



Testimony of

**Ben Scott**  
**Policy Director**  
**Free Press**

on behalf of

**Free Press**  
**Consumers Union**  
**Consumer Federation of America**

before the

**United States Senate**  
**Committee on Small Business & Entrepreneurship**

Regarding

**Improving Internet Access to Help Small Business**  
**Compete in the Global Economy**  
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**Free Press**  
**Massachusetts Office**  
**40 Main St., Suite 301**  
**Florence, MA 01062**  
**(413) 585-1533**

**Free Press**  
**Washington Office**  
**501 3<sup>rd</sup> St, NW, Suite 875**  
**Washington, DC 20001**  
**(202) 265-1490**

## **SUMMARY -- TESTIMONY OF BEN SCOTT, FREE PRESS -- SEPTEMBER 26, 2007**

Free Press<sup>1</sup>, Consumers Union<sup>2</sup>, and Consumer Federation of America<sup>3</sup> appreciate the opportunity to testify on the state of the broadband market for small businesses. Few issues have a more direct path to economic growth at the center of our entrepreneurial economy. Unfortunately, a lack of competition has led to high prices and slow speeds for small business broadband connections, threatening to stunt innovation and endangering our global competitiveness. Our primary policy goal must be to increase competition in the broadband Internet service provider (ISP) marketplace.

Policies that create a healthy broadband market are critical for our small business economy. To begin, competitive ISPs are often small businesses. The competitive ISP industry has dramatically declined in recent years because of poor policy decisions. Second, new competition policies will bring more broadband choices to small business consumers, driving market forces that lower prices and increase speeds to catch up with our global competitors. Finally, small businesses that depend on the Internet for e-commerce require policies like network neutrality that protect the free market, ensuring that there are no gatekeepers that obstruct their path to the market.

The problems we face today in the broadband access market are severe, but perhaps nowhere are they worse than in the small business sector. The problems in the residential market get the headlines and scrutiny. It is no secret that we are falling behind the world leaders in broadband penetration -- our broadband speeds are comparatively low and prices are high. Many small businesses (and particularly those with Internet-based goods and services) have a single choice for broadband service -- the incumbent telephone company. Compare that to global competitors in Europe and Asia that can choose from literally dozens of providers. The competitive market abroad translates into service that is far faster and less expensive. The economic disadvantages for our homegrown entrepreneurs over time are clear and the damage will be difficult to reverse.

Recent broadband policy at the Federal Communications Commission (FCC) has not embraced a free market approach to enabling competition, instead supporting the entrenched incumbency of telephone and cable companies. The legacy of these decisions has put downward pressure on investment opportunities and innovation in the small business sector. Right now, the FCC is considering a number of critically important regulatory choices -- including changes to the special access market and the barriers to market entry for competitive providers. Wrong decisions will result in higher broadband prices for small business and cripple competitive markets in ways that will take years to correct. In many cases, the incumbents seek to evade laws that foster competition through regulatory forbearance. Yet few in the Congress are paying close attention.

We recommend this Committee, working with the Small Business Administration (SBA), undertake a sweeping inquiry into the broadband policies that will directly benefit American small business. To begin, we need to improve our knowledge of the small business broadband market. Currently no federal agency is conducting serious data collection or analysis. We recommend the Committee support a variety of policy initiatives to bring competition to the marketplace including: ensuring spectrum auctions produce real competitors not vertical integration; opening the television white spaces for unlicensed use; protecting the rights of local governments to offer broadband services; guaranteeing the interconnection of networks on nondiscriminatory terms; transitioning Universal Service Fund (USF) programs to broadband; and safeguarding the Internet's free market for goods and services through network neutrality rules. We look forward to working with the Committee as it moves forward.

## Broadband's Centrality to the Small Business Economy

It is now widely understood that the availability and adoption of broadband Internet access in our communities translates into jobs, investment and economic growth. For small business, it is an essential tool in the information economy -- a means to grow sales, expand to new markets, and innovate. Broadband is also rapidly becoming a difference-maker in a globally competitive market for goods and services. As the U.S. falls behind the world's leading nations in broadband penetration rates, speeds, and prices, the impact on entrepreneurs and small businesses will be severe. It is not merely that our counterparts in Europe and Asia have more broadband services to choose from -- they can often purchase ten times the speed at half the price. Using this technological edge, these companies can outperform U.S.-based competitors.

Broadband is not only important for keeping existing small businesses competitive; it is also critical in the creation of new small business jobs at home. A 2007 study by researchers at the Brookings Institution and MIT estimated that a one-digit increase in U.S. per-capita broadband penetration -- the metric used by the Organisation for Economic Co-Operation and Development (OECD) -- equates to an additional 300,000 jobs.<sup>1</sup> Thus our slide from 12th to 15th place in the world's broadband rankings during the latter half of 2006 equals approximately 240,000 lost jobs.<sup>2</sup> If our broadband penetration were as high as number-one-ranked Denmark, we could expect approximately 3.7 million additional U.S. jobs. This is not merely a matter of national pride; this is serious money and a life-or-death situation for the small business market. Small businesses often run on thin margins and innovative ideas, both areas that are squeezed if broadband technologies are unavailable or very expensive.

In 2005, the Small Business Administration (SBA) commissioned a study about broadband use by rural small businesses.<sup>3</sup> The study found: "Broadband investment and services appear to stimulate economic productivity and output, as well as create jobs."<sup>4</sup> The report summarizes a number of studies that confirm this finding and concludes that the conventional wisdom is correct. The primary finding in this report is that rural small businesses are less likely to have broadband services and more likely to miss out on the economic benefits broadband brings. The report does not make any international comparisons to note the competitive disparity between the U.S. and international markets. However, it does note that communities with broadband services "have a competitive edge in terms of attracting and retaining businesses"<sup>5</sup> -- a critical component of economic development. This finding is applied to different U.S. towns and cities, but it is equally true of a comparison between the U.S. and Europe or Asia.

