

Web Principles: HTML/Expression Web



The Internet – Defined

Internetwork System

“a loose collection of related networks”

“network of networks”

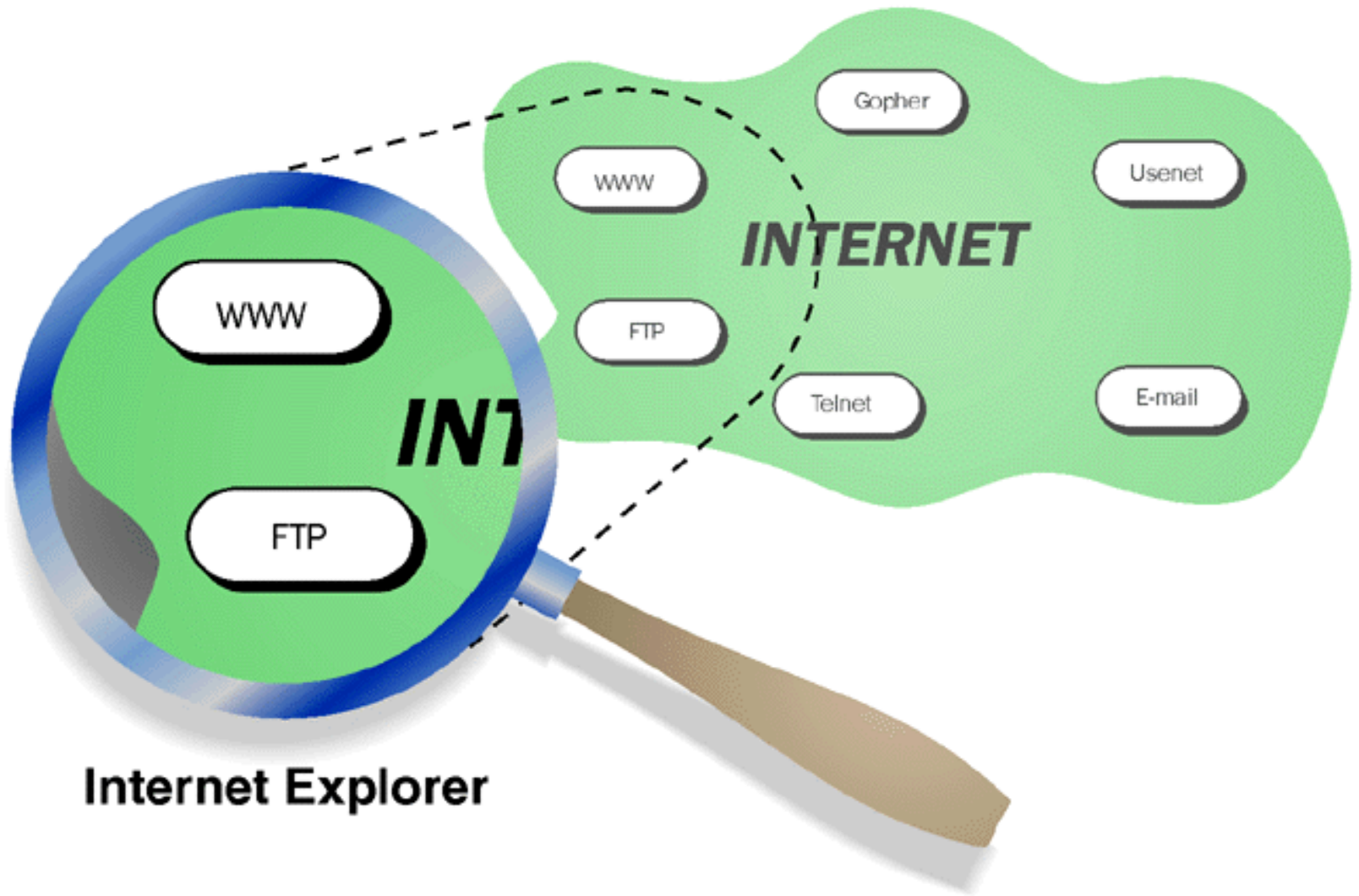
“Cyberspace”

“Information Superhighway”

“The Net”

“Surf the Net”

Internet Functions



The Internet - History

1969 - ARPA (Advanced Research Projects Agency)

ARPANET internetwork for scientists, researchers

Developed rules/protocols & connected

1982 – ARPANET joined MILNET

Included military networks

1986 – NSFNET joined ARPANET

National Science Foundation

1992 – World Wide Web

Global information retrieval system through Hypertext

1993 – Graphical Interface Web Browser

Mosaic browser written at University of Illinois

Forerunner to Netscape

The Internet – Who owns it?

