ITE309 Web Technologies
Unit I

V.Mareeswari
Assistant Professor
School of Information Technology & Engineering
VIT University, Vellore

Internet

- The Internet is a global *network of networks*.
- People and organizations connect into the Internet so they can access its massive store of shared information.
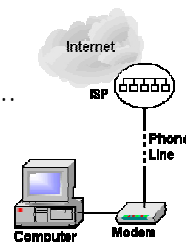- The Internet is an inherently participative medium. Anybody can publish information or create new services.

2   V.Mareeswari/AP/SITE/VITU   7/8/2014

How Do I Connect to the Internet?

- Computer
- Connection - Phone Line, Cable, DSL, Wireless, …
- Modem
- Network Software - TCP/IP
- Application Software - Web Browser, Email, …
- Internet Service Provider (ISP)

3   V.Mareeswari/AP/SITE/VITU   7/8/2014

Web

- The Web was invented in 1991 by Tim Berners-Lee.
- The Web is a *distributed information system*.
- The Web contains *multimedia*.
- Information in the Web is connected by *hyperlinks*.

4   V.Mareeswari/AP/SITE/VITU   7/8/2014

Internet Backbone

- The **Internet backbone** may be defined by the principal data routes between large, strategically interconnected computer networks and core routers on the Internet. These data routes are hosted by commercial, government, academic and other high-capacity network centers, the Internet exchange points and network access points, that interchange Internet traffic between the countries, continents and across the oceans.
- The first Internet backbone was named NSFNET. It was funded by the U.S. government and introduced by the National Science Foundation (NSF) in 1987.
- As of 2013 there are only seven tier 1 providers in the telecommunications industry. Current Tier 1 carriers include Level 3 Communications, TeliaSonera International Carrier, CenturyLink, Vodafone, Verizon, Sprint, and AT&T Corporation.

5   V.Mareeswari/AP/SITE/VITU   7/8/2014

Markup Languages

- The Internet uses markup to define how Web pages should look when displayed in a browser or to define the data contained within a Web document.

History
- In the early 1970s
  - GML (the Generalized Markup Language)
- Since the 1980s
  - SGML (the Standard GML)
  - HTML
- Currently
  - XML
    - Not intended to replace HTML!
    - XHTML does by providing better data description, …

6   V.Mareeswari/AP/SITE/VITU   7/8/2014

Language	Creator	First public release date	Editor	Viewer
Script	IBM	1968	Text editor	GDDM, AFP viewer
troff (typesetter runoff), groff (GNU runoff)	Joe Ossanna	1973	Text editor	groffer, or output to PostScript
TeX	Donald Knuth	1978	Text editor	DVI or Portable Document Format (PDF) converter
Maker Interchange Format (MIF)	Frame Technology, acquired by Adobe Systems in 1995	1986	Text editor, FrameMaker	FrameMaker
Texinfo	Richard Stallman	1986	Text editor	output to DVI, Portable Document Format (PDF), HTML, DocBook, others.
Rich Text Format (RTF)	Microsoft	1987	Text editor, Word processor	Word processor
Text Encoding Initiative (TEI)	Text Encoding Initiative Consortium	1990	Text/XML editor	Web Browser (using XHTML), PDF, Word Processor (using ODF) or EPUB
DocBook	The Davenport Group, OASIS	1992	XML editor	Output to HTML, PDF, CHM, javadoc, others.
HyperText Markup Language (HTML)	Tim Berners-Lee	1993	Text editor, HTML editor	Web browser
LilyPond	Han-Wen Nienhuys, Jan Nieuwenhuizen	1996	Text editor, Scorewriter	Output to DVI, PDF, PostScript, PNG, others.

7   V.Mareeswari/AP/SITE/VITU   7/8/2014

Lan.guage	Creator	First public release date	Editor	Viewer
ncoded Archival Description AD)	Berkeley Project	1998	Text editor	Web browser
ath Markup Language MathML)	W3C	1999 (July)	Text/XML editor, TeX converter	Web browser, Word processor
ireless Markup Language XML)	WAP Forum	1999	Text/XML editor	Microbrowser
pen Mathematical Documents OMDoc)	Michael Kohlhase	2000	Text/XML editor[1]	Output to XHTML+MathML, TeX, others.
xtensible HyperText Markup anguage (XHTML)	W3C	2000	Text/XML editor, HTML editor	Web browser
usic Extensible Markup anguage (MusicXML)	Recordare	2002	Scorewriter	Scorewriter
rg-mode	Org-mode project	2003	Emacs, text editor	Emacs. Output to HTML, PDF, DocBook, FreeMind, OpenDocument Format (ODF), others.
StructuredText	David_Goodger	2001[2]	Text editor	Output to HTML, LaTeX, PDF, Unix man pages, ODT, S5 (HTML Slide Shows), XML, others.
arkdown	John Gruber and Aaron Swartz	2004	Text editor, E-mail client	Web browser (XHTML, or HTML output), preview in gedit-markdown-plugin
extile	Dean Allen	2004	Text editor	Web browser (HTML), brief overview, online tester

8   V.Mareeswari/AP/SITE/VITU   7/8/2014

Language	Creator	First public release date	Editor	Viewer
Scalable Vector Graphics (SVG)	W3C	2004	Vector graphics editor	Web browser, etc.
Darwin Information Typing Architecture (DITA)	IBM, OASIS	2005	Text/XML editor	Output to HTML, PDF, CHM, javadoc, others.
OpenDocument Format (ODF)	OASIS, ISO/IEC	2005	Office suite	Office suite
Office Open XML (OOXML)	Ecma International, ISO/IEC	2006	Office suite	Office suite
Computable Document Format	Wolfram Research	2010	Mathematica	CDF Player

9 V.Mareeswari/AP/SITE/VITU   7/8/2014

Web 2.0

- One way to look at Web 1.0 (1990s and early 2000s) is as a *lecture, a small number of professors* informing a large audience of students. In comparison, Web 2.0 is a *conversation, with* everyone having the opportunity to speak and share views.
- Web 2.0 embraces an **architecture of participation**—a design that encourages user interaction and community contributions.
- For websites like MySpace, Facebook, Flickr, YouTube, eBay and Wikipedia, users create the content, while the companies provide the platforms. These companies *trust their users—without such trust, users cannot make* significant contributions to the sites.

10 V.Mareeswari/AP/SITE/VITU   7/8/2014