Increasingly, good business depends on good communications technologies. Manufacturers increasingly require online inventory and ordering capabilities for sales points. According to the Census Bureau, 92 percent of e-commerce takes place business-to-business. These transactions rely "overwhelming on proprietary Electronic Data Interchange (EDI) systems."<sup>6</sup> Small businesses

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<sup>1</sup> Robert Crandall, William Lehr and Robert Litan, "The Effects of Broadband Deployment on Output and Employment: A Cross-sectional Analysis of U.S. Data, June 2007. Available at <http://www.brookings.edu/views/papers/crandall/200706litan.htm>.

<sup>2</sup> Organization for Economic Cooperation and Development, "OECD Broadband Statistics to December 2006", <http://www.oecd.org/sti/ict/broadband>.

<sup>3</sup> Stephen B. Pociask, "Broadband Use by Rural Small Business," December 2005, Small Business Administration, Office of Advocacy, Available at <http://www.sba.gov/advo/research/rs269tot.pdf>

<sup>4</sup> Ibid, i.

<sup>5</sup> Ibid, 3.

<sup>6</sup> "E-Stats," US Census Bureau, May 25, 2007, Available at <http://www.census.gov/eos/www/2005/2005reportfinal.pdf> (Figures are for 2005, the last year reviewed in this study).

without the communications capacity necessary to take advantage of EDI systems are left out of this multibillion-dollar industry. In addition, advertising and marketing are increasingly done online and the web interface for a small business is often as critical as its brick-and-mortar façade. Many small businesses -- such as the thousands of eBay power-sellers -- are exclusively online. Retail e-commerce sales totaled \$33.6 billion in the second quarter of 2007, up 20.8 percent from the same quarter in 2006.<sup>7</sup>

Certainly, the primary interest for this Committee in broadband policy must be to increase the number of broadband choices in the small business market in order to increase speeds and lower prices. But it is important to note that small businesses are not just the beneficiaries of better broadband services. Competitive broadband providers, i.e. new entrant Internet Service Providers (ISP) and Competitive Local Exchange Carriers (CLEC), are often small businesses themselves (assuming a definition of small business as having less than 500 employees). These businesses -- as well as those that use the networks to transact commerce -- rely on a free market for the production, consumption and transmission of Internet packets. This is the reason why small businesses have been central to the network neutrality debate raging for almost two years. Any imposition of gatekeepers in the access market will jeopardize the engine of innovation in the small business economy.

### **Broadband Market Failures in the Small Business Sector**

The small business broadband marketplace is in a state of alarming failure. Not least of our problems is the fact that no government agency monitors the small business broadband market. We must extrapolate the state of the market by making informed assumptions about the residential broadband market (from which most small businesses buy their services) and the enterprise market for broadband. The FCC collects no data specific to small business broadband connections. The SBA's 2005 study laments this fact and calls for more research and better measurements. Virtually nothing has been done to address this glaring lack of data. We cannot fix problems that we do not measure.

The SBA did conduct a survey in 2004 to determine whether or not small businesses are subscribing to broadband, what type of service they buy, and what price they are paying.<sup>8</sup> Although three years is a long time in the broadband market, a number of findings are worth noting because they reveal very significant problems which almost certainly have not been remedied.

Extrapolating from the SBA survey data, the marketplace for small business broadband connections resembles the residential broadband market because the vast majority of small businesses are buying consumer-class connections (i.e. asymmetric upload/download speeds without a dedicated line). These asymmetric lines are sometimes marketed as "business-class", but they do not have the reliability of a dedicated line or the functionality of symmetric upload speeds. Broadband lines that are not dedicated to one customer are often shared by 20 to 50 customers -- a metric known as the contention ratio. These figures are proprietary to each broadband provider and are not made public -- so we cannot know for sure what kinds of services are actually in the market. As a technological matter, there are no cable modem products that are symmetrical in speed and offer dedicated lines. Only a T-1 service or better in digital subscriber line (DSL) or fiber-optics can

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<sup>7</sup> "Quarterly Retail E-Commerce Sales, 2<sup>nd</sup> Quarter 2007" US Census Bureau, August 16, 2007, Available at: <http://www.census.gov/mrts/www/data/pdf/07Q2.pdf>

<sup>8</sup> "A Survey of Small Businesses' Telecommunications Use and Spending," Stephen Pociask, TeleNomic Research for the Office of Advocacy, Small Business Administration Contract No. SBA-HQ-02-M-0493, Washington, DC, March 2004 available at <http://www.sba.gov/advo/research/rs236tot.pdf>

provide this level of service. The standard T-1 line -- typically a 1.5 Mbps symmetrical connection with capacity dedicated to one end-user business customer -- often prices small businesses out of the market, even though its speed is hardly revolutionary.

According to the SBA survey, only 4 percent of small businesses were buying T-1 lines in 2004. Even if we generously assume that this number has tripled in the last three years, this is a huge problem by itself. It indicates that most small businesses do not subscribe (because of price or availability) to the kinds of communications technologies that are best suited to business use. These business-class broadband capabilities are available at higher speeds and much lower prices in international markets -- which points to a glaring competitive disadvantage at home. If an IT consulting firm in Massachusetts is serving its clients from servers connected to a cable modem (8 Mbps download/3 Mbps upload), and its Japanese counterparts are competing for the same clients with servers connected to a fiber-optic line (100 Mbps upload and download), the situation is not sustainable for U.S. business interests. Adding insult to injury, the Japanese firm likely pays the same price or less for its connection!

For any business that pushes data out from its own servers, the most important problem is not download speed, it is upload speed. For a small business that deals in e-commerce, markets products online, provides services or processes orders over the network, or communicates between offices via a high-speed line, it is critical to have sufficient upload speed to transmit data to clients and consumers. Reliability is also a critical factor. If the business depends on the network connection, it cannot go down. If these are the main concerns for small businesses, any small business without at least a T-1 line will be at a competitive disadvantage. The SBA data shows how far the marketplace is to realizing universal adoption of these kinds of services.