No single entity owns or operates the Internet

1990 - Electronic Frontier Foundation (EFF)

- Protects Civil Liberties & 1st Amendment
- Addresses Social & Legal Issues
- Minimize Governmental Control

1992 – Internet Society (ISOC)

- International Organization
- Promotes Global Exchange of Information
- Set Standards
- Problem Solving

1994 – World Wide Web Consortium (W3C)

- Maintain Standards
- Education and Outreach

The Internet – How big is it?

http://mashable.com/2011/06/19/how-many-websites/#view_as_one_page-gallery_box1583

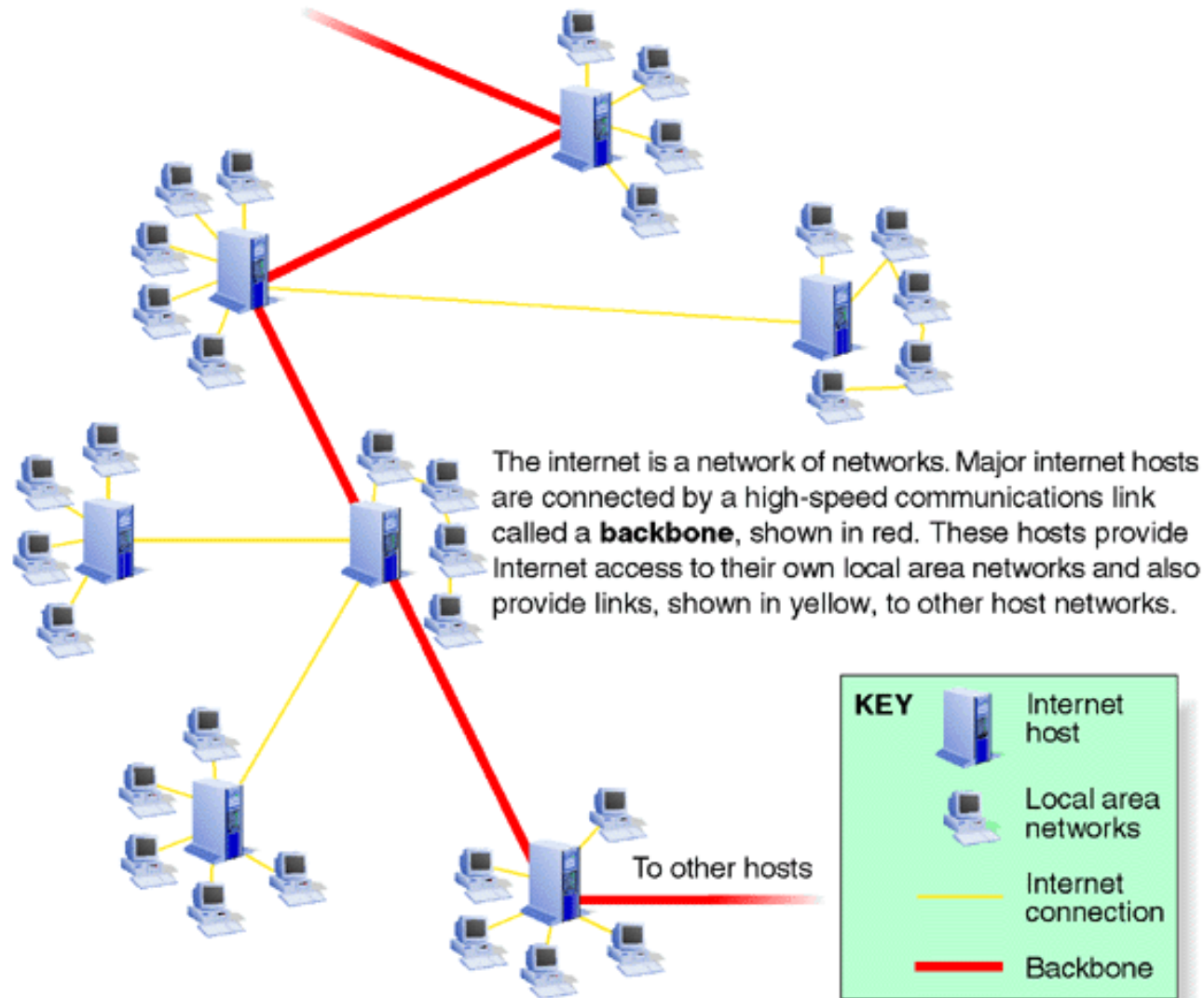
