



CHAPTER 12

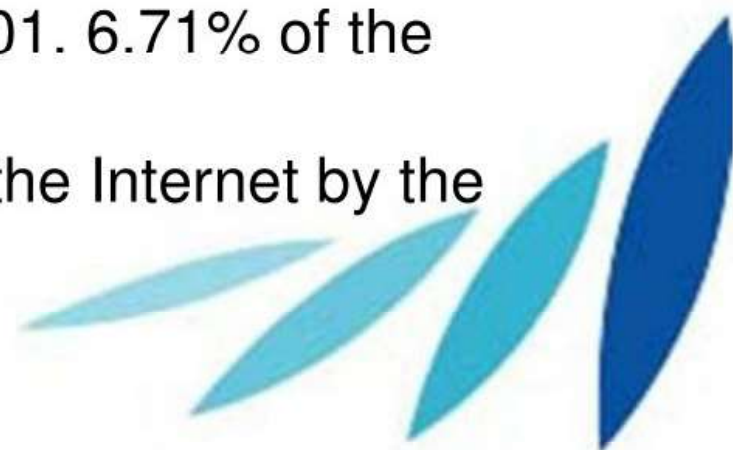
the Internet and Multimedia





Internet History

- The internet began as a research network funded by the [Advanced Research Projects Agency \(ARPA\)](#) in 1969.
- Sending e-mail and posting to newsgroups established in 1989.
- More than 15 million users in mid-1990s.
- 407.1 million users in 2001. 6.71% of the world's population.
- 1/4 people had access to the Internet by the beginning of 2010





What is the relationship
between LAN and WAN?





A local area network (LAN) can be connected to other LANs to form a **wide area network** by using gateways and routers.





The **Domain Name System (DNS)** was developed to rationally assign names and addresses to computers linked to the Internet. **Top-level domains (TLDs)** were established.





com	Commercial entities
edu	Degree-granting colleges and universities (other schools register in the country domain)
gov	U.S. federal government agencies (state and local agencies register in the country domain)
int	Organizations established by international treaties and international databases
mil	U.S. military
net	Computers belonging to network providers
org	Miscellaneous and non-government organizations
Two-letter country codes	More than 240 countries and territories

aero	Air-transport industry
biz	Businesses
coop	Cooperatives
info	Unrestricted use
museum	Museums
name	For registration by individuals
pro	Accountants, lawyers, and physicians





Bandwidth expresses in bits per second (bps), you can send from one computer to another in a given amount of time.





What is **daemon**?






Daemons are agent programs that run in the background, waiting to act on requests from the outside.





In the case of the Internet,
daemons support protocols such as
HTTP for World Wide Web, **POP**
for e-mail and **FTP** f and
exchanging files.





To identify the nature of the data transmitted and, by inference, the purpose of that data, the Internet uses a standard list of filename extensions called Multipurpose Internet Mail Extensions (MIME-types).





Hypertext Markup Language
(HTML) allows users surf from
one document to another.



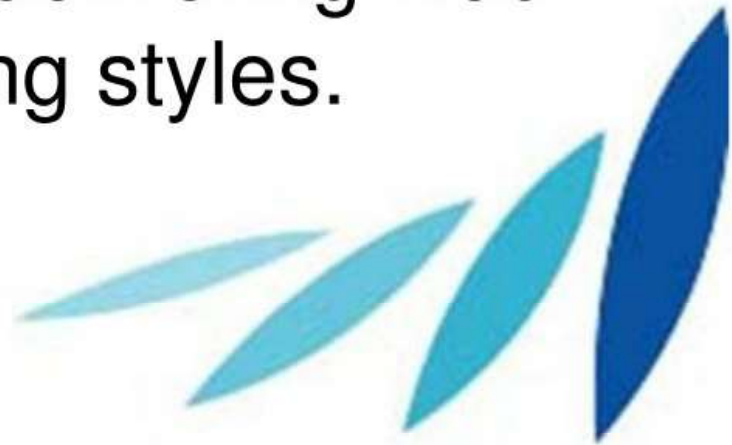


Semantic Web provides a common framework that allows data to be shared and reused across application, enterprise and community boundaries.






XML (Extensible Markup Language)
goes beyond HTML-it is the next
evolutionary step in the
development of the Internet for
formatting and delivering web
pages using styles.






What is Web 2.0? Examples?