The central problem is that there is insufficient competition in the marketplace for T-1 class connections to lower prices to a reasonable level. Because cable operators do not offer these services, the incumbent telephone company has a monopoly -- unless there are CLECs in a particular local market. Moreover, prices fluctuate dramatically across the country, leaving rural areas at a tremendous disadvantage.

In a recent workshop<sup>9</sup> hosted by the Cooperative Association for Internet Data Analysis (CAIDA), practitioners reported the prices they pay for 1 symmetrical Mbps of dedicated broadband service in different areas of the country. There are no publicly available datasets that provide this kind of price information on a larger scale, but this snapshot gives a striking display of the disparities and the importance of supply-side market conditions. There is an urgent need both to study this problem and use policy changes to mitigate the worst of the damage.

**Price per month of 1 symmetric Mbps of dedicated broadband service:**

San Francisco -- \$8-12

Chicago, Ill. -- \$80-90

Urbana, Ill. -- \$300-320

Greenup, Ill. -- \$1300

These figures are corroborated by the SBA's survey that reports the average monthly expense on a T-1 line for small businesses at \$720.<sup>10</sup> There are multiple factors at play in the price

<sup>9</sup> Commons Project Strategy Summit, December 2006, San Diego, CA, Cooperative Association for Internet Data Analysis (CAIDA).

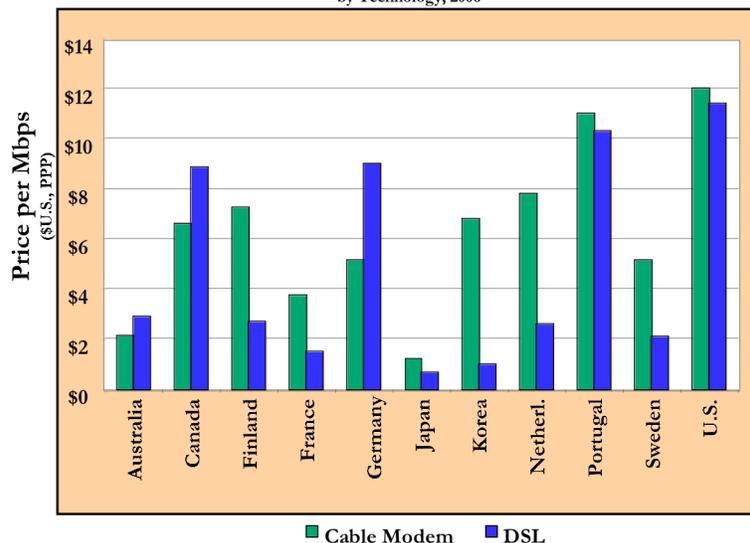
<sup>10</sup> See summary of SBA survey: Pociask, 19.

disparity here (including the cost of service provision in rural versus urban areas), but by far the most important one is the presence of competitive service providers. As a general rule of thumb, the more CLECs there are in a market, the more likely it is that prices are driven down.

The consequences of this problem are stark. By way of analogy, imagine if small businesses faced similar disparities in gas prices. By analogy, if a gallon of gas were \$2 in San Francisco, it would cost \$260 a gallon in Greenup. Is there any wonder where investment, jobs and economic growth will go in such an environment?

This is where the rural digital divide and the international comparisons become very significant for the small business economy. If the communications technologies most appropriate for business users are unavailable or excessively priced in rural areas, those businesses will either never materialize, or they will move to urban areas. A 2005 survey reported that three-quarters of rural small businesses did not have access to the broadband technologies they need.<sup>11</sup> If these technologies are available at higher speeds and lower prices overseas than anywhere in the U.S. market (rural or urban), either the jobs will flow abroad or the competitive advantages will tip the scales dramatically against the U.S. economy. The SBA survey reported that the average small business customer that did not have a T-1 line paid between \$40 and \$50 per month for asymmetric cable modem and DSL service. These connections are typically between 3 and 8 Mbps on the download and roughly one-third of that or less on the upload. By contrast, connections in France are 3 to 10 times those speeds for the same price.<sup>12</sup> In Japan, the same money buys 8 to 30 times that speed.<sup>13</sup>

**Broadband Price for Select OECD Countries**  
by Technology, 2006

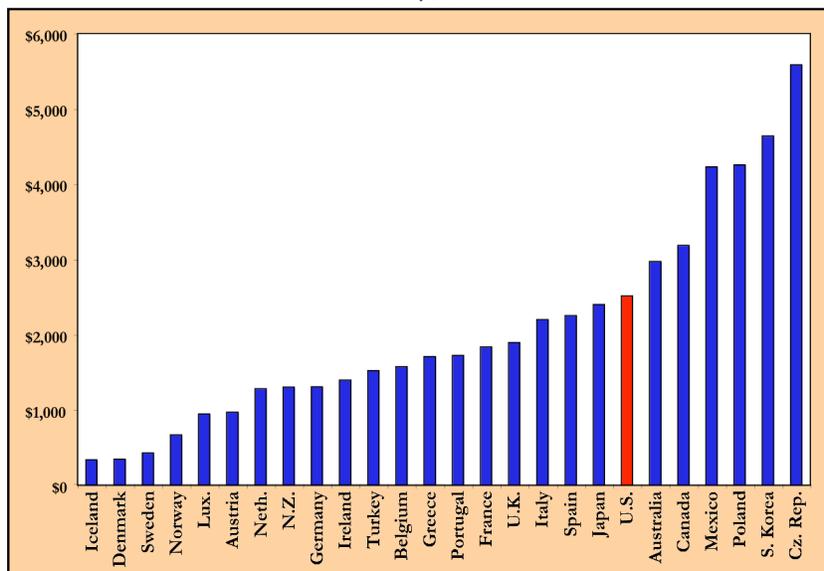


Source: OECD

<sup>11</sup> Gross, Grant, “Survey: Small businesses lack broadband options,” IDG News, September 20, 2005, Available at [http://www.infoworld.com/article/05/09/20/HNsmbbroadband\\_1.html](http://www.infoworld.com/article/05/09/20/HNsmbbroadband_1.html)  
<sup>12</sup> See: Jennifer L. Schenker, “Vive la High Speed Internet,” *Business Week*, July 18, 2007, Available at: [http://www.businessweek.com/print/globalbiz/content/jul2007/gb20070718\\_387052.htm](http://www.businessweek.com/print/globalbiz/content/jul2007/gb20070718_387052.htm)  
<sup>13</sup> See: Blaine Harden, “Japan’s Warp-Speed Ride to Internet Future,” *Washington Post*, August 29, 2007, Available at: [http://www.washingtonpost.com/wp-dyn/content/article/2007/08/28/AR2007082801990\\_pf.html](http://www.washingtonpost.com/wp-dyn/content/article/2007/08/28/AR2007082801990_pf.html)

