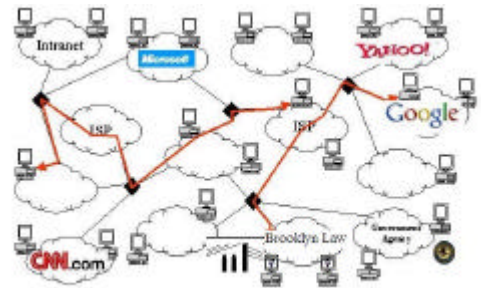


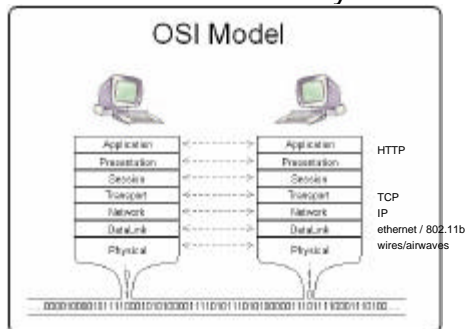
Network Neutrality

Do we need to regulate the Net to save it?

Remember the network cloud



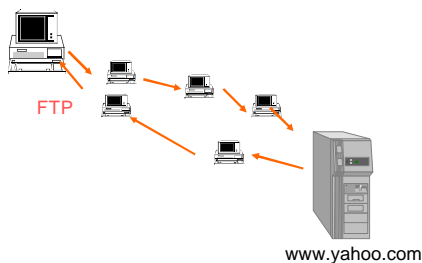
The Internet's "Layers"



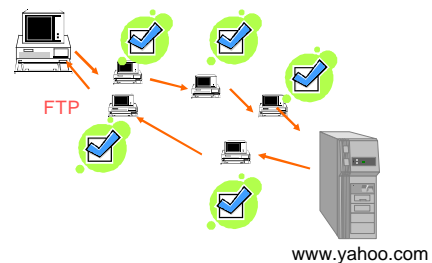
End-to-End Argument

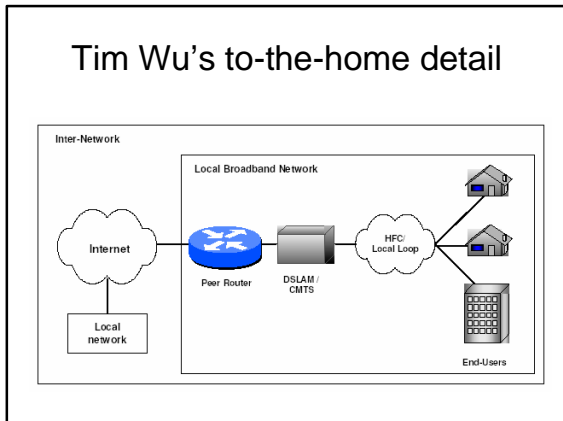
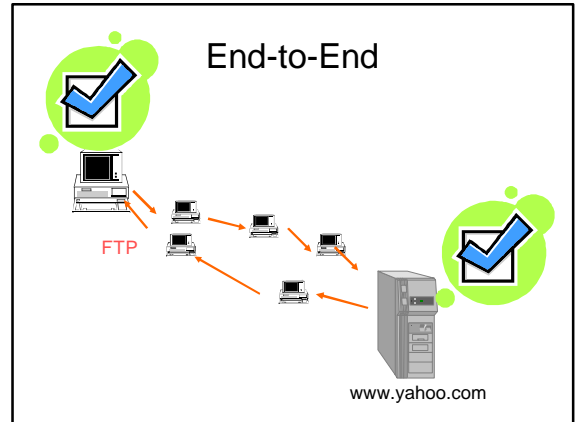
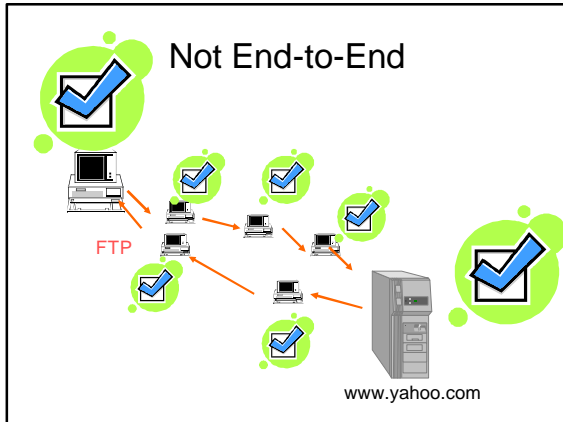
- The function in question can completely and correctly be implemented only with the knowledge and help of the application standing at the end points of the communication system. Therefore, providing that questioned function as a feature of the communication system itself is not possible. (Sometimes an incomplete version of the function provided by the communication system may be useful as a performance enhancement.)

File transfer, with detail



Not End-to-End





- ### What's the problem?
- Whose problem?
 - Consumer
 - Network provider
 - Application developer
 - Public

- ### Problems?
- Lack of competition?
 - Lack of incentive to invest?
 - Discrimination?
 - Inequality?
 - Cost?
 - Access?
 - Choice?

- ### Solutions?
- Principles
 - Antitrust enforcement
 - Regulation
 - Structural separation
 - Mandates
 - Common carriage
 - Performance criteria
 - Prohibitions
 - Disclosure

FCC Broadband Principles

- [T]o ensure that broadband networks are widely deployed, open, affordable, and accessible to all consumers, the Commission adopts the following principles:
- *To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet*, consumers are entitled to access the lawful Internet content of their choice
- *To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet*, consumers are entitled to run applications and use services of their choice, subject to the needs of law enforcement.
- *To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet*, consumers are entitled to connect their choice of legal devices that do not harm the network.
- *To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet*, consumers are entitled to competition among network providers, application and service providers, and content providers.



If code is law, what kind of law do we have and want?

- Open or controlled?
- Transparent or opaque?
- Free or fee?
- How do we preserve innovation? generativity?
- What normative values are supported by the laws and architecture we choose?

Major challenges ahead

- Speech: Can we combat harmful speech without stopping dialogue? How will the Net deal with differing views of free speech?
- Copyright: How do we preserve artists' incentives, public access, *and* technological innovation?
- Privacy: How can we balance liberty and security; privacy and commerce?
- Network architecture: Can an open network survive spam? Can it survive monopolies? Well-intentioned regulators?

Thanks!

[The end of the Internet](#)

Thanks for being a great class, and please keep in touch!

You can always* find me at
wendy@seltzer.org

*until we stop using email, email addresses, and domain names, at least