Terminology

Data Communications

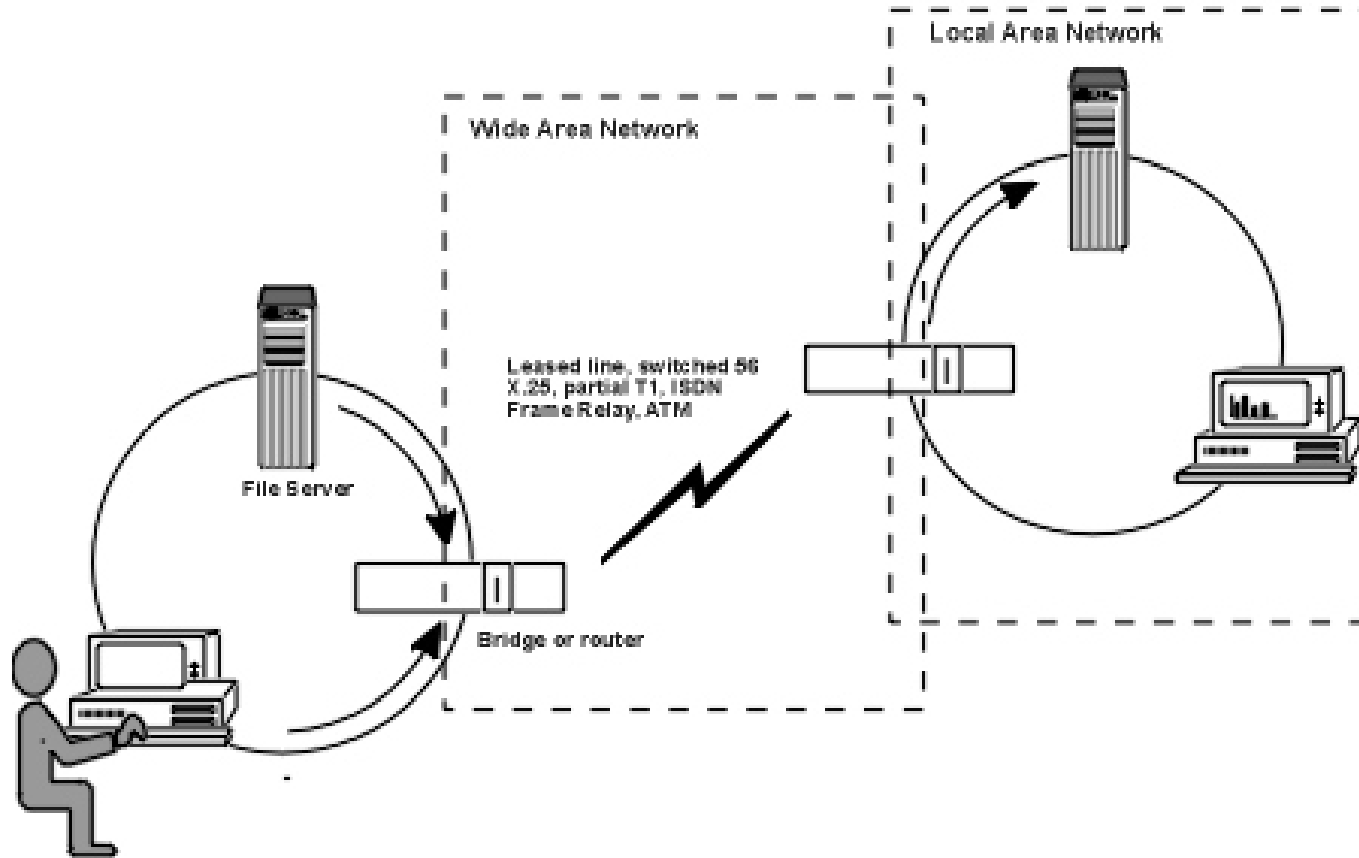
The four components of data communications:

1. Sender – originator of message
2. Channel – phone line, network cable
3. Receiver – destination of message
4. Protocols – rules of communication

Network of Networks



Network: LAN/WAN



Network Speed

Modem

Cable/DSL

T-1

T-3

Packet Switching

Internet data is broken into small segments with a from and to address. This enables data from many different sources to co-mingle on the same Internet lines and to be directed to the proper destination.

