HEAD OF THE CLASS: BROADBAND IN THE UNITED STATES

THE ADVANCED COMMUNICATIONS LAW & POLICY INSTITUTE
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About the ACLP

Focus Areas

- Analyze local, state, and federal public policies impacting the deployment, adoption, and use of broadband in the U.S.
- Work with policymakers to develop and implement rational, forward-looking frameworks

Relevant Work

- Barriers to Broadband Adoption
- Government-Owned Broadband Networks (GONs)
- PSTN-IP Transition
- Bolstering Broadband Connectivity Across the U.S.

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Snapshot: Broadband Availability in the U.S.

	U.S.
% Population w/out wireline access	3.5%
% Population w/out wireless access	0.2%
# of people w/out access to "fixed" broadband	~19 million
% Population w/access to 2+ wireline ISPs	69%
% Population w/access to 3+ wireless ISPs	93%
DSL access (% pop.)	89.5%
Cable access (% pop.)	87.6%
Fiber access (% pop.)	20.5%
Wireless access (% pop.)	99%

Source: National Broadband Map (data as of June 2012)

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Context: Shifting Consumer Demand

	2000	2005	2011/2012*
POTS Lines in Service	192.5 million 138.9 million residential	175.3 million 95.8 million residential	106.9 million 52 million residential
Wireless Subscriptions	101 million	203.7 million	300+ million
VoIP Subscriptions	<200,000	4.5 million	36.7 million 31 million residential
Broadband Lines in Service	7.1 million	43.6 million	230 million
Broadband Adoption Rate	3%	33%	68%

* Most recent data available
Sources: FCC; NTIA; Pew; Telegeography

Context: Network Investments by ISPs

- Between 1996 and 2010, ISPs invested ***$1.2 trillion*** in risk capital in their networks. The results?
  - *Telco*: DSL deployment; shift to fiber (FTTH; FTTN)
  - *Cable*: DOCSIS 1.0 → 2.0 → 3.0
  - *Wireless*: 2G → 3G → 4G
- Total annual cap-ex continues to exceed $60 billion:
  - *Telco*: $24+ billion (2011)
  - *Cable*: $13 billion (2011)
  - *Wireless*: $25 billion (2012)

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Context: Regulatory Environment

- Broadband and wireless have thrived under light-touch regulatory frameworks
  - *1993*: national deregulatory approach for wireless implemented via federal legislation
  - *1996*: clear bipartisan "hands-off" policy re the Internet in Telecom Act
  - *2000s*: FCC classifies broadband as an "information service"

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Adding it All Up: Key Takeaways regarding <u>Broadband in the U.S.</u>

1. All of the trends lines are going in the right direction:
   - Availability
   - Speeds
   - Competition/Choice
   - Use (data consumption)
   - Prices
2. Cross-platform competition is thriving (don't forget about wireless!)
3. A vibrantly innovative, competitive, and interdependent ecosystem has developed (networks, devices, content)
4. Consumers are reaping enormous gains and driving the market

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Challenges

- Bridging the deployment gap
  - Incentivizing build-out to “uneconomic” areas
- Outdated policy frameworks at every level
  - *Federal*: PSTN-IP transition; IP-enabled services
  - *State:* legacy rules remain on the books; VoIP patchwork
  - *Local:* ROW; zoning/siting; ****GONs****
- Demand-side issues
  - Low adoption rates in key communities (e.g., seniors, low-income and rural households)
  - Barriers to adoption & use in key sectors (e.g., healthcare, education, energy)

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A Note on Government-Owned Broadband Networks (GONs)

- Some local governments have elected to go the DIY route and build a GON to compete with existing ISPs
  - Common examples:
    - Chattanooga, TN (~$200 million in debt)
    - Lafayette, LA (~$100 million in debt)
  - Notorious examples:
    - Burlington, VT ($17 million in debt; credit downgraded)
    - Groton, CT ($28 million in debt; sold off for $550k)
    - Provo, UT ($39 million in debt; sold to Google for $1)
- ****ASCE Infrastructure Report Card should serve as the backdrop for any discussion re GONs**

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Opportunities to Bolster Connectivity

- ***Supply-Side***
  - PPPs to bridge the deployment gap (e.g., NY, ME)
  - Rational, forward-looking USF reform
  - Modernize policy frameworks to unlock more investment and competition
    - *Federal*: set clear parameters for IP transition
    - *State:* continue the trend in regulatory modernization
    - *Local:* streamline ROW management
- ***Demand-Side***
  - PPPs with experts in the private and nonprofit sectors to bolster adoption/use and enhance digital literacy in under-adopting communities & sectors

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