A recent comprehensive survey by the OECD indicates that the U.S. small businesses that choose to purchase the more expensive but more reliable symmetrical leased-access connections pay far more than business users in most other OECD nations.<sup>14</sup> The OECD found that while businesses in countries like Denmark and Iceland pay approximately \$350 USD per month for a 2 Mbps leased-access line, U.S. businesses are paying on average \$2,500 per month for the same product.

Average Monthly Cost for a 2Mbps Symmetrical Leased Access Line  
OECD 2007, \$U.S. PPP



Source: OECD

It is imperative that Congress pay close attention to broadband regulatory policy issues -- great and small -- in order to ensure that by the time Capitol Hill moves to address the disastrous failures in the broadband marketplace, the FCC hasn't already given up the game. As this analysis demonstrates, the key problem is not the availability of broadband services (although that is a significant problem in many rural areas); it is the creation of competitive markets to make them faster and more affordable. How do we get T-1 class or better services in as many markets as possible? How do we open the market to more providers to create the competition which will drive the costs down so that they are affordable to most small businesses?

Notwithstanding the absence of specific data and analysis on the small business broadband market, Congress is acutely aware of the larger problems in the marketplace. The facts are unambiguous in the residential broadband market (which we have seen has a large overlap with the small business market). A significant number of American households -- around 10 percent -- have no available terrestrial broadband service.<sup>15</sup> A much larger percentage -- over 40 percent -- have service available to them, but they do not subscribe -- foregoing the social and economic benefits of connectivity because of high prices, a lack of equipment and training, or simple disinterest.<sup>16</sup> Rural

<sup>14</sup> "OECD Communications Outlook 2007", Organization for Economic Cooperation and Development, Information and Communications Technology Division, July 2007.

<sup>15</sup> "Broadband Deployment is Extensive throughout the United States, but it is Difficult to Assess the Extent of Deployment Gaps in Rural Areas," Government Accountability Office, Report to Congressional Committees, GAO-06-426, May 2006.

<sup>16</sup> Extrapolated from "High-Speed Services for Internet Access as of June 30, 2006," Industry Analysis and Technology

areas lag behind urban areas in broadband access.<sup>17</sup> These inequalities present significant downward pressure on the likelihood that small businesses will be founded and succeed in the geographic and socio-economic areas most in need of economic development.

The cost to our economy and the quality of life in our society mounts each successive year that these problems go unsolved. Meanwhile, alarmingly, the U.S. is falling behind the rest of the world in broadband penetration and market performance, ceding the tremendous benefits of leading the world in network connectivity to others. The President called for us to reach the universal broadband milestone by this year. There is now no chance we can achieve that result. While it is true that the total number of broadband lines deployed in the U.S. is rising and the total number of broadband users is now near 50 percent of the country, the U.S. growth rate in broadband penetration compared to other nations is not encouraging. Our growth rate between 2005 and 2006 earned us the 21<sup>st</sup> spot out of 30 among OECD nations.<sup>18</sup>

Country	Year to Year Absolute Change In Broadband Penetration (OECD)					
	Dec 2001-2002	Dec 2001-2003	Dec 2003-2004	Dec 2004-2005	Dec 2005-2006	Slowing ('05 to '06)?
Denmark	3.8	4.8	6.0	5.9	7.0	No
Netherlands	3.2	4.8	7.2	6.2	6.6	No
New Zealand	0.9	1.0	2.1	3.4	5.9	No
Ireland	0.3	0.5	2.5	3.4	5.8	No
Sweden	2.7	2.6	3.8	5.7	5.8	No
Norway	2.3	3.8	6.8	7.0	5.7	Yes
Hungary	0.3	1.4	1.6	2.7	5.6	No
Luxembourg	1.2	2.0	6.3	5.1	5.5	No
Australia	0.9	1.7	4.2	6.1	5.4	Yes
France	1.8	3.1	4.6	4.6	5.2	No
United Kingdom	1.7	3.1	5.1	5.9	5.2	Yes
Finland	4.2	4.0	5.4	7.5	4.8	Yes
Poland	0.2	0.5	1.3	0.3	4.5	No
Switzerland	3.6	4.5	7.4	6.6	4.4	Yes
Belgium	4.3	3.0	3.8	2.7	4.3	No
Czech Republic	0.1	0.3	2.0	3.9	4.2	No
Germany	1.8	1.5	2.8	4.6	4.1	Yes
S. Korea	4.6	2.4	0.6	0.4	3.9	No
Spain	1.8	2.4	2.7	3.4	3.8	No
Iceland	4.7	5.9	3.9	8.2	3.3	Yes
United States	2.4	2.8	3.2	3.4	3.3	Yes
Greece	0.0	0.1	0.3	1.0	3.2	No
Slovak Republic	0.0	0.3	0.7	1.5	3.2	No
Austria	2.0	2.0	2.5	4.2	3.0	Yes
Italy	1.0	2.4	4.0	3.7	3.0	Yes
Canada	3.2	3.0	2.5	3.4	2.8	Yes
Japan	3.9	4.6	4.3	2.6	2.6	Yes
Portugal	1.5	2.3	3.4	3.3	2.3	Yes
Turkey	0.0	0.3	0.4	1.4	1.7	No
Mexico	0.2	0.1	0.5	1.3	1.3	Yes

Despite the inactivity of the agencies responsible for broadband deployment, the broadband problem is well-documented. Accordingly to the best available data:

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Division, Wireline Competition Bureau, Federal Communications Commission.; calculated assuming one line per household, based on July 1 2006 Census household estimates; S. Derek Turner, "Broadband Reality Check II," Free Press, Consumers Union, and Consumer Federation of America, August 2006, Available at <http://www.freepress.net/docs/bbrc2-final.pdf>

<sup>17</sup> SBA's study affirms this finding. See Pociask, op cit.