Router

A special-purpose device (or software package) that handles the connection between 2 or more *networks*. Routers spend all their time looking at the destination addresses of the *packets* passing through them and deciding which route to send them on.

TCP/IP

Transmission Control Protocol/Internet Protocol

The TCP/IP model describes a set of general design guidelines and implementations of specific networking protocols to enable computers to communicate over a network.

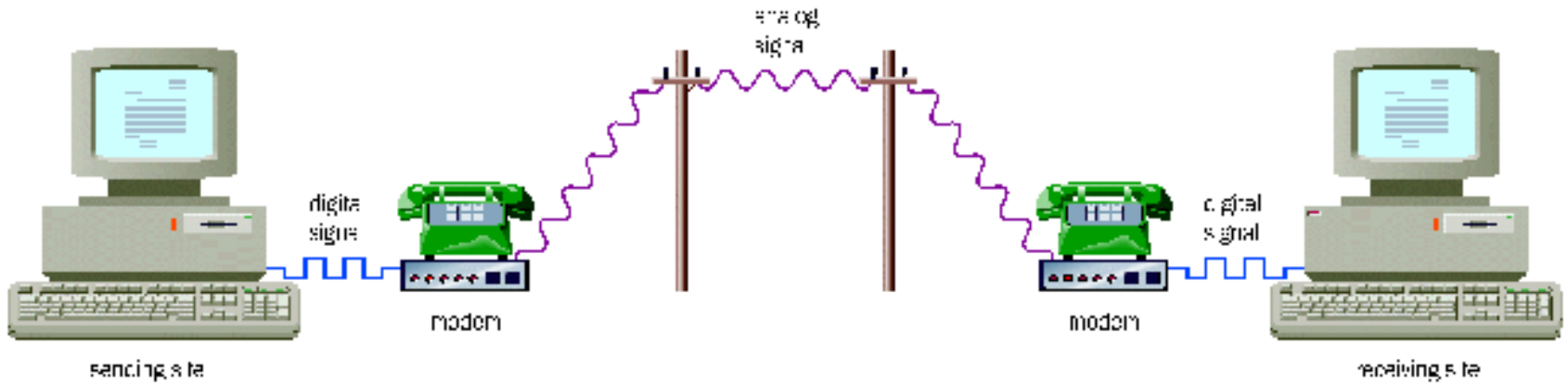
IP Number

(Internet Protocol Number) -- A unique number consisting of 4 parts separated by dots, e.g.

165.113.245.2

Every machine that is on the Internet has a unique IP number - if a machine does not have an IP number, it is not really on the Internet. Most machines also have one or more *Domain Names* that are easier for people to remember.

Modulator-Demodulator (Modem)



Top Level Domains (TLD)

.com	Commercial Entities
.edu	Educational Institutions
.gov	Non-Military Government
.mil	Military Organizations
.org	Non-Profit Organizations
.net	Network Resources
.biz	Business Enterprises
.int	International (NATO)
.(country code)	.nz .it .bs

