

FACTUAL RECORD APPENDIX

A. In The Absence Of Intrusive Regulatory Intervention, Broadband Services Have Experienced Thriving Competition And Robust Growth

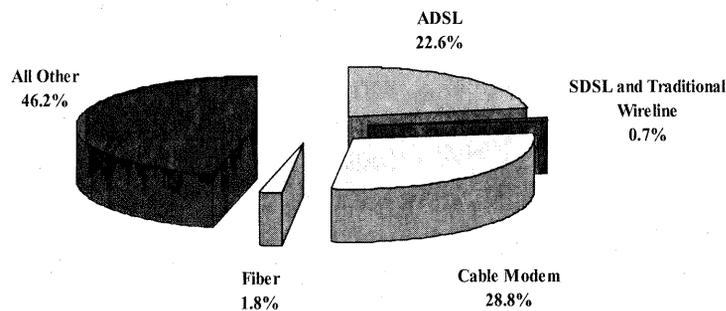
In the absence of intrusive regulatory intervention, competition is thriving in the broadband market and robust growth is evident. Recent data show that broadband adoption is increasing rapidly. All evidence suggests that there is an increasing array of broadband services available to businesses and consumers throughout the United States and that broadband quality is increasing.¹ Robust broadband investment has continued despite the recent economic downturn. In addition, the data suggest that wireless broadband competes with wireline broadband and that customers are increasingly availing themselves of the rapidly expanding array of wireless broadband options. At the same time, broadband prices are dropping and broadband providers compete vigorously based on price, data speeds, bundling, and comparative advertising. In other words, this clearly is not a market that is broken and in need of an intrusive regulatory fix.

1. Broadband adoption continues to increase rapidly in the United States

According to the Commission's latest "High-Speed Services for Internet Access" report (showing data as of June 30, 2008), the total number of high-speed lines in service across all modalities has grown dramatically in the United States -- from 15.8 million lines in June 2002 to 132.8 million lines in June 2008, an increase of over 700% during

¹ In addition, there is no credible evidence that the U.S. is somehow falling behind other countries when proper account is taken of broadband accessibility and other meaningful measures. *See* Thomas W. Hazlett, "Were Number Two?" Commentary, December 2009, available at: <http://www.commentarymagazine.com/viewarticle.cfm/we-re-number-two—15294>.

that time.² Of the 132.8 million total high-speed lines in service as of June 2008, 28.8% were cable modem, 22.6% were asymmetric DSL (ADSL), 0.7% were symmetric DSL (SDSL) and traditional wireline, 1.8% were fiber to the end-user premises, and 46.2% used other technologies, such as fixed wireless, mobile wireless and satellite. This breakdown is illustrated in the following graphic:³



This rapid increase in broadband adoption is corroborated by other recent broadband industry data. For example, the National Cable Telephone Association (NCTA) reports that, as of September 2009, there were 41.2 million cable modem broadband lines, up from 21.0 million in 2004.⁴ ILECs have also reported significant increases in the number of DSL broadband lines. For example, Qwest reported an increase from 1.037 million in 2004 to 2.951 million in September 2009 in mass market broadband subscribers.⁵ Verizon reported that, as of the third quarter of 2009, it now serves 9.174 million broadband customers, including 3.28 million FiOS Fiber to the

² *High-Speed Services for Internet Access: Status as of June 30, 2008*, Industry Analysis and Technology Division, Wireline Competition Bureau, rel. July 2009, Table 1 (FCC Broadband Report).

³ *Id.* at Chart 2.

⁴ See <http://www.ncta.com/Statistics.aspx>.

⁵ Qwest 3Q09 Earnings Release. See <http://investor.qwest.com/earningsarchive>.

Home (FTTH) high-speed Internet customers.⁶ Verizon's overall broadband lines have increased over 30% since December 2006 and its FiOS lines have increased almost 50% in the last year alone.⁷ AT&T reported 15.6 million broadband lines as of the third quarter of 2009, up from 14.1 million as of the end of 2007.⁸

Subscription studies also confirm these trends and suggest that broadband adoption may even be accelerating. According to a recent study conducted by the Pew Internet and American Life Project, 63% of adult Americans subscribed to broadband Internet as of April 2009 -- up from 55% in May of 2008.⁹ The Pew Study also showed that the percentage of adults with broadband at home surged 57% from December 2008 to April 2009.¹⁰ Interestingly, the Pew Study also showed that broadband now serves a larger swath of the American populace than in the past. For example, the study showed significant growth in broadband subscription rates for senior citizens and low-income households:

Senior citizens: broadband adoption among Americans age 65 and older grew by 58% from 2008 to 2009, from 19% to 30%.

Low-income Americans: broadband adoption among those who report household incomes of \$20,000 per year or less (16% of the sample) grew from 25% in 2008 to 35% in 2009. This 40% growth represents a

⁶ *Id.* See also, http://investor.verizon.com/financial/quarterly/vz/3Q2009/supplemental_schedule_3Q09.xls?t=633956169991380665 and <http://investor.verizon.com/news/20091026/20091026.pdf?t=633956176381849415>.

⁷ See http://investor.verizon.com/financial/quarterly/vz/3Q2009/supplemental_schedule_3Q09.xls?t=633956169991380665.

⁸ See http://www.att.com/Investor/Growth_Profile/download/master_Q3_09.xls.

⁹ See *Home Broadband Adoption 2009*, Pew Internet and American Life Project, June 2009, at 9 (Pew Study).