<sup>18</sup> Organization for Economic Cooperation and Development, "OECD Broadband Statistics to December 2006", <http://www.oecd.org/sti/ict/broadband>.

- **Extrapolating from FCC data, nearly 60 percent of U.S. homes are not broadband adopters.**<sup>19</sup>
- **The rate of residential broadband adoption continues to slow.** From June 2005 to June 2006 the number of residential advance service lines increased 34 percent. But from June 2004 to June 2005 the increase was 62 percent.<sup>20</sup>
- **37 percent of ZIP codes have one or less cable and/or DSL provider.**<sup>21</sup> Given that FCC ZIP code data overstates the level of broadband deployment; this should be viewed as a conservative figure.
- **Some states have large gaps in coverage.** Over 40 percent of South Dakota households are not wired for cable broadband. Over 40 percent of New Hampshire and Vermont households are not wired for DSL.<sup>22</sup>
- **The broadband market remains a duopoly.** 96 percent of residential advanced-services lines are either cable or DSL.<sup>23</sup>
- **There are no viable 3<sup>rd</sup> “pipe” competitors.**
  - From June 2005 to June 2006 there were only 637 new broadband over powerline (BPL) connections added, bringing the total to just over 5000 nationwide, or 0.008 percent of all U.S. broadband connections.<sup>24</sup>
  - From December 2005 to June 2006 the number of advanced service satellite broadband connections DECREASED by 40 percent.<sup>25</sup>
  - Mobile wireless broadband from cellular carriers enjoyed a rapid growth-rate in the last year. However, these connections remain slow and costly compared to wireline alternatives. They are not substitutable competitors with DSL and cable modem, but rather form a complementary market dominated by vertically integrated firms with little incentive to cannibalize wireline market share.
  - The likelihood of solving the small business broadband problem with a wireless third pipe is even more remote than the notion that residential wireline services will be replaced with wireless. The needs of small business for higher speeds and symmetrical connections at affordable rates stand in direct contrast with the characteristics of asymmetrical, slow, expensive wireless connectivity

This record of performance has not positioned us well in the race for global competitiveness -- with all of the economic and social benefits at stake. According to the OECD, the U.S. is 15<sup>th</sup> among the 30 member nations in broadband penetration, lagging behind the acknowledged world

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<sup>19</sup> “High-Speed Services for Internet Access as of June 30, 2006,” Industry Analysis and Technology Division, Wireline Competition Bureau, Federal Communications Commission.; calculated assuming one line per household, based on July 1 2006 Census household estimates.

<sup>20</sup> *Ibid.*

<sup>21</sup> *Ibid.*

<sup>22</sup> *Ibid.*

<sup>23</sup> *Ibid.*

<sup>24</sup> *Ibid.*

<sup>25</sup> *Ibid.*

leaders, the Netherlands and South Korea, but also Canada and all of Scandinavia.<sup>26</sup> The International Telecommunication Union (ITU), evaluating a larger number of countries than the OECD, places the U.S. at 16<sup>th</sup>.<sup>27</sup> A separate ITU study measuring a variety of factors in the Digital Opportunity Index, places the U.S. at 21<sup>st</sup>.<sup>28</sup> The consequences of lagging performance are severe.

### **Current Policy Debates Affecting Small Business Broadband Market**

Buried in the arcane world of telecommunications regulatory policy are a number of issues that have enormous bearing on the quality, price and competitive availability of business-class broadband connections. For example, the FCC is currently mired in debates over three technical regulatory proceedings: special access regulation, forbearance petitions on unbundling and interconnection requirements, and the retirement of copper wire facilities by incumbent telephone companies. What does this mean for small business?

The special access debate centers on the prices that incumbent network owners charge to competitive service providers to transport and terminate the aggregated traffic from the competitive last-mile networks. Incumbent Local Exchange Carriers (ILEC) are pushing to deregulate pricing of their monopoly infrastructure. CLECs, wireless telecommunications providers (e.g. Sprint/Nextel, T-Mobile), cable companies and municipal broadband providers all pay special access rates to the incumbent networks (usually Bell companies) that own the backbone of the Internet and the regional networks that carry traffic to the backbone. These competitors are arguing that prices should continue at rates that permit competition. Generally speaking, the higher the rates are for special access, the higher the prices are for consumers of telecommunications services from these kinds of competitive service providers, since the costs the competitors pay to the incumbents must be passed along to consumers. Since CLECs disproportionately serve the business market, this debate is highly significant for the future of small business connectivity. Special access rates will play a huge role in determining the cost and availability of T-1 or better classes of business broadband service.

