


Why Close the Digital Divide?

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June 11, 2001 CITI panel on "The Digital Divide: An Inhibitor of Growth?" 1



NTIA's *Falling through the Net: Toward Digital Inclusion*

- "Digital Divide": *concept that society should not be separated into information haves and information have-nots.*
- Policy goal: *target and enact policies and programs to close disparities in access to computers and the Internet.*


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FCC on "What is Universal Service?"

- *The goals of Universal Service, as mandated by the 1996 Act, are*
 - *to promote the availability of quality services at just, reasonable, and affordable rates;*
 - *increase access to advanced telecommunications services throughout the Nation;*
 - *advance the availability of such services to all consumers, including those in low income, rural, insular, and high cost areas at rates that are reasonably comparable to those charged in urban areas.*

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Congressional harbinger:

Democrats in the House and Senate introduced legislation last week that would provide the carrot for the deployment of broadband Internet service in rural parts of the country through a low-interest loan guarantee program.

- Communications-Related Headlines for May 30, 2001


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Larry Irving:

- *NTIA report demonstrates conclusively that race plays a factor in the Divide.*
 - *Commerce Department controlled for income and education ...*
 - *...there are other undetermined factors affecting Black and Hispanic connectivity.*


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Kofi Annan:

Knowledge has long been synonymous with power, but with the advent of the Internet, access to knowledge is quickly becoming a requirement for power whether social, political or economic.


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Three Questions

- Is there a digital divide?
- Why close the digital divide?
- What are the most efficient policies?


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Economic rationales

- Network externalities:
Others benefit when a marginal subscriber connects.
- Economies of scope:
The marginal cost of a connection is less than the average cost.


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Internet activities

- Communication
 - Email, Instant Messaging, chat rooms
- Access information
- E-commerce platform
 - B2B
 - Consumer


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WWW network effects?

- ISPs provide Internet access to consumers and websites.
- Consumers' value of Internet access depends on the availability of and the price of content and services.
- Economies of scale in providing content and in distribution.


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Economics of networks

- A *network* is a catalog of goods and services available at specified prices.
- A *network externality* occurs if an additional connection increases the variety, quality, or affordability of cataloged goods and services.


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IO Perspective on networks

- Greater consumer Internet penetration increases the "size of the market" for Web content and e-commerce.
- John Sutton (*Sunk Costs and Market Structure*, 1991) identifies two cases:
 - Exogenous sunk costs
 - Endogenous sunk costs


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Exogenous sunk cost model

- Larger market size increases product variety.
 - Business stealing effect?
- Increased horizontal competition reduces price.
- Less service quality?


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Endogenous sunk cost model

- Larger market size increases investments in (perceived) product quality.
 - Advertising, product improvement, etc.
- Lower bound on market concentration
 - Non-monotonic effect of size on concentration
 - Higher prices?
 - Greater service quality?

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Digital Divide: Inhibitor of growth?

- Increased residential Internet access is likely to expand Web-based consumer markets.
 - Industrial organization effects are complex.
- Does Digital Divide have much direct impact on the markets?
 - Will closing the rural divide promote regional development?

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