¹⁰ *Id.* at 10.

significant shift from the 2007 to 2008 timeframe, when this group saw a slight (and not statistically significant) drop in broadband penetration from 28% to 25%.¹¹

Significantly, this growth in broadband adoption continues unabated while the United States and the world as a whole have experienced a severe recession over the past two years. The Pew Study noted that “Broadband adoption appears to have been largely immune to the effects of the current economic recession.”¹²

2. Broadband penetration is also steadily increasing

The FCC Broadband Report also demonstrates that broadband availability is steadily increasing throughout the United States. For example, the report estimates that, as of June 2008, high-speed DSL connections were available to 83% of the households to whom incumbent LECs could provide local telephone service, and that high-speed cable modem service was available to 96% of the households to whom cable system operators could provide cable TV service.¹³ By June 2008, 98.2 percent of zip codes had three or more competing broadband service providers and more than 76.5% had six or more competitors.¹⁴ Less than 0.3 percent of the nation’s zip codes were reported to have one provider or less.¹⁵ In contrast, just three years prior, in June 2005, only 74.7% of zip codes had three or more providers and only 37.3% had six or more competitors. In June 2005, 11.3% of the nation’s zip codes were reported to have one provider or less.¹⁶ Similarly, the *Broadband in America Report* prepared for the Commission by the

¹¹ *Id.* at 16.

¹² *Id.* at 4.

¹³ *Id.* at Table 14.

¹⁴ *Id.* at Table 15.

¹⁵ *Id.*

¹⁶ *Id.*

Columbia Institute of Tele-Information estimates that, as of 2008, wireline broadband was available to 89% of U.S. households and that broadband availability will increase to 94.5% by 2013.¹⁷

3. **Broadband quality is also increasing**

Customers with broadband access are also shifting to higher speed services as new applications such as video streaming continue to proliferate. According to the FCC Broadband Report, while the number of ADSL lines overall increased 85.2% between June 2005 and June 2008, the growth of higher speed ADSL services increased at far higher rates. By way of example, ADSL lines “[g]reater than or equal to 2.5 mbps and less than 10 mbps in the faster direction” increased over 476%, and ADSL lines “[g]reater than or equal to 10 mbps and less than 25 mbps in the faster direction” increased 1292.9%.¹⁸ Over this time period, the percentage of ADSL lines over 2.5 mbps has increased from 13.5% to 42.3%.¹⁹

Cable modem customers have also shifted to faster speeds. According to the FCC Broadband Report, the number of cable modem broadband lines increased 59.5% between June 2005 and June 2008. Cable modem customers started this time period with higher speeds on average than ADSL (*e.g.*, many customers already subscribing to services between 2.5 and 10 mbps). However, customers with “[g]reater than or equal to 10 mbps and less than 25 mbps in the faster direction” increased 3016% to over 4.5 million (or 11.9% of the total) -- by far the largest percentage increase for any cable

¹⁷ *Broadband in America*, Columbia Institute for Tele-Information, released November 11, 2009 (*Broadband in America Report*) at 59.

¹⁸ FCC Broadband Report, Table 5 (*see reports for June 2005, June 2006, June 2007 and June 2008 data*).

¹⁹ *Id.*

modem service category.²⁰

4. **Broadband investment continues despite the economic downturn**

Despite the recent difficult economic conditions, virtually all broadband providers have continued to invest heavily to expand their broadband footprint, and are increasing the speeds available to consumers and businesses as they seek to try and meet burgeoning bandwidth demand. According to the *Broadband in America Report*, aggregate U.S. broadband capital expenditures in 2008 were \$62.8 billion, with \$41.4 billion for wireline and \$21.35 billion for wireless.²¹

Cable companies have been significantly expanding their broadband reach, and according to the NCTA, now pass 121.4 million homes with broadband Internet availability, up from 90.6 million in 2003.²² Cable companies have also been investing in upgrading their networks to the DOCSIS 3.0 standard, which allows far greater broadband speeds. According to the *Broadband in America Report*, “Cable broadband upgraded to DOCSIS 3.0 is becoming widely available today at advertised speeds as high as 50 megabits downstream (with one firm advertising 101 megabit speeds)” and 20 mbps upstream.²³ Comcast has been particularly aggressive in adding DOCSIS 3.0 capability to its network. According to Stephen Burke, Comcast’s Chief Operating Officer:

DOCSIS 3.0 allows you for the first time to really dramatically increase your capacity for high-speed. . . DOCSIS 3.0 allows you to do something called channel bonding, which means putting together channels so you can

²⁰ *Id.*

²¹ *Broadband in America Report* at 29.

²² See <http://www.ncta.com/StatsGroup/Availability.aspx>.

²³ *Broadband in America Report* at 21 and 33.

really get data speeds that are 100 meg if you want.

