# Issues in Multimedia Authoring Lecture 3: Berners-Lee and the WWW

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# Summary

- B-L a researcher at CERN

- Shows how hypertext and Internet could merge

- Decentralized, user annotations

- Incorporated multimedia features (sound, video, pictures)

# 1989 - Computing

- Personal computer now ~13 years old

- IBM (and clones) established in PC market

- Mac OS and Windows around

- 68030/040 and 80386/486 high end microprocessors

- AOL founded

- First ANSI C standard

# 1989 - Other Happenings

- Soviets withdraw from Afghanistan

- Fatwa pronounced against Salman Rushdie

- "Cold fusion" debacle

- Exxon Valdez oil disaster

- Tiananmen Square protest

- Berlin wall torn down

- École Polytechnique Massacre

- Ayer dies

# Berners-Lee's Proposal: Summary (I)

- Introduced the term "World Wide Web"

- Information management method that does not "place its own restraints on the information"

- Nodes (either textual or graphical) and links

- 5 key link relationships:
  - is a part of
  - made
  - refers to
  - uses
  - is an example of

# Berners-Lee's Proposal: Summary (II)

- 6 other structural features

  - remote access across networks is necessary

  - different systems be able to access the same data

  - systems be linkable together without central coordination

  - existing data be still accessible

  - users can add their own links to and from public information

  - users can annotate links / nodes privately

- Plain text; formatting and graphics optional

# Comparison with Current WWW (I)

- Nodes and links broadly same

- Difference between static and temporary link nonexistent: instead we have error conditions

- Dynamic content comes in many flavours from Flash to PHP; some use of other protocols (RTSP); embedded languages (ECMAScript)

# Comparison (II)

- Remote access successful: WWW available almost everywhere on Earth - cell phone, satellite connections

- Even old OSes have web browsers (e.g. OS/2, AmigaOS)

- Internet passes on its semi-non-centralization to WWW

- Some groups (but not with any fixed location): ICANN, Internic, W3C

- No *enforced* central control; voluntary structure

- Political control some places (e.g. China)

# Comparison (III)

- HTTP does not access old data itself

- Web browsers often "speak" gopher and ftp

- Some old protocols not integrated (tn3270 from my student days); less issue now

- Creating one's own link requires access to server

- Browser functions work here too: bookmarks - naming links; naming nodes hard

# Comparison (IV)

- Pages which work text-only vanishing

- "Bells and Whistles" popular - plugins etc.

- HTML includes non-ASCII characters, font and style changes, etc.

# To think about or do

- Build a small website to illustrate Berners-Lee's requirements

- TTQ: What do you think led to the success of Berners-Lee's proposal?

- Research a particular country's WWW censorship