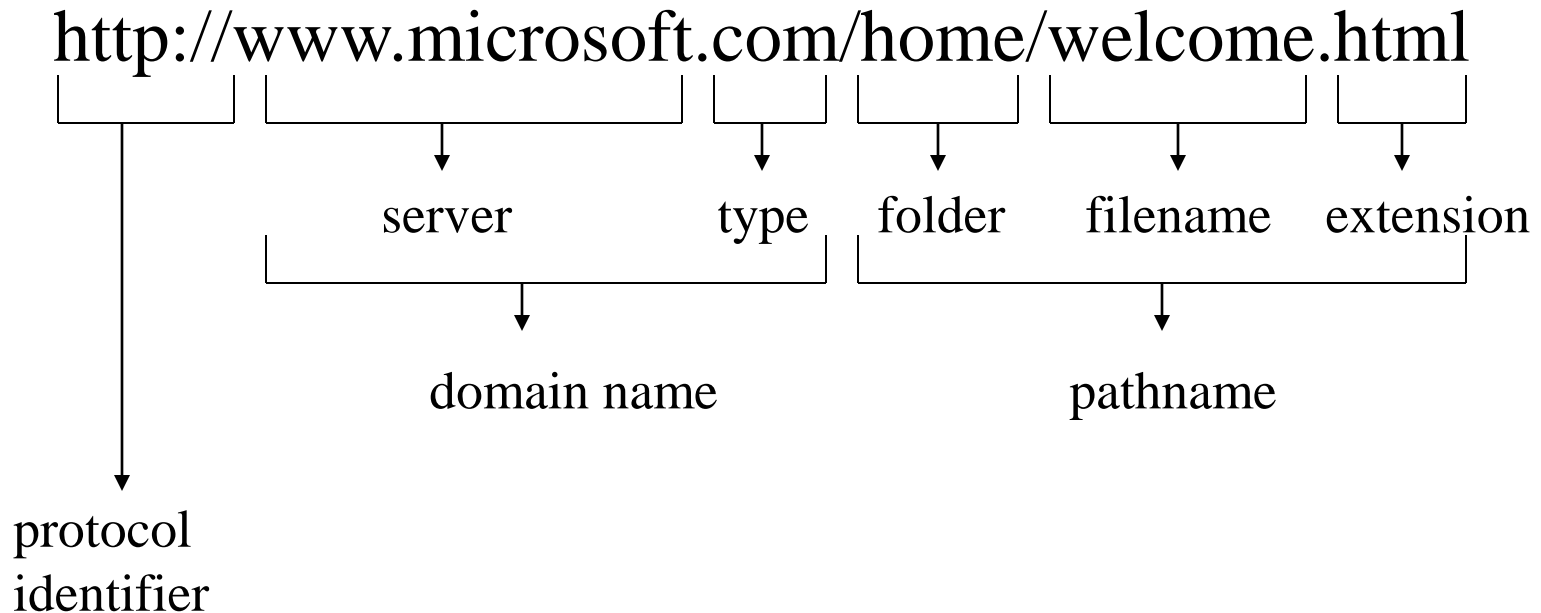
<http://www.icann.org/en/registrars/accredited-list.html>

HTTP

The **Hypertext Transfer Protocol (HTTP)** is an application protocol for distributed, collaborative, hypermedia information systems.

URL: Uniform Resource Locator

Components



Internet Service Provider (ISP)

The local, regional, or national company that provides access to the Internet in some form.

Local Examples include:

Charter

Solarus

HTML/XHTML

Hypertext Markup Language (HTML) is a text based language that controls how a web page is displayed in a browser.

Extensible Hypertext Markup Language (XHTML) is a stricter version of HTML designed to better integrate HTML with other markup languages.

Deprecated

Older features of HTML that are being phased out and no longer being supported by all browsers.

Deprecated tags may be needed if your users have older browsers

Browser Software

Graphical interface software that uses *hypertext* and *hypermedia* to access web-based data.

Examples include:

- Internet Explorer
- Foxfire
- Chrome
- Safari

Browser Functions

- Toolbar Buttons
 - Back, Forward, Stop, Refresh, Home
- History Functions
- Favorite Management
- Saving Text & Images from the Web
- Security

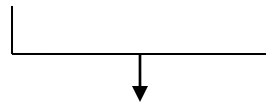
Hit

A **hit** is a request to a web server for a file (web page, image, script, Cascading Style Sheet, etc.).

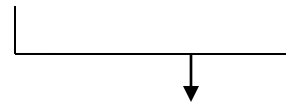
When a web page is uploaded from a server the number of "hits" or "page hits" is equal to the number of files requested.

