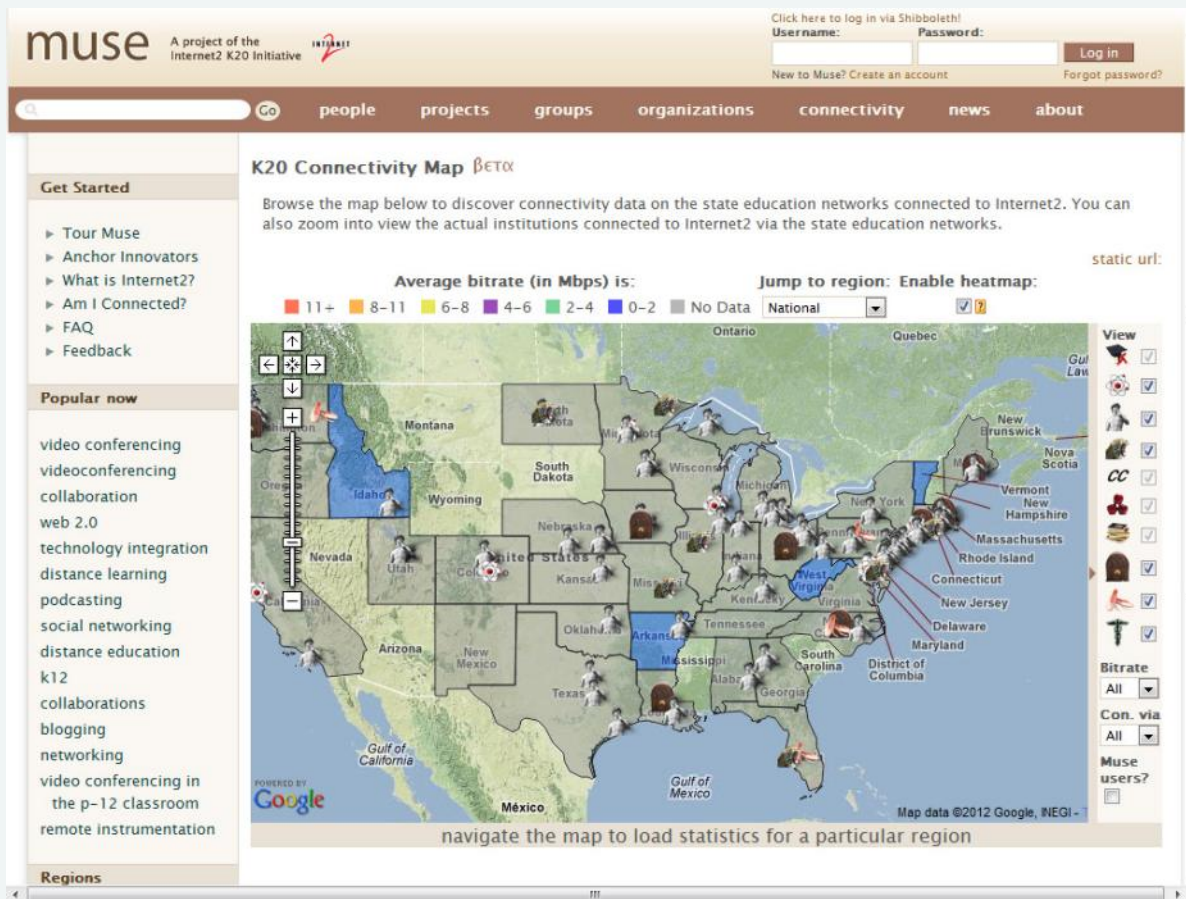- 1995 – AOL, Prodigy, and CompuServe offer Internet service

The Internet
The Physical Entity: A Network of Computers

World Internet Penetration Rates by Geographic Regions - 2011

Region	Penetration Rate
North America	78.6%
Oceania / Australia	67.5%
Europe	61.3%
Latin America / Caribbean	39.5%
Middle East	35.6%
World, Avg.	32.7%
Asia	26.2%
Africa	13.5%

Source: Internet World Stats - www.internetworldststs.com/stats.htm
Penetration Rates are based on a world population of 6,930,055,154
and 2,267,233,742 estimated Internet users on December 31, 2011.
Copyright © 2012, Miniwatts Marketing Group

Internet 2 (I2)

Designed for education, research, and collaboration

- Colleges
- Universities
- Other educational institutions
- Museums
- Art galleries
- Libraries
- Hospitals

Does your school participate in the I2 project? Ask your librarian or instructor. If yes, what features does your school use? If not, why not?