The market is hardly unprofitable for the incumbents. According to Sprint/Nextel's testimony before the Senate Commerce Committee in 2006: "Just last year ATT/SBC earned a rate of return of 92 percent on its special access services; BellSouth earned nearly 98 percent."<sup>29</sup> In 2005-2006, the special access market was a \$16 billion business. Over 80 percent of this revenue went to Verizon and AT&T. The profit margin in this sector was between 50 and 100 percent. These monopoly rents stand in stark contrast next to the FCC's authorized rate for rate-of-return carriers, 11.25 percent. Clearly, there is little competition in special access.<sup>30</sup> The Government Accountability Office (GAO) confirms this finding in the marketplace, reporting on its study of telecommunications companies providing service to business districts: "Data on the presence of competitors in commercial buildings suggest that competitors are serving, on average, less than 6 percent of the buildings with demand for dedicated access in these areas. For buildings with higher

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<sup>26</sup> Organization for Economic Cooperation and Development (OECD), "OECD Broadband Statistics to June 2006," October 13, 2006, Available at <http://www.oecd.org/sti/ict/broadband>

<sup>27</sup> [http://www.itu.int/ITU-D/ict/statistics/at\\_glance/top20\\_broad\\_2005.html](http://www.itu.int/ITU-D/ict/statistics/at_glance/top20_broad_2005.html)

<sup>28</sup> World Information Society Report, August 2006,

<http://www.itu.int/osg/spu/publications/worldinformationsociety/2006/wisr-web.pdf>

<sup>29</sup> Testimony of Robert S. Foosaner, Senior Vice President – Government Affairs, Sprint Nextel Corporation before U.S. Senate Committee on Commerce, Science and Transportation, June 13, 2006.

<sup>30</sup> Sprint Nextel Corporation Comments to the Federal Communication Commission, May 16, 2007, Docket No. 07-45.

levels of demand, facilities-based competition is more moderate, with 15 to 25 percent of buildings showing competitive alternatives, depending on the level of demand.”<sup>31</sup>

In addition, the incumbent providers have filed numerous forbearance petitions at the FCC regarding various regulations that, among other things, control special access rates and require wholesaling of network elements to CLECs. They seek forbearance -- meaning they are requesting the FCC simply decline to enforce the rules that govern them -- in order to undo the regulations that create competitors in their markets. Business class services are the primary arena of dispute, once again casting a direct line of influence on small business customers. If the incumbents are granted forbearance from the rules, the rates for small businesses seeking first class broadband service could increase very substantially. The competitive pressures that have exerted what little pressure exists on pricing will be gone.

Finally, there is a hot debate over what is known as “copper retirement.” According to numerous press reports and the complaints of the CLECs, incumbent telephone companies (notably Verizon) are decommissioning or even cutting the copper wire when they install new fiber-optic lines into a neighborhood.<sup>32</sup> The result is that the CLECs that were paying Verizon to use those lines are now unable to compete in that market. They cannot reach their customers! Verizon claims that it is unacceptable to ask them to run two networks -- a fiber and a copper network. However, in the likely event competitors will run the networks, they need to buy or lease them intact, not inert and useless in the ground. Beyond the importance of maintaining competitive markets, these wires should not be Verizon’s to retire. They have been paid for many times over by the rate paying public. They have also been fully depreciated through tax incentives for the Bell companies. And, of course, they are laid on the public’s rights-of-way. Once again, the competitive service providers that are losing out in this debate are the industry that specializes in business class broadband services.

These issues carry a great deal of importance for the future of small business broadband competition. They are often considered independent of the larger focus of the Congress on pro-competitive broadband policy and the goals of increasing speeds and lowering costs by triggering market forces. But they are tied to that mission. If each of these debates results in the reduction of competition, they will weigh down and inhibit the progress toward a better broadband marketplace for small business, further reducing global competitiveness across the economy.

## **Policy Agenda to Address the Broadband Problem for Small Business**

Clearly, there is a strong need to address our growing broadband problems. Perhaps nowhere is the urgency more pressing than in the small business marketplace. Most of our small businesses are not buying the services best suited to them because of cost, even as their global competitors race ahead. Even if we correct course immediately, it will take years to undue the damage.

The first step is establishing a serious national broadband policy. Currently, we are “the only industrialized state without an explicit national policy for promoting broadband.”<sup>33</sup> According to FCC Commissioner Michael Copps: “We recently got a commitment on a goal, on an objective. But

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<sup>31</sup> See findings: United States Government Accountability Office, “FCC Needs to Improve Its Ability to Monitor and Determine the Extent of Competition in Dedicated Access Services,” GAO-07-80, November 2006.

<sup>32</sup> See for example: Ed Gubbins, “CLECs protest copper retirement,” *Telephony Online*, May 21, 2007, Available at: [http://telephonyonline.com/mag/telecom\\_clecs\\_protest\\_copper/](http://telephonyonline.com/mag/telecom_clecs_protest_copper/)

<sup>33</sup> Thomas Bleha. “Down to the Wire.” *Foreign Affairs*, May/June 2005. <http://www.foreignaffairs.org/20050501faessay84311/thomas-bleha/down-to-the-wire.html>

an objective and a strategy are two vastly dissimilar things.”<sup>34</sup> The key problem is that U.S. broadband policies have not engaged free market competition, choosing instead to deregulate incumbents and wait for the elusive intermodal competition of wireless and BPL to come along and challenge the stagnant duopoly of DSL and cable. This policy will not work for the residential market -- where redundant infrastructures have brought complimentary, not substitute, broadband services. This policy *cannot* work for the business market, where the most suitable services are only available on a single network. Small businesses that buy either consumer or business class broadband will rise and fall in the global marketplace based on the number of choices they have for broadband and the price per unit of speed.

We need to identify our goals for the small business broadband market and work backward to find the right policies. We suggest goals that address our shortfalls in each of the three major indices of broadband performance: availability, price and value (cost per unit of speed).

Goal #1 -- Establish universal availability of business-class broadband services

Goal #2 -- Lower barriers to market entry for competitive ISPs -- stimulating market forces to drive prices down and speeds up

Goal #3 -- Stabilize the market conditions that will permit small businesses to move out of the consumer-grade broadband market and subscribe to affordable, business-class services.

To regain global leadership in broadband and maximize the social benefits of a network economy, we need to establish a framework that supports an evolving communications infrastructure that will ultimately provide 100 Mbps of symmetrical connectivity to small business in America in the next decade. This is the standard that has already been reached by the world’s leading broadband nations. We have no time to lose.