E-mail Address Components

dave.colby@mstc.edu



user ID



host name

E-Mail Protocol

SMTP – Simple Mail Transport Protocol

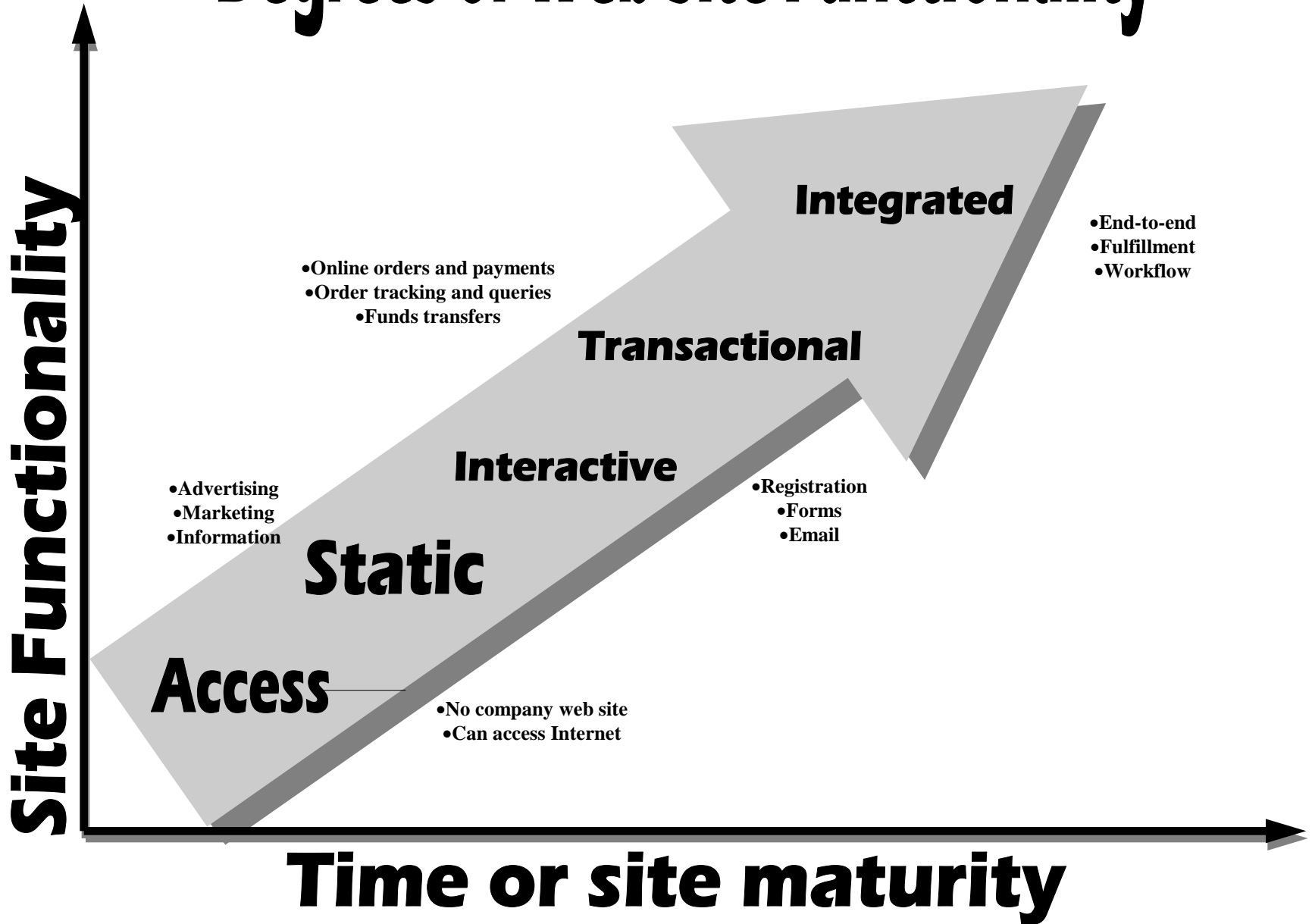
POP – Post Office Protocol

IMAP – Interactive Mail Access Protocol

Copyright Guidelines

- Appropriate academic use only by students and faculty
- Use a limited amount of text or number images from one source
- Always include a proper citation
- Commercial use requires permission
- If in doubt, request permission

Degrees of Web Site Functionality



Search Engine

Database software which retrieves information based upon a user's query.

Query

A written request in question form that tells the search engine to find documents that contain a keyword (a specified word or phrase).

And/Or Operators

Method the search engine uses to search for multiple word requests. “And” operator requests all sites that include all words in query. “Or” operator requests all sites that include any word in a query.