A Web 2.0 site may allow users to interact and collaborate with each other in a [social media](#) dialogue as creators of [user-generated content](#) in a [virtual community](#), in contrast to Web sites where people are limited to the passive viewing of [content](#). Examples of Web 2.0 include [social networking sites](#), [blogs](#), [wikis](#), [folksonomies](#), [video sharing sites](#), [hosted services](#), [Web applications](#), and [mashups](#).







Web Browsers

- 50 browsers competed for market share in 1996.
- By mid-2001 only two competitors remained: Netscape and Microsoft.
- By 2006, Netscape was dead.



THE BROWSER PIE


From a worldwide perspective, which browser is currently the most popular amongst web users?





Web Page Makers and Site Builders






Adobe's
ColdFusion (.cfm)

Microsoft's Active
Server Pages (.asp)

ColdFusion Markup
Language (CFML)
Or PHP





Other powerful options beyond plain HTML

Knowledge of Dynamic HTML (DHTML)

Extensible Markup Language (XML)

Cascading Style Sheets (CSS)





HTML translators

- WYSIWYG

What You See Is What You Get





Automatically opens web
pages in a WYSIWYG view

Google



Google Search

I'm Feeling Lucky



On the downside



Google Search

I'm Feeling Lucky

sources Timeline Profiles Resources Audits Console

```
<http://schema.org/WebPage" lang="en">
```

```
inload="try{if(!google.j.b){document.f&&document.f.q.focus();document.gbqf&&document.gbqf.q.focus();}}catch(e){}
page().src='/images/nav_logo195.png'" alink="#dd4b39" bgcolor="#fff" id="gsr" link="#12c" text="#222" vlink="#61c">
="viewport">_</div>
```

```
clients5.google.com/pagead/drt/dn/" aria-hidden="true" style="display: none !important;">_</iframe>
s/k=xjs.s.en_US.FPL170oQXNA.0/m=sy25,abd,sy72,sy71,sy70,sy73,a_pET9LYYwKAXVBQ8/rt=j/d=0/t=zcms/
wRcliH2wLjpQl3Ig" gapi_processed="true"></script>
">_</style>
e chw-oc" style="display: none;">_</div>
```

Styles Computed Ev

```
element.style {
}
```

```
body, html {
  font-size: small
}
```

```
body {
  background: > □ #f
  color: ■ #222;
}
```

```
body, td, a, p, .h
  font-family: ari
}
```

```
html, body {
  height: 100%;
}
```

Find in Styles




- InDesign from Adobe saves pages PDF files.
- Corel's XMetal imports and converts files created in Word, and other word processors.
- Adobe Dreamweaver is a WYSIWYG editor that lets you create and edit text pages, import images, and link to other documents, and offers enhanced integration with PDF files.
- Dream- weaver has become the most popular





Plug-ins and Delivery Vehicles

- **Plug-ins** add the power of multimedia to web browsers by allowing users to view and interact with new types of documents and images.
 - **Helper applications**, or **players**, also provide multimedia power by displaying or running files downloaded from the Internet by your browser, but helpers are not seamlessly integrated into the operation of the browser itself.
- 



- Text and document plug-ins get you past the display limitations of HTML and web browsers, where fonts are dependent on end users' preferences and page layout is primitive.
- **Adobe Acrobat Reader**





- Browsers enabled for HTML5 will read and display **Scalable Vector Graphics (SVG)** files.
- Vector graphics are also **device-independent**, in that the image is always displayed at the correct size and with the maximum number of colors supported by the computer.






Sound

- Digitized sound files (MP3, WAV, AIF, or AU) sent to your computer and then played.
- MIDI files depend upon (more compact) depend upon computer's MIDI setup for quality.
- Speech files(sent at great speed to another computer played back in a variety of voices)





Animation, Video, and Presentation

- Most data-intensive multimedia elements are **video streams** containing both images and synchronized sound
 - Files for proprietary formats such as **Keynote**, **Microsoft PowerPoint**
 - Apple's QuickTime, Microsoft's Video for Windows (AVI), and MPEG files
- 



- **Common Gateway Interface (CGI)**
- CGI is a standard for interfacing external applications with information servers





3-D Worlds

- Web are now possible with Intel's Internet 3-D Graphics Software using software such as Second Life, Paper vision within Flash, Flash CS4, and **Adobe Director** for development and the Shockwave player for delivery.
- Web-enabled 3-D environments promise compelling and interactive multimedia experiences.