To achieve the goal, we will need vigorous, multimodal competition -- that is, competition between delivery platforms (e.g. DSL, cable, and wireless) as well as competition within delivery platforms (e.g. multiple ISPs offering T-1 service in a market). We cannot and should not bet our digital future on one form of competition. These competition policies will provide healthier markets for small business consumers of broadband as well as prompt the emergence of small business ISPs carving out sectors of the market for their own innovative offerings.

We should also ensure that the content/applications market that sits adjacent to the connectivity/access market also retains maximum competitiveness. Through network neutrality rules, we can preclude market power in network ownership from distorting the market for Internet content. This will maximize innovation among small businesses in the content and services market, stimulating greater investment and job growth in the sector. It will also ensure that small businesses compete on a level playing field with large businesses. To realize these goals, we will need to establish a national broadband policy framework that is comprehensive and aggressive in pursuit of market competition and advanced network capabilities.

### *Study the Problem*

We should begin by addressing our data problems. This Committee should press the SBA to conduct further studies in conjunction with the FCC on the small business market. There is no

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<sup>34</sup> Jim Hu, “Why Our Broadband Policy’s Still a Mess,” CNet, February 28, 2005, Available at: [http://www.news.com/Why-our-broadband-policys-still-a-mess/2008-1034\\_3-5590929.html](http://www.news.com/Why-our-broadband-policys-still-a-mess/2008-1034_3-5590929.html)

specific information at any federal agency on small business connections in the U.S., which inhibits our ability to craft the right policies. We should also study the international competitiveness of our small businesses, focusing on ways we can bridge the technology gap to the world leaders.

We should study the cost and feasibility of broadband technologies. We do not have reliable cost estimates for deploying different technologies to meet the needs of business broadband users. For years, we have heard that technologies like BPL and satellite wireless broadband were inches from transforming the marketplace. Yet we did not study these issues sufficiently to determine that those estimates were overblown and unrealistic. A paucity of information has led us to false expectations and delay, distracting from the need to seek out the necessary data points to make policy.

To do all of this effectively, we needed better data in general. We need to know at a granular level – block by block -- where broadband service is available and where it is not. But we must go beyond that. We must collect information about the price and speed of connections as well. Without this information, we cannot quickly identify the gaps in the service market and remedy market failures that hold prices high and service quality low.

Programs like ConnectKentucky represent a valuable model to consider for federal policy—particularly in its focus on working with local communities. The ConnectKentucky model has much in it to recommend. In particular, the combination of teams of local stakeholders with localized broadband data collection is a useful method to aggregate market demand and attract the cooperation of broadband carriers. This brand of on-the-ground needs assessment is a very useful innovation in the sector—though it does raise perplexing questions about the quality of the carriers’ own market research.

However, there are limitations with the ConnectKentucky model. The data the program collects is exclusively proprietary. This means that the information about deployment in different geographic areas cannot be used by researchers, business leaders and policymakers to further inform policy and investment decisions. Further, the program does not collect information about price and speed of broadband connections. This is a significant limitation. It is particularly problematic in areas which are not wholly unserved but nonetheless have low broadband penetration rates. Finally, if programs like ConnectKentucky were to be instituted nationwide on a state by state basis, the information collected that can be made public would not be comparable between states and the insights from a bigger picture analysis would be unavailable.

### *Enact Multi-Modal Competition Policy*

The problems in the marketplace will not be solved by tweaking around the edges; nor will they be solved by enacting policies that are subsidies of status-quo, incumbent business models. We need to reject the conventional political wisdom of complacent incrementalism and embrace a policy inquiry into all the possible options for putting our broadband future back on track. Now is not the time to make artificial declarations that some ideas are off the table and narrowly focus on particular proposals. No one policy idea is the silver bullet. It will require many different initiatives aimed at different levels of the broadband market to accomplish our goals. In short, it must be “multimodal” -- by which we mean that it must foster competition both *within* and *between* broadband technology markets.

We present here an outline that may serve as a blueprint of ideas for a national broadband policy that serves the interests of small business. We would encourage other stakeholders to offer the Committee similar, comprehensive proposals for consideration. To simplify for present purposes, the broadband market can be understood as two separate arenas: 1) a physical connection to the Internet and the technologies used to transmit information over the network; and 2) the

applications and content delivered via that Internet connection and the devices used to receive them. We can and should target broadband policy in both layers of the network to maximize the productivity of both markets.

### Policies for the Physical Layer

Given the dearth of small businesses that subscribe to symmetrical, dedicated broadband connections, the first policy priority must be expanding the reach, capacity, competitiveness and efficiency of our networks to serve small business customers. In turn, these networks support the spread of advanced Internet applications that carry the nation's growing e-commerce business.

- Reasonable and nondiscriminatory interconnection between facilities-based providers -- Since the Internet is nothing more than a global network of interconnected private and public networks, it is imperative that each interconnects with one another to maximize the efficiency and utility of the overall network. This policy is central to the revitalization of a competitive marketplace for business-class broadband services.
- Reintroduce intramodal competition into the broadband market -- Though recent FCC decisions have moved away from this model of competition policy, it is imperative that it is not abolished. Intramodal competition through open access to network infrastructure has been the cornerstone of international broadband successes. Forbearance petitions seeking to circumvent these rules at the FCC should be denied.
- Pro-competitive regulations for special access telecommunications connections -- The incumbent networks must not be permitted to price all competition out of the market and destroy what little remains of the competitive ISP industry. Forbearance petitions at the FCC seeking to circumvent undermine competition in the special access market should be denied.
- Allocation of licensed public spectrum aimed at creating wireless broadband competitors that are independent of wireline incumbents and offer capacity on a wholesale basis.
- Expansion of unlicensed public spectrum into lower frequencies by opening up the unassigned television channels (also known as "white spaces") for wireless broadband. We recommend the Kerry-Smith bill, S. 234.
- Reform and transition the federal universal service programs from dial-tone to broadband -- We should move our valuable Universal Service Fund (USF) programs into the 21<sup>st</sup> century with targeted subsidies and accountability benchmarks to support broadband deployment in high-cost areas.
- Explore financial incentives to expand broadband capacity in the last mile -- Successful policies overseas have included direct government investment in wiring public facilities, low-interest loans for public and private broadband projects, tax incentives for networking equipment, accelerated depreciation, debt guarantees and other targeted investments in our digital future.<sup>35</sup>

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<sup>35</sup> Gross, op. cit.