And so we decided to try to get 80% of the company DOCSIS 3.0 compliant as quickly as possible by the end of this year and we've done that, and again when you're competing with DSL, which is all our competition in 75% of the country, and they struggle to get five meg and you can offer 50, 75 or 100 and you have all these services doing very, very high-quality video or high-quality gaming or everything else, I think those kinds of investments are what's going to really power the next generation of growth on the DOCSIS side.²⁴

As of the end of 3Q09, Comcast had deployed DOCSIS 3.0 "Wideband" capability to 65% of its footprint, and anticipated increased CapEx in 4Q09.²⁵

Cox Communications also plans to have DOCSIS 3.0 enabled services available to two-thirds of its footprint by the end of 2010.²⁶ According to Cox, its

"Ultimate Tier" service "allows for download speeds of 50 Mbps and upload speeds of 5 Mbps, with users seeing considerably faster online gaming experiences and video sharing."²⁷ Nearly all of the cable companies have been investing heavily in such technologies for several years. According to the NCTA, aggregate cable company investment in infrastructure has increased every year

²⁴ Comcast Comments at Bank of America-Merrill Lynch Conference, September 9, 2009. *See* http://files.shareholder.com/downloads/CMCSA/789830167x0x321428/bb736678-a561-44d5-bece-b201ec4e3cd3/CMCSA-Sep_9_2009.pdf.

²⁵ Comcast 3Q09 Earnings call, November 4, 2009. *See* http://files.shareholder.com/downloads/CMCSA/789830167x0x330658/aa0c31f6-483d-4d68-9641-cedb2998de64/Comcast_Q309_Transcript.pdf.

²⁶ Cox Press Release, July 29, 2009. *See* <http://cox.mediaroom.com/index.php?s=43&item=439>. (Also see *Broadband in America Report* at 22.)

²⁷ *Id.*

since 2004 and cable companies invested \$14.6 billion in 2008 -- an increase of 45% from 2004.²⁸

ILECs have also been investing heavily. For example, Qwest has been investing significant sums to increase its broadband capability through its Fiber to the Node (FTTN) initiative. FTTN allows Qwest to offer broadband services at significantly higher speeds up to 40 mbps downstream and 20 mbps upstream. According to Qwest's 3Q09 Earnings Announcement:

Qwest continued to make strong progress on expanding broadband capabilities in the third quarter. Fiber to the node (FTTN) was deployed to more than 500,000 additional homes during the quarter. Qwest's FTTN footprint now reaches more than three million homes. In the quarter, 71,000 customers added broadband services that utilize the fiber network.²⁹

Qwest also recently announced that it would begin development of its next generation of backbone facilities to "provide 100 Gbps speeds across the network when fully implemented over the next year."³⁰

FTTH availability and adoption is also increasing significantly. As noted above, the FCC Broadband Report showed that, as of June 2008, there were 2.3 million fiber-based broadband connections in the United States. However, according to the latest reports from the FTTH Council, there were 4.2 million homes connected with FTTH service in North America (mostly the United States) as of April 2009 -- an increase of 1.5 million or almost 200% from March of 2007.³¹ While Verizon is clearly the largest

²⁸ See <http://www.ncta.com/Stats/InfrastructureExpense.aspx>.

²⁹ Press Release, Qwest 3Q09 Earnings Report, October 28, 2009.

³⁰ *Id.*

³¹ Fiber-To-The-Home: North American Market Update For The FTTH Council, April 2009. See http://www.ftthcouncil.org/sites/default/files/RVA.FTTH_Apr09.060109.pdf.

FTTH provider, the report identified a total of 681 other providers of FTTH representing over 1.1 million total connections.³² This same study also shows FTTH networks in March 2009 passing 15.2 million North American homes, almost doubling from 8.0 million in March 2007.”³³ Meanwhile, the overall take rate -- the percentage of those offered FTTH service who decide to subscribe -- went up for the sixth straight six-month period and now stands at 31.8 percent -- up from 22.3 percent in March 2007.³⁴ As mentioned, 3.28 million of Verizon’s 9.174 million broadband customers are now (as of 3Q09) FiOS FTTH high-speed Internet customers.³⁵ Verizon’s overall broadband lines have increased over 30% since December 2006 and FiOS lines have increased from 2.48 million in 3Q08, an increase of almost 50% in one year.³⁶ According to its 3Q09 investor presentation, FTTH is now available to 14.5 million homes and the penetration rate for Internet broadband services is now 29%.³⁷ Verizon hopes to have its FTTH build-out complete in 2010.

5. Wireless broadband competes with wireline broadband and is experiencing similar growth

Wireless broadband, which as used herein includes mobile broadband, fixed

³² These 1.1 million non-Verizon lines are provided by other ILECs, CLECs, Developers/Integrators and Municipal entities. *Broadband in America Report* at 15-16.

³³ *Id.*

³⁴ *Id.*

³⁵ *Id. See also*

http://investor.verizon.com/financial/quarterly/vz/3Q2009/supplemental_schedule_3Q09.xls?t=633956169991380665 and

<http://investor.verizon.com/news/20091026/20091026.pdf?t=633956176381849415>.

³⁶ *See*

http://investor.verizon.com/financial/quarterly/vz/3Q2009/supplemental_schedule_3Q09.xls?t=633956169991380665.

³⁷ *See*

<http://investor.verizon.com/news/20091026/20091026.pdf?t=633956176381849415>.

broadband and satellite-based broadband, also continues to experience significant increases in adoption, availability, quality and investment.