Objective 2: Overview

Get Connected

1. Discuss methods to connect to the Internet
2. Compare and contrast Internet connection methods
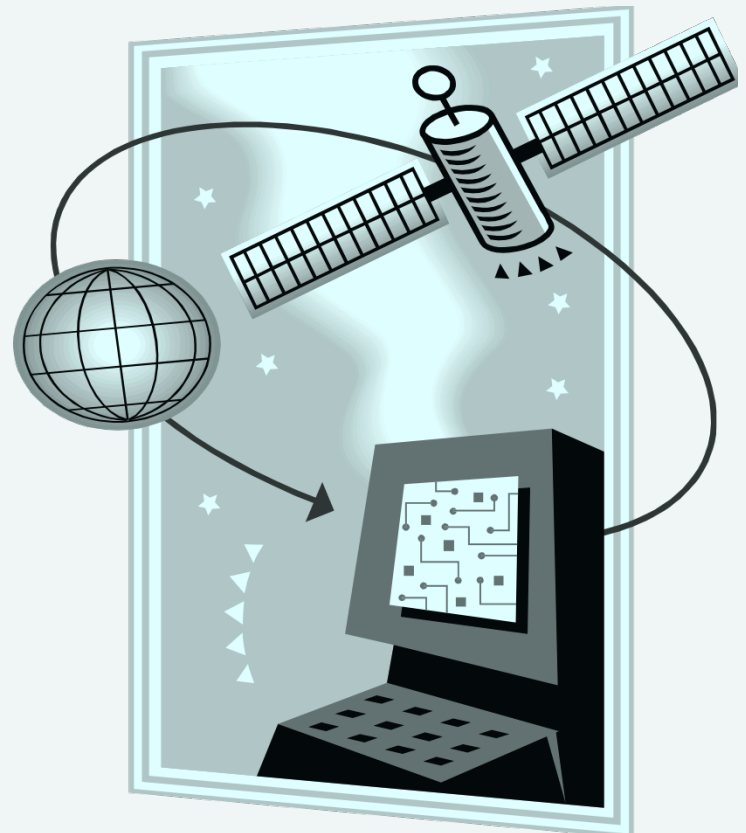3. Discuss wireless connection methods

Key Terms

- Broadband
- Cable Internet access
- Dial-up
- DSL
- Fiber-to-the-Home (FTTH)
- Hotspot

- Internet service provider (ISP)
- LTE (Long Term Evolution)
- Municipal WiFi
- Satellite Internet access
- WiFi
- WiMAX Mobile Internet

Internet Connection

- Internet service provider (ISP)
  - Dial-up
  - Broadband
  - Wireless
  - Wireless mobile
  - Satellite

Internet Connection: Wired

Dial-up	Broadband Options		
	Cable	DSL	FTTH
■ Least expensive ■ Uses regular phone line ■ $10-$30 per month ■ Very slow, maxing out at 56 Kbps	■ Offered by cable TV providers ■ Cable speeds range from 1 Mbps – 50 Mbps	■ Uses phone line to carry digital signal ■ Average speeds of 384 Kbps – 7 Mbps	■ Fastest broadband alternative ■ Speeds top out at 300 Mbps ■ Can carry Internet, phone, and TV ■ Uses fiber optic cables ■ Limited areas of availability

Internet Connection: Wireless

Wireless Options		
LTE	Satellite	Municipal WiFi
4G service - Connects to the Internet via cellular networks	- More global and more expensive option - Need a clear view of the southern sky - Weather conditions can affect service - Considered when other options are not available	- Offered in some cities and towns - WiFi hotspots - Free - Fee-based - Available in many public locations

Internet Connection

Mobile Devices

- Smartphones
- Cell phones
- PDAs
- Video game consoles (Xbox, Wii, PS3)
- Portable media players (iPod, iPad)
- eBook readers (Kindle, Nook)
- Satellite phones

Research two types of Internet access that are available where you live. Create a table like this one to compare features.

Provider	Service Type	Speed Upstream/Downstream	Cost	Extras	Other

Objective 3: Overview

Surf's Up

1. Define browsers and what they do
2. Compare the following browsers: Internet Explorer, Firefox, Chrome, Safari, and mobile browsers
3. Discuss ways to configure Web browsers

Key Terms

- Add-on
- Home page
- HTML (Hypertext Markup Language)

- Mobile browser (microbrowser)
- Plug-in
- Web browser
- Web page

Web Browsers

- **HTML**
  - Hypertext Markup Language
 - Authoring language that defines structure of Web pages

- **Web browsers**
  - Programs that interpret the HTML
  - Display Web pages

Web Browsers

Internet Explorer	Mozilla Firefox	Google Chrome	Apple Safari
▪ Released in 1995 ▪ Leading Web browser ▪ Included with Windows OS	▪ Released in 2004 ▪ Similar in look to IE ▪ Free and easy to install	▪ Released in 2008 ▪ Streamlined interface ▪ Similar to IE and Firefox, but not as many features ▪ Main focus is on speed	▪ Most popular browser for Macs ▪ Bundled with Mac OS X ▪ Available for Windows

Mobile Browsers				
Internet Explorer	Firefox	Opera	Safari	Proprietary
				Kindle, Blackberry, Android