- Authorize and protect the right of local governments to provide broadband services -- Municipalities have led the charge in recent years to fill gaps in the broadband market and build services that exceed those offered by commercial incumbents. This effort to bring competition and innovation to the marketplace should be encouraged. We recommend the Lautenberg-McCain bill, S. 1853.
- Collect data and map the broadband market on an ongoing basis -- We cannot solve problems that we do not understand. Our current state of broadband data collection is unacceptable. FCC should be instructed to collect more granular information on service as well as price and speed data on all broadband connections. Programs should be initiated to specifically study the small business market. We recommend the Inouye data collection bill, S. 1492, which has recently passed out of the Senate Commerce Committee.

### Policies for the Applications Layer

The applications layer, in this analysis, refers to the marketplace for content, applications, services and devices that flow over, or connect to, the Internet. This economic space at the “edge” of the network architecture has been a remarkable engine of economic growth in the small business sector in the last decade. Innovators and entrepreneurs should have not barriers to entry to sell their ideas. We need an absolutely free market, absent any gatekeepers. Policies aimed at the application layer should recognize its centrality to the economic and democratic health of the nation.

- Network Neutrality should be established as the cornerstone of broadband policy -- We should protect an open market for speech and commerce on the Internet for consumers, citizens and businesses alike. To do this, we should apply nondiscrimination safeguards to the broadband ramps leading onto the Internet that prohibit owners of the physical layer of the network from gate-keeping the applications layer of the network. We recommend the Dorgan-Snowe bill, S. 215.
- *Carterphone* rules should apply to the wireless broadband platform -- We should recognize and remedy the contradictions in fostering an open market for wireless broadband on a platform emerging from the closed networks of cellular telephony. The walled garden of the personal communications service (PCS) world should not be permitted to cripple the potential of mobile wireless broadband. All devices, applications and services that do not harm the network should be permitted access.
- Facilitate ongoing research into network traffic and data management -- The dearth of information about what is happening on the Internet cripples our efforts to address some of the most pressing problems in the application layer: spam, cyber-security, privacy and traffic management. Policymakers should seek to make available the tools researchers need to provide the best available answers to these problems.

### **Conclusion**

The broadband problems in the U.S -- and the small business broadband problem in particular -- are urgently in need of redress. If we watch and wait, trusting that today’s artificially constrained marketplace will magically solve market failures, we will see the U.S. slip farther behind the rest of

the world and widen the digital divide -- both domestically and internationally. The consequences are too severe to permit. Even if we reversed engines today, it would take years to catch up to the world's leading broadband nations.

The way forward is clear, it simply requires the political will to recognize the problem and address it with swift and comprehensive policy change. Broadband is now well understood to be a driver of economic growth and an essential part of a healthy small business sector. Yet the lack of competition in the broadband market is so severe that most small businesses are unable to purchase the kind of broadband service most suited to advance their competitive interests. Many small businesses -- especially in rural areas -- do not have connectivity at all. Meanwhile, the gap to our global competitors is widening across the board. The losses we are incurring as a result of the status quo are measured in billions of dollars.

In spite of these harsh realities, we still lack a comprehensive national broadband policy. If anything, our current policies are headed in the wrong direction. The incumbent network owners are busy pressuring the FCC to permit them to sweep away the last free market policies on the books and crush what little competition remains. If they are successful, the only market forces exerting downward pressure on the prices for business class broadband service will disappear. As global broadband markets are flooding with competitive offerings, ours are contracting.

Perversely, the proposals of the incumbents also include dismantling the open, neutral marketplace for commercial applications to squeeze out higher revenues at the expense of new innovators. The result in the value chain will be a resounding net loss. This is robbing Peter to pay Paul. We must reject the argument that an open Internet and a high capacity network are mutually exclusive goals. We must have both for our information marketplace to prosper. Nowhere is this truer than for American small business.

The first step on the road to broadband recovery is understanding the problem. We must rectify the deplorable state of data collection in the broadband market. What we do not know undercuts our ability to craft and target viable solutions. Armed with the right information, the Congress should move forward with a comprehensive national broadband policy. This should be a broad platform of initiatives that addresses the complexity of the issue and maximizes our chances for near and long term success. The focus of these policies should be: 1) enhancing competition between and within the technologies that deliver broadband connectivity; 2) protecting competition and speech in the content flowing over the Internet; 3) expanding opportunities to bring new broadband providers to the market using new technologies; 4) using targeted economic incentives to stimulate investment in underserved areas; 5) promoting a permanent research agenda that facilitates the collection of data in the market and on the network. We look forward to working with the Committee to support these productive goals.

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<sup>1</sup> Free Press is a national, nonpartisan organization with over 350,000 members working to increase informed public participation in media and communications policy debates.

<sup>2</sup> Consumers Union is a nonprofit membership organization chartered in 1936 under the laws of the state of New York to provide consumers with information, education and counsel about goods, services, health and personal finance, and to initiate and cooperate with individual and group efforts to maintain and enhance the quality of life for consumers. Consumers Union's income is solely derived from the sale of *Consumer Reports*, its other publications and from noncommercial contributions, grants and fees. In addition to reports on Consumers Union's own product testing, *Consumer Reports* with more than 5 million paid circulation, regularly, carries articles on health, product safety, marketplace economics and legislative, judicial and regulatory actions which affect consumer welfare. Consumers Union's publications carry no advertising and receive no commercial support.

<sup>3</sup> The Consumer Federation of America is the nation's largest consumer advocacy group, composed of over 280 state and local affiliates representing consumer, senior, citizen, low-income, labor, farm, public power and cooperative organizations, with more than 50 million individual members.