This is significant since wireless broadband competes with wireline broadband services. The Commission itself has acknowledged this.³⁸ The Commission also notes that “wireless networks can cover wide geographic areas efficiently, providing the first available broadband service, or a competitive service, into many communities.”³⁹ In the recent “FCC Workshop on Economic Issues in Broadband Competition,” Professor Marius Schwartz emphasized the importance of wireless as a broadband alternative:

[P]otentially much more important is wireless competition, and that could come both from fixed wireless, like Clear Wire, which is terrestrial-based, perhaps satellite -- Hughes is an example of that -- as well as probably more important mobile wireless.⁴⁰

As wireless broadband penetration increases, wireless speeds increase and wireless devices evolve, it is likely that more and more broadband customers will “cut the cord” as they have done with voice services. As was also noted in the *Broadband in America Report*:

Many individuals who utilize a wireline broadband service at home will also subscribe to a wireless broadband service for Internet access away from the home or office. It is also likely that some people will utilize wireless broadband as their only means of Internet access at home or away from home, just as a growing number of individuals have “cut the cord” and only have a mobile device for voice telephone service.⁴¹

³⁸ <http://www.fcc.gov/wbatf/wbatf-factsheet.pdf> (stating “There are many different types of broadband access technologies, such as cable, DSL, powerline, satellite, and wireless. Each of these technologies can compete to provide similar services to consumers and businesses.”)

³⁹ Wireless Broadband; Facts for Consumer and Local Governments, <http://www.fcc.gov/wbatf/wbatf-factsheet.pdf>.

⁴⁰ National Broadband Plan Workshop, Economic Issues in Broadband Competition, Washington, D.C., October 9, 2009, Transcript at 43.

⁴¹ *Broadband in America Report* at 60.

Wireless broadband does not need to be a perfect substitute for wireline broadband service in order for it to serve as a competitive constraint on wireline services from both a pricing and quality of service perspective. As long as there are enough customers willing to consider “cutting the cord” (often called customers “at the margin”), this constrains the pricing and service quality of wireline broadband providers. As was also noted by Professor Schwartz:

Now in order for mobile wireless to constrain the behavior of fixed wireless, landline, we don't need all of the users to view these two things as perfect substitutes . . . We just need to have enough users on the margin that view them as good substitutes.⁴²

Thus, Dr. Schwartz questions the premise offered by some analysts that the broadband market is a “durable duopoly.”⁴³

The bottom line is that, if a wireline broadband provider were to raise prices to a supracompetitive level or provide unacceptable service quality, it would be subject to losing customers to both wireline and wireless rivals.

It is, thus, significant that the *mobile* wireless broadband market has also been growing exponentially. The FCC Broadband Report states that mobile wireless high speed lines with speeds over 200kbps in at least one direction has grown from only 0.3 million lines in June of 2005 to almost 60 million in June of 2008.⁴⁴ There is also evidence that the use of mobile broadband has exploded even further. According to the CTIA's latest semi-annual survey, released on October 7, 2009:

⁴² National Broadband Plan Workshop, Economic Issues in Broadband Competition, Washington D.C., October 9, 2009, Transcript at 44.

⁴³ *Id.* at 43-44. Dr. Schwartz also notes that “even a duopoly can exhibit strong rivalry (not just one away from monopoly): *See* http://www.broadband.gov/docs/ws_economic_issues/schwartz.pdf.

⁴⁴ FCC Broadband Report at Table 1.

Wireless data services revenue showed impressive year-to-year gains, climbing to more than \$19.4 billion for the first half of 2009. This represents a 31% increase over the first half of 2008. In addition, wireless data revenues were more than 25% of all wireless service revenues, and represent what consumers spend on non-voice services. The survey also found that more than 246 million data-capable devices are in the hands of consumers today. More than 40 million of these devices are Smartphones or wireless-enabled PDAs and more than 10 million are wireless-enabled laptops, notebooks or aircards.⁴⁵

Mobile wireless technologies are also evolving rapidly. While Internet access was first provided over Second Generation (2G) technology, 2G was supplanted by the 3G technologies that are used to provide mobile broadband in many areas today. 3G can be used to provide downstream speeds of up to 7.2 mbps (using HSPA 7.2).⁴⁶ Many customers use smartphones such as the iPhone or Blackberry to perform email and web-surfing activities over these 3G networks. In addition, many customers today equip their laptop computers with a wireless broadband card and can perform the same functions on the go that they normally perform at home or in the office. In its third quarter earnings release, AT&T noted that purchase of 3G LaptopConnect cards increased from 646,000 in December 2007 to 1.445 million as of September 30, 2009 -- an increase of over 120% in only 21 months.⁴⁷ These cards, which plug into a laptop USB port, allow wireless broadband at speeds that are “typically 700 Kbps - 1.7 Mbps download / 500 Kbps - 1.2 Mbps uplink” and that “works seamlessly across AT&T's 3G BroadbandConnect and EDGE networks.”⁴⁸ The *Broadband in America Report* estimates that there will be “16

⁴⁵ CTIA Press Release, October 7, 2009. See <http://www.ctia.org/media/press/body.cfm/prid/1870>.

⁴⁶ *Broadband in America Report* at 23.

⁴⁷ See http://www.att.com/Investor/Growth_Profile/download/master_Q3_09.xls.

