METCALFE'S LAW

The usefulness, or utility, of a network approximately equals the square of the number of users.
**GENERALIZED MARKUP LANGUAGE**

**STANDARD GENERALIZED MARKUP LANGUAGE**

**HYPERTEXT MARKUP LANGUAGE**

**EXTENSIBLE MARKUP LANGUAGE**

**TRADITIONAL MARKUP**

- Content still tagged but
- Tagging based on content’s meaning
- Presentation of information separated from content
- Presentation tied to tags

**GENERAL MARKUP**
GENERALIZED MARKUP LANGUAGE (GML)
• Developed by IBM’s Charles Goldberg, Edward Mosher and Raymond Lorie
• Tags not standardized but rules for tags are
• Software tools able to work with all rule-based tags

STANDARD GENERALIZED MARKUP LANGUAGE (SGML)
• Tags go beyond simple formatting
• Tags can trigger codes
• Tagged information sources can be merged into new documents
• Very complicated, best-suited for very large publishing entities

SGML > HTML
• Simplified version (an application) of SGML
• Universal playback
• Graceful degradation

HTML’S LIMITED FUNCTION
• Designed to encode but not render content
• Narrow subset of SGML tags
• No style tags

EXTENSIBLE MARKUP LANGUAGE
• XML
• Must be “well-formed” (obeys syntactical rules)
• Tags can be extended

EARLY TRENDS
• Browsers gave designers progressively more control over presentation (appearance) at expense of structure
• Competition created often incompatible versions of HTML
• Structural tags used increasingly as presentation tags
TRADITIONAL PUBLISHING

• Synergy between words and pictures
• More than either words or pictures alone

WEB PUBLISHING

• Adds interaction to words and pictures
• Interaction made possible through coding

TRADITIONAL PUBLISHING MODEL APPLIED TO WEB

WEB DEVELOPMENT MODEL

BUILDING BLOCKS OF THE WEB MODEL

1. Structure
   Organization, Navigation, Optimization of content
2. Presentation
   Visual presentation of content
3. Behavior
   Interaction between user and content

TEXT: DISADVANTAGES
“OCEAN TEMPERATURES ARE THE FUEL THAT DRIVE HURRICANES.”
NOT UNIVERSAL

"ASCII" = American Standard Code for Information Exchange
- Only Western characters (no Big Five, Korean, Cyrillic, etc.)
- UNICODE is more or less universal

STANDARD ASCII CHARACTER SET

CYRILLIC ALPHABET

TEXT: ADVANTAGES
- ASCII more or less Universal
- Small & Fast
- Machine readable
- Machines can organize
- Machine modifiable
- Can be structured

STRUCTURED TEXT
- Structured tags not designed for appearance
- Structured tags denote meaning of content
- Good example: XML
- Presentation tags only indicate how text should appear
Cascading Style Sheets (CSS)
- Designed for appearance of contents
- CSS tells the browser how to render tags
- Rendering of page(s) now separate from content

**STYLE**

- Allows unique experience for every viewer
- Pages can be dynamically created
- Pages can act dynamically
- Interaction – both significant and trivial – becomes possible

**BEHAVIOR**

“The ultimate goal of a successful web site is a collaboration of design and editorial content with interface functionality and a solid back-end.”

- The Art & Science of Web Design, p. 27

**IDEAL WEB PAGES**

**BUILDING A WEB TEAM**