Outline

• Existing Service-Based Regulation
  – Telephone
  – Cable
  – Wireless

• Existing Provider-Based Regulation
  – BOC restrictions

• Emerging Regulatory Issues
  – IP Telephony
  – Video Streaming

• Broadband Regulation and the “Last Mile”
Introduction

• Tradition of non-regulation of the Internet
  – Allow for rapid deployment
  – Unfettered innovation
  – Not an essential service
  – Difficult to regulate

• But still significant regulation of players in the Internet
Introduction

- Internet Regulators
  - Legislatures
  - Judiciary
  - Federal Communications Commission
  - Federal Trade Commission
  - Department of Justice
  - State Attorneys General
  - State public utility commissions
  - Local and municipal authorities
Existing Service-Based Regulation

- Federal Regulatory Structure
  - FCC jurisdiction
  - Communications Act of 1934
    - Broadcast (one to many, over the air)
    - Telephone (one to one, over wire)
    - Cable (one to many, over wire)
      - Added to Communications Act in 1984
    - DBS (like cable, but over air)
      - Carriage requirements added in 1992
  - Increasingly uncomfortable regulatory fit as new technologies are developed
Existing Service-Based Regulation

• Telephone (Telecommunications) Services
  – Telephone services intensively regulated
    • “Common carrier” regulation of rates and terms of service
    • 1982 Separation of Long Distance from Local Services (AT&T Consent Decree)
      – BOCs barred from most other lines of business
    • 1996 Telecommunications Act
      – Incumbents required to “unbundle” and offer wholesale services
      – Incumbents required to offer interconnection
  – Information or data services not regulated
    • FCC “Computer I” decision (1971)
Existing Service-Based Regulation

• Telephone (Telecommunications) Services
  – 1996 Telecommunications Act codified prior structure:
    • Basic Services are “the transmission of information of the user’s choosing without change in the form or content.”
      – Subject to common carrier regulation
    • Enhanced Services are information services that involve “transforming, processing, retrieving, utilizing or making available information via telecommunications.”
      – Not subject to common carrier regulation
  – ISPs today generally provide “enhanced services”
Existing Service-Based Regulation

• Cable Services
  – 1984 Cable Act limited regulation to “one way transmission to subscribers of (i) video programming, or (ii) other programming service.”
  – Congress did not extend regulation to non-programming information
  – 1996 Telecom Act did not significantly alter the definition of “cable services”
  – Unclear precisely where Internet services fall under the 1984 Cable Act and 1996 Telecom Act
Existing Service-Based Regulation

- **Cable Services**
    - Internet services may constitute “cable services” when cable operator “supplies significant amounts of its own content and local programming and information along with open-ended Internet connectivity.”
    - Internet services probably not “cable services” when offering is “nothing more than basic conduit access to the Internet.”
Existing Service-Based Regulation

- **Cable Services**
  - Ninth Circuit held that Internet services over cable did not constitute “cable service”
    - City of Portland v. AT&T (9th Cir. 2000)
    - Held that AT&T’s @Home service was a combination of information service and telecommunication service
    - Concluded that cable broadband service was a “common carrier” service subject to FCC regulation
  - Other courts have disagreed
    - Gulf Power v. FCC (11th Cir. 2000) (pole attachments)
    - MediaOne v. County of Henrico (E.D. Va. 2000)
Existing Service-Based Regulation

- **Cable Services**
  - Last Sept., FCC initiated NOI regarding Cable Open Access
    - Address the classification of cable modem service and the cable modem platform
    - Determine whether open access is a desirable policy goal
    - How to implement open access
  - FCC has “forbearance” authority if:
    - enforcement not necessary to ensure just and reasonable terms
    - enforcement not necessary to protect consumers
    - forbearance is consistent with the public interest
Existing Service-Based Regulation

- **Wireless Services**
  - FCC jurisdiction over radio “spectrum” has historically been extensive
    - Licensing jurisdiction
  - Wireless Internet services are being afforded “light” regulation
  - FCC permitting voice, data and video services without common carrier or broadcast regulation:
    - Multichannel Multipoint Distribution Service (MMDS)
    - Local Multipoint Distribution Service (LMDS)
    - Satellite
Existing Provider-Based Regulation

- Incumbent Local Exchange Carriers (ILECs)
  - BOCs and GTE (now Verizon)
  - Regulatory restrictions have prevented BOCs from fully participating in Internet marketplace
  - Restrictions conflict with concept of “non-regulation” of Internet
    - Regulatory restrictions on major players
    - Different regulations than on monopoly cable providers
Existing Provider-Based Regulation

- InterLATA restriction
  - BOCs cannot provide long distance services that originate in their region
    - Restricted from Internet backbone market (on remand)
    - Restricted from bundling services
      - AT&T v. Ameritech (FCC 1998) held that ILEC violated Telecom Act by marketing package that included long-distance service from Qwest
    - Compare with monopoly cable competitor like Cox
  - BOCs required to obtain Section 271 Authority from FCC to offer in-region long distance
Existing Provider-Based Regulation

