History of the World in Just 5 Slides, Part 1

• **ARPANET**
  – Implemented in late 1960’s by ARPA (Advanced Research Projects Agency of DOD)
  – Networked computer systems of a dozen universities and institutions with 56KB communications lines
  – Grandparent of today’s Internet
  – Intended to allow computers to be shared
  – Real benefit?
History of the World in Just 5 Slides, Part 2

• ARPA’s goals
  – Allow multiple users to send and receive info at same time
  – Use packet switching technique
    • Digital data sent in small packages called packets
    • Packets contained data, address info, error-control info and sequencing info
    • Greatly reduced transmission costs of dedicated communications lines
  – Operate without centralized control
    • If portion of network fails, remaining portions still able to route packets

• Huge variety of networking hardware and software appeared
  – Development of TCP/IP protocols enabled interoperation

History of the World in Just 5 Slides, Part 3

• Internet initially just for universities and research labs
  – Military became big user
  – Next, government decided to access Internet for commercial purposes

• Internet traffic grew
  – Businesses spent heavily to improve Internet
    • Better service their clients
  – Fierce competition among communications carriers and hardware and software suppliers
  – Result
    • Bandwidth (info carrying capacity) of Internet increased tremendously
    • Costs plummeted
History of the World in Just 5 Slides, Part 4

• WWW
  – Allows computer users to locate and view multimedia-based documents
  – Introduced in 1990 by Tim Berners-Lee

• W3C – www.w3.org
  – Founded in 1994 by Tim Berners-Lee
    • Devoted to developing non-proprietary and interoperable technologies for the World Wide Web and making the Web universally accessible
  – Standardization
    • W3C Recommendations: technologies standardized by W3C
      – include Extensible HyperText Markup Language (XHTML), Cascading Style Sheets (CSS) and the Extensible Markup Language (XML)
    • Document must pass through Working Draft, Candidate Recommendation and Proposed Recommendation phases before considered for W3C Recommendation

History of the World in Just 5 Slides, Part 5

• Web 2.0
  – Users create the content
    • Facebook
    • Wikipedia
    • del.icio.us
    • Amazon – how?
  – Tagging

  – Richer user interfaces
    • Google Maps vs. original Mapquest
    • AJAX

  – And more… see IT452!