Browser Features

Tabbed browsing

Menu

Search bar

Address bar

Bookmarks
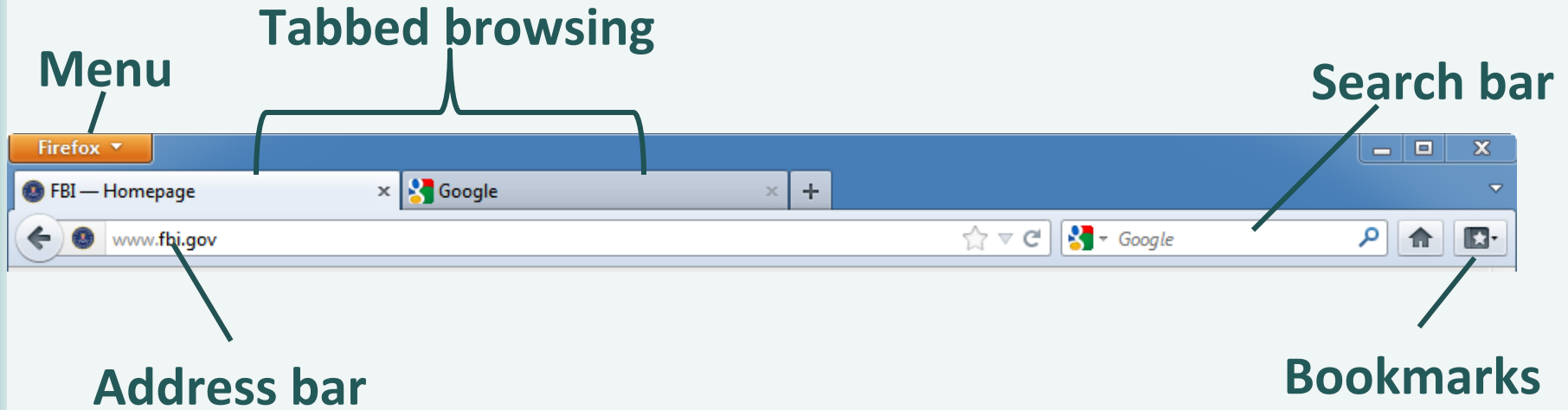
Mozilla Firefox

Configuring Browsers

- Set the home page
- Set search provider
- Add-ons
  - Additional features
- Plug-ins
  - Third-party programs
- Toolbar
  - Quick access to features

Research the version and market shares of the top five Web browsers. How has this changed since this article was written? Are there any in the current list of five that were not mentioned in this book?

Objective 4: Overview

Navigating the Net

1. Demonstrate how to navigate the Web
2. Understand the parts of a Web address
3. Learn how to create smart searches

Key Terms

- Domain name
- Domain Name System (DNS)
- Home page
- Internet Protocol (IP) address
- Search engine

- Top-level domain (TLD)
- Uniform resource locator (URL)
- Website

Ways to Navigate

- Two ways to navigate
  - Type the URL (uniform resource locator) Web page address
  - Follow hyperlinks in the Web pages
- Website
  - Consists of one or more Web pages
- Home page
  - Main or starting page of a website

Parts of a URL

Protocol

**Domain Name or
Second-level Domain**

http://www.google.com

Third-level Domain

**Top-level
Domain (TLD)**

The Web Address

- ICANN
    - Internet Corporation for Assigned Names and Numbers
    - Coordinates the Internet naming system

- IP
    - Internet Protocol
    - Unique numbered address associated with a website

- DNS
    - Domain Name System
    - Provides a friendly name instead of an IP address

Searching the Web

- ## Search engine
  - ### Database that indexes the Web
- ## Refine searches with
  - ### Keywords
  - ### Advanced search tools
  - ### Boolean operators
    - #### AND
    - #### OR

TERMS	SEARCH FILTER/ BOOLEAN OPERATOR	RESULTS
eagles	None	216,000,000
eagles AND birds	AND	32,600,000
eagles OR birds	OR	818,000,000

Research various search engines. Select two that look interesting and search for the name of your favorite sports team. Did you get the same results? How were they different? Read the About section of the search tool to determine how content is added. You can usually find this link at the bottom of a Web page. What are some of the unique features of each?

Objective 5: Overview

Would I Lie to You?

1. Discuss how to evaluate the credibility of information found on the Web
2. Define user-generated content
3. Discuss the importance of information literacy

Key Terms

- User-generated content

Credibility and the Web

- User-generated content
  - Content written by everyday users
    - Blogs
    - Websites
    - Wikis
    - Social media sites
- It is important to know
  - What is credible
  - How to evaluate the information you find

Credibility and the Web

Considerations:

- When was the resource created or updated?
- Is the information current enough for your topic?
- Are there references given for the resource?
- Is the content primarily opinion?
- Who created the resource?
- Is there evidence that the creator or organization is an expert on this subject?
- Why was the resource put on the Web?
- What is the domain extension?
- Based on the writing style and vocabulary, who is the intended audience?

Compare these two websites based on the guidelines discussed in this article:

- *www.choosemyplate.gov*
- *www.foodpyramid.com*