• Content restriction
  – BOCs may provide information services only by satisfying conditions with FCC
    • Comparably Efficient Interconnection (CEI) plans
    • Open Network Architecture (ONA) plans
  – FCC will likely continue to regulate BOC provision of information services
Existing Provider-Based Regulation

• **State Regulation**
  – **Qwest Section 271 proceeding**
    • In the US West-Qwest merger proceeding, Qwest argued that Section 271 provided most pressure on it to improve service quality
  – **General Constitutional authority over “public service corporations”**
    • “All corporations other than municipal engaged in … transmitting messages or furnishing public telegraph or telephone service, and all corporations other than municipal, operating as common carriers…” Ariz. Const. art. XV, § 2.
    • Certification requirements and regulatory jurisdiction
Emerging Regulatory Issues

- **IP Telephony**
  - Instead of analog transmission, voice signals are converted to data and transmitted over packet-switched Internet networks
  - **Various flavors of IP Telephony**
    - **Computer-to-computer**
      - Software-based; dual connected computers
    - **Phone-to-phone**
      - Uses voice switch at gateways
      - Uses normal telephone numbers
      - Invisible to user
    - **Voice over cable networks**
Emerging Regulatory Issues

• IP Telephony
  – Computer-to-Computer IP Telephony
    • Information service
    • Not regulated
  – Phone-to-Phone IP Telephony
    • Functional approach
    • Users receive only voice, not information, services
    • Probably regulated as telecommunications service
  – Voice over cable networks
    • Not a cable service, because probably doesn’t fit the definition
    • Probably considered a telecommunications service
Emerging Regulatory Issues

- **Video Streaming**
  - Use of broadband facilities (DSL, Cable, etc.) to send video to customers
  - ISPs providing such services over telecom facilities are probably not regulated, because it is probably an “information service”
  - Telephone companies providing video services, however, face common carrier regulation
    - Exclusion for Open Video Systems
    - Exclusion for Video on Demand
Emerging Regulatory Issues

• Video Streaming
  – Cable providers offering streaming video may be subject to regulation as a Cable Service
    • Local franchise requirements
    • Might be considered information service, then not subject to cable services requirements
  – Why distinguish for regulatory purposes between cable streaming video and telecom streaming video?
• Conclusion: Difficult to draw clean lines under current regulations
Broadband and the “Last Mile”

- The “last mile” to the customer
  - least competitive
  - most constrained
- FCC concluded that broadband may solve the last mile problem
  - “opens the possibility of new facilities to service the last mile…” (Advanced Services Report, February 1999)
Broadband and the “Last Mile”

• Advanced Service Report concluded no monopoly issues with broadband, because of intermodal competition:
  – DSL
  – Fiberoptic
  – Wireless radio
  - Cable
  - Satellite

• This conclusion may ignore current reality:
  – Only two current technologies with significant market share: cable and DSL
  – Potentially significant switching costs between these technologies
  – Technological limitations on cable and DSL
Broadband and the “Last Mile”

• Cable Open Access
  – FCC generally does not impose cable open access on monopoly cable companies
    • Did not require open access on AT&T/TCI merger in 1998
    • Did require some open access provisions as a condition to Time-Warner/AOL merger because of significance of the merger
    – FCC initiated Cable Open Access NOI last year
  – Prospects for FCC action on cable open access
    – New Chairman Michael Powell dissented from the Time Warner/AOL merger conditions
    – Powell is very free market-oriented, but has been non-committal on where the FCC should go on cable open access
Broadband and the “Last Mile”

• FCC Line Sharing Order
  – Refers to the ability of two different service providers to offer two services over the same line at the same time
    • Voice - low frequency
    • Data/DSL - high frequency
  – 1999 Line Sharing Order required incumbent phone companies to unbundle the high frequency portion of the local loop
    • FCC concern that competitors would not be able to offer competitive DSL at a competitive price
    • Concern over delay in deployment of advanced services
    • Eliminates requirement for a second telephone line for data services
  – FCC reaffirmed these principles in January 2001 in a Reconsideration Order and FNPRM
Broadband and the “Last Mile”

• SBC’s Project Pronto
  – Project to aggressively make broadband service available to SBC’s local customers using fiber-optic—rather than copper—subloops
    • Plan to install 25,000 “neighborhood” terminals
    • Will allow access at 20 million homes that were “out of distance”
    • But SBC will remove copper loops from central offices
  – Problem for the CLEC is where to install their DSL equipment
    • Telecom Act allows collocation in a central office of an incumbent
    • But now can’t get out with DSL due to fiber!
    • Cost too high and space too limited at neighborhood terminals
    • Restricts CLECs to resellers of SBC’s service
  – Reconsideration being watched closely by other BOCs
Recommended Resources

- www.cybertelecom.org
- www.fcc.gov
  - Word Search tools
  - EDOCs
  - ECFS
  - Working Papers series
- www.thestandard.com (The Industry Standard)