⁴⁸ See [http://www.wireless.att.com/cell-phone-service/cell-phone-details/?device=AT%26T+USBConnect+Quicksilver+\(Refurb\)&q_sku=sku3360227](http://www.wireless.att.com/cell-phone-service/cell-phone-details/?device=AT%26T+USBConnect+Quicksilver+(Refurb)&q_sku=sku3360227).

million laptop cards in the market by 2012.”⁴⁹ In order to support faster 3G HSPA technology, AT&T is investing heavily in bringing fiber facilities to its cell sites.⁵⁰ Many wireless companies, including AT&T and Verizon, are also working towards a 4G Long Term Evolution (LTE) standard that will allow faster wireless broadband speeds than are available on the current 3G network -- with projected speeds of about 10 mbps.⁵¹

WiFi technology also provides wireless broadband access in “hotspots” throughout the U.S., such as airports, coffee shops, libraries and hotels.⁵² As part of their wireless services, AT&T, Verizon and other providers offer WiFi connectivity in thousands of “hotspots” throughout the United States. In addition, while many large-scale municipal WiFi network deployments planned in the mid-2000s have been shelved, there are still many municipal WiFi networks in operation in the U.S.⁵³

Fixed wireless broadband and satellite-based broadband has also experienced significant growth. According to the FCC Broadband Report, the total number of fixed wireless high-speed lines with speeds over 200 kbps in at least one direction grew from 257,431 in June 2005 to 808,375 in June 2009.⁵⁴ According to the Pew Study, fixed wireless and satellite broadband has increased its presence as a “home” high speed connection option:

A half dozen years ago home broadband access generally came in two flavors – cable or DSL services provide by telephone companies. Since then the range of options has expanded. Even though most home

⁴⁹ *Broadband in America Report* at 61.

⁵⁰ *Id.* at 27.

⁵¹ *Id.* at 23.

⁵² *See, e.g.,* <http://www.wi-fihotspotlist.com/>.

⁵³ *See* <http://www.muniwireless.com/2009/03/28/muniwireless-list-of-cities-with-wifi/>.

⁵⁴ FCC Broadband Report at Table 1.

broadband users still have DSL or cable modem service, wireless access has made a significant dent among home broadband users. . .⁵⁵

The Pew Study also found that fixed wireless and satellite have increased their presence for home use -- from 8% of home connections in 2007 to 17% in 2009 -- over a 100% increase in two years.

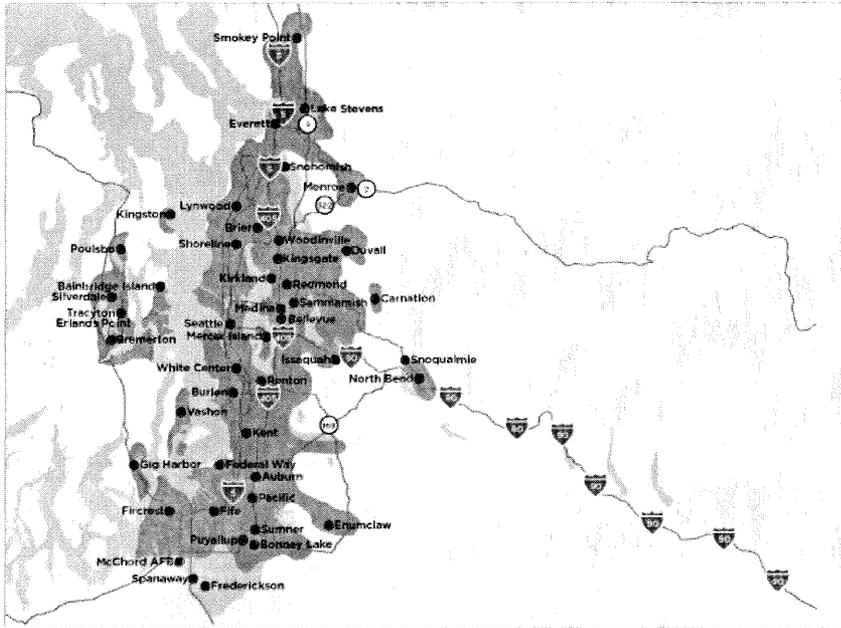
Fixed wireless broadband also continues to shift dramatically towards next generation technologies. Some carriers are implementing a “WiMax” 4G solution. Clearwire, whose investors include Sprint Nextel, Comcast, Time Warner Cable, Google and Intel, has already implemented its “CLEAR” 4G WiMax solution in several cities. It recently announced that “Clearwire’s 4G network will expand to numerous markets around the country by the end of 2009... [and] is expected to be available in more than 25 markets covering over 30 million people.”⁵⁶ In fact, the interactive map on Clearwire’s web site lists 29 cities with coverage *today*,⁵⁷ including Philadelphia, Chicago, Seattle, Portland and Dallas. The coverage in most of these cities is extensive. By way of example, CLEAR provides the following wireless broadband coverage map for the Seattle/Puget Sound area:⁵⁸

⁵⁵ Pew Study at 20.

⁵⁶ CLEAR is available in places such as: Atlanta and Milledgeville, GA; Baltimore, MD; Boise, ID; Chicago, IL; Las Vegas, NV; Philadelphia, PA; Charlotte, Raleigh, and Greensboro, NC; Honolulu and Maui, HI; Seattle and Bellingham, WA; Portland, OR; and Dallas/Ft. Worth, San Antonio, Austin, Abilene, Amarillo, Corpus Christi, Killeen/Temple, Lubbock, Midland/Odessa, Waco and Wichita Falls, TX.” Clearwire Press Release, December 1, 2009. See <http://investors.clearwire.com/phoenix.zhtml?c=214419&p=irol-newsArticle&ID=1360319&highlight>.

⁵⁷ See <http://www.clear.com/coverage/show/insider>.

⁵⁸ See <http://www.clear.com/coverage/show/services>.



In announcing the availability of CLEAR Service in the Puget Sound, Clearwire stated:

The CLEAR customer experience is similar to that provided by Wi-Fi, but without the short-range limitations of a traditional Internet hotspot. CLEAR uses a wireless 4G technology that differs from Wi-Fi called WiMAX, which provides service areas measured in miles, not feet. Furthermore, CLEAR gives you average mobile download speeds of 3 to 6 mbps with bursts over 10 mbps.⁵⁹ (Emphasis added.)

That CLEAR service is a substitute for current wired broadband services such as DSL and cable modem, as well as mobile broadband applications, is obvious. Available speeds are comparable -- or faster than -- what many customers currently purchase with their home or business wired broadband service. Essentially, a customer with a laptop (or home computer) can use the CLEAR service to do all of the same online activities that they would do using a fixed wireline broadband connection. CLEAR offers several “home” Internet packages with competitive prices. “Basic Home” service, with download speeds up to 1 Mbps and upload speeds up to 500 Kbps, is offered at \$25 per month. “Faster Home” service, with download speeds up to 6 Mbps and upload speeds

⁵⁹ *Id.*

up to 1Mbps, is offered at \$45 per month.⁶⁰ Additional savings are available for customers who purchase a combination of services, including a plan that offers home-*and*-mobile Internet service for as low as \$50 per month.⁶¹

Comcast, following its investment in Clearwire, is also now launching its “High-Speed 2go” service in several of its U.S. markets utilizing the Clearwire 4G WiMax network. According to Comcast:

Comcast’s High-Speed 2go is a fourth-generation, or 4G, wireless high-speed data service that provides the fastest available wireless Internet in the nation via wireless data cards. Comcast will sell this wireless service bundled with one or more of its popular Internet, phone and television products, providing mobile broadband where ever and whenever customers need to be connected.⁶²

Comcast “High Speed 2go Metro service” which provides 4G coverage in a customer’s local area, may be purchased by existing Comcast high speed Internet customers for \$30 per month (for 12 months), and may be purchased by customers without Comcast high-speed Internet service for \$50 per month. Comcast “High Speed 2go Nationwide” service, which provides “coast to coast” coverage using the Clearwire 4G network when available, or the Sprint 3G network elsewhere, may be purchased by existing Comcast high-speed Internet customers for \$50 per month (for 12 months).⁶³

It is also clear that mobile broadband will continue to grow significantly in the future. According to the *Broadband in America Report*, there were 63.1 million wireless broadband users as of 2008 -- representing a penetration of 25.6% of the population of

⁶⁰ See <http://www.clear.com/shop/services/home?intemp=HFHSHLHI111809>.

⁶¹ See <http://www.clear.com/shop/flow/plan-detail>.

⁶² Comcast Press Release, November 4, 2009. See <http://www.comcast.com/About/PressRelease/PressReleaseDetail.ashx?PRID=935>.

⁶³ See <http://www.comcast.com/corporate/Learn/HighSpeedInternet/high-speed-2go.html?fss=highspeed%20to%20go>.

persons over the age of 14. By 2013, it is expected that the number of users and penetration will increase to 136.6 million and 52.7% respectively.

6. Broadband prices are dropping

Over the past few years, broadband prices have generally been declining in terms of the price per megabit. The decline in price per megabit is demonstrated by a recent broadband study performed by PointTopic, as described in a September 9, 2009 article in TMCnet:

Measured in terms of price-per-megabit, digital subscriber line consumers have gained about 40 percent more value in the last 18 months, while cable modem users have gained about 30 percent, says Oliver Johnson, Point Topic CEO. Optical fiber value has improved about 17 percent.

Though prices are not dropping as quickly as they were, enhancements continue. Cable operators have increased the headline speed of their entry level services by 21 percent on a worldwide average in the last 18 months, compared to increases of 15 percent for fiber connections and 17 percent for DSL.

Cable and DSL advances have been driven by deployment of ADSL2+ and DOCSIS 3.0 technologies.⁶⁴

7. Broadband competitors compete vigorously based on price, data speeds, bundling, and comparative advertising

It is also clear that broadband providers are competing vigorously, differentiating their services based on attributes such as data speed and price. Virtually all providers offer bundles of services at a discount, and offer promotional rates to attract customers. These providers also engage in comparative advertising, seeking to attract customers based on these attributes. This is all characteristic of a competitive market.

In his recent testimony, Professor Schwartz also described the current state of broadband comparative advertising:

⁶⁴ <http://cable.tmcnet.com/topics/cable/articles/63932-price-per-megabit-declines-across-board.htm>.

The second category of evidence is comparative advertising. . . On the land line broadband space you have the Comcast versus DSL; Comcast with the Slowsky's ads, you know, those turtles that the DSL speed is so slow. Today you have Verizon touting FIOS against the cable guy; That's all [comparative] advertising. That suggests competition. On the mobile side, you've got the fastest network versus the most reliable networks -- all these TV campaigns you're familiar with.⁶⁵

A cursory visit to the current web sites of competing broadband providers further illustrates this competition through product offerings and the comparative advertising that accompanies them. For example, Comcast offers its High Speed Internet service (12 mbps) for \$19.99 per month for six months, and advertises "lightning fast speeds way faster than DSL."⁶⁶ Comcast also offers a "triple play" bundle of high speed Internet, video and voice for \$144.99 for twelve months. Verizon's web site provides a section "See how FiOS compares to cable" that touts its comparative value: "Fiber optics all the way to your home brings download speeds up to 50 Mbps and the fastest upload speeds. Remember -- it's not fast unless it's two-way fast, and FiOS beats cable by a country mile, coming and going."⁶⁷ Verizon offers a "one month free" promotion on some speeds, and offers a free wireless router. It also offers a "new reduced price" of \$99.99 for one year of its triple play (phone, Internet -- at 15 mbps download and 5 mbps upload -- and video).⁶⁸ AT&T has offered a \$150 cash rebate for customers switching from cable

⁶⁵ National Broadband Plan Workshop, Economic Issues in Broadband Competition, Washington D.C., October 9, 2009, Transcript at 48.

⁶⁶ See <http://www.comcast.com/>, visited 12-28-09.

⁶⁷ See <http://www22.verizon.com/Residential/FiOSInternet/FiOSvsCable/FiOSvsCable.htm>, visited 12-28-09.

⁶⁸ See <http://www22.verizon.com/Residential/FiOSInternet/Plans/Plans.htm>, visited 12-28-09.

to one of its fastest three speeds.⁶⁹

B. There Is No Market Failure Or Other Demonstrated Basis For Intrusive Regulatory Intervention At This Time

Not surprisingly, given the considerable evidence discussed above of the competitive state of broadband access services, there is also no evidence in the record suggesting that the United States has experienced a market failure when it comes to broadband. Nor is there any other demonstrated basis for intrusive regulatory intervention at this time. As noted in the main body of Qwest's comments, part of the careful balancing the Commission must accomplish in this proceeding is to weigh the potential for market imperfections with the desire for investment and growth. Because regulation might impede investment in broadband infrastructure, the better course is to deal with *potential* market imperfections on a case-by-case basis through enforcement of the FCC Internet Policy Principles. In this light, it is significant that all the evidence suggests that broadband providers do not possess undue market power. It is also significant that the *NPRM* identifies, at best, potential market imperfections and that the FCC Internet Policy Principles have proven to be an adequate regulatory tool to address any alleged market imperfections in the past.

1. Broadband providers do not possess undue market power

The *NPRM* raises the possibility that, despite the evidence regarding the robust competitive state of broadband access services, "effective competition" among broadband providers may be lacking. Specifically, paragraphs 70 and 71 of the *NPRM* question whether broadband providers may have excessive "market power" that could be used to

⁶⁹ *Broadband in America Report* at 39.

harm social welfare.⁷⁰ In other words, the *NPRM* raises the question whether alleged broadband provider market power represents a possible “market failure” that must be addressed by regulators. As demonstrated below, there is simply no basis to assume that any broadband provider is currently capable of exercising undue “market power,” or will be able to do so in the future.

To begin with, the Commission must view “market power” in the broadband market within the proper context and, specifically, recognize the limitations of drawing inferences about market power from market share. A traditional “market power” analysis typically seeks to define the market in static terms (*e.g.*, by attempting to measure “market share”). However, in a rapidly evolving marketplace -- which the broadband market certainly is -- the Commission should focus on “dynamic efficiency” rather than static market share measurements. In a white paper recently filed by Qwest with its Reply Comments in WC Docket Nos. 09-135, 06-172 and 07-97, Dr. Dennis Weisman and Dr. Timothy Tardiff explained:

The limitations of drawing inferences about market power from market share are well documented in the literature.⁷¹ Such metrics are necessarily backward looking in their approach and therefore quite limited in predictive value in markets that exhibit “fragility” due to their technologically-dynamic character,⁷² such as telecommunications.⁷³

⁷⁰ *NPRM*, 24 FCC Rcd at 13093-94 ¶¶ 70-71.

⁷¹ *See, e.g.*, Dennis L. Weisman, Principles of Regulation and Competition Policy for the Telecommunications Industry - A Guide For Policymakers. The Center for Applied Economics, KU School of Business, Technical Report 06-0525, 2006, Section 3.5.2.

⁷² *See* Richard Schmalensee, “Antitrust Issues in Schumpeterian Industries,” *American Economic Review*, Vol. 90, No. 2, May 2000 at 192-94.

⁷³ *See* Section 1.521 U.S. Department of Justice and the Federal Trade Commission. *Horizontal Merger Guidelines*, 1992 [Inclusive of April 8, 1997 Revisions]. This section of the guidelines indicates that market share measures can be misleading in terms of competitive significance when market conditions are changing.

Market share measurement is inherently static in nature.⁷⁴

The Commission should also be careful, in evaluating the broadband market and the level of market power of participants, not to define the market too narrowly. For example, the Commission should view the broadband market with consideration to all broadband alternatives, including wireline and wireless technologies. As described above, all broadband technologies are advancing rapidly and wireless broadband technologies are increasingly serving as a substitute for wireline broadband technologies. The existence of significant wireline and wireless alternatives for nearly all customers significantly curtails the individual market power of each competitor. That is, if any broadband provider prices its services too high, or provides a level of service that does not satisfy customers, that provider will incur the wrath of the market and likely lose customers to competition.

Taking this approach, it is clear that no broadband provider is currently capable of exercising undue “market power.” Market power is typically defined as the ability of a firm to profitably raise prices above competitive levels for more than a transitory period of time.⁷⁵ In the competitive environment described above, broadband providers are not able to sustain broadband price increases above competitive levels. If they did so, customers would simply opt for another option. While a broadband provider may be able

⁷⁴ See Reply Comments of Qwest Corporation, WC Docket No. 09-135, filed Oct. 21, 2009 at Exhibit 1: Declaration of Timothy J. Tardiff and Dennis L. Weisman in Support of the Reply Comments of Qwest Communications: Principles of Competition and Regulation for the Design of Telecommunications Policy, dated Oct. 21, 2009 at 22 ¶ 38 (Qwest White Paper).

⁷⁵ *Id.* ¶ 50. See also U.S. Department of Justice and the Federal Trade Commission. *Horizontal Merger Guidelines*, 1992 [Inclusive of April 8, 1997 Revisions], Section 0.1. (A firm possesses market power when it has “the ability profitably to maintain prices above competitive levels for a significant period of time.”).

to engage in a *short term* increase in price (for a comparable service), such increases would not be sustainable in the long term, as exhibited by the declining price per megabit over time. A recent study confirms that, even if you believe the broadband provider market to be a duopoly, there is no evidence that broadband providers are earning supra-normal rates of return.⁷⁶

Several other observations about market power are important. First, broadband prices and service quality levels are also constrained, and market power limited, because broadband providers generally operate with high price-cost margins due to scale and scope economies. As was also described in the Qwest White Paper, in these situations, “price increases that produce even small reductions in demand can generate large losses in contribution to joint and common costs because the firm’s revenues decline much more than the costs it can avoid.”⁷⁷ Thus, high price-cost margins -- typically required of high-technology firms -- can serve to discipline the provider’s pricing behavior.

Second, as alluded to earlier, market power is further constrained in the broadband market because competition occurs “at the margin” which means that a little competition goes a long way:

The phrase that “competition occurs at the margin” means that it is the marginal customers, those willing to substitute alternative services in the face of a price increase, that serve to impose pricing discipline on the market provider.⁷⁸ This observation has special significance for wireline providers because it implies that a relatively small percentage of

⁷⁶ *Market Power In U.S. Broadband Services*, Thomas W. Hazlett and Dennis L. Weisman, George Mason University Law and Economics Research Paper Series, 09-69, December 2009.

⁷⁷ Qwest White Paper at 33 ¶ 61.

⁷⁸ See, e.g., Jerry A. Hausman, “Regulated Costs and Prices in Telecommunications,” in Gary Madden (ed.), *International Handbook of Telecommunications Economics, Volume 2: Emerging Telecommunications Networks*, 2003 at 226.

customers (the “marginal customers”) willing to discontinue service or switch to alternative service providers in the face of a price increase is sufficient to provide the requisite competitive discipline.⁷⁹

Thus, for example, broadband wireless competition helps to constrain wireline broadband prices and service quality because there are customers “at the margin” who would substitute wireless broadband service for wireline service if the wireline provider priced services too high or engaged in activities that reduced the quality of service.

Third, the market power of individual broadband providers is limited by the nature of service bundling. Many broadband customers purchase broadband service as a component of a service bundle, *i.e.*, they purchase along with voice service, video service and/or wireless service at a “bundle discount.” If a broadband provider sets prices too high, service quality too low, or engages in any other activity that displeases customers, the broadband provider would lose not only a broadband customer, but a customer who purchases other services. For example, if a Qwest customer purchases a bundle of broadband, voice, video and wireless, and they become dissatisfied with Qwest broadband service, they may switch to a bundle provided by another provider such as Comcast. In that case, Qwest would lose not only a broadband bundle customer, but a voice, video and wireless customer as well.⁸⁰ The potential loss of these revenues constrains broadband prices and any decline in service quality.

Finally, and perhaps most importantly, recent research demonstrates unequivocally that broadband providers are not currently exercising market power.⁸¹ Dr.

⁷⁹ Qwest White Paper at 34 ¶ 62.

⁸⁰ Qwest offers Verizon Wireless as a component of its bundled service offerings.

⁸¹ *Market Power In U.S. Broadband Services*, Thomas W. Hazlett and Dennis L. Weisman, George Mason University Law and Economics Research Paper Series, 09-69, December 2009.

Thomas Hazlett and Dr. Dennis Weisman recently performed an analysis of “*q* ratios” for both cable and telco broadband providers. A *q* ratio is equal to the firm market value divided by the replacement cost of tangible capital.⁸² A *q* ratio above 1.0 “captures the expectation of investors that the future flow of profits will be substantially in excess of costs, suggesting that supra-competitive profits are likely.”⁸³ Thus, a *q* ratio above 1.0 may be suggestive of market power, and a *q* ratio below 1.0 suggests that a provider is not exercising market power. Drs. Hazlett and Weisman found that the *q* ratios for two major cable broadband providers (Comcast and Time Warner) are less than 1.0; and that “the inability of cable operators to produce profit expectations above risk-adjusted normal returns suggests an absence of market power as per the self-interested trading activity of investors.”⁸⁴ Similarly, the *q* ratios for Verizon, AT&T and Qwest are less than 1.0, with an average of .60, suggesting that these companies do not possess market power.⁸⁵ Drs. Hazlett and Weisman also note that “investors see the telephone business (and its broadband and video products) as requiring heavy, ongoing capital outlays not justified by future cash flows.”⁸⁶ Drs. Hazlett and Weisman conclude:

We find no credible basis to believe that broadband providers, despite their relatively few numbers, are currently exercising market power. This is clear from focusing on the key metrics of profitability and market value, as opposed to the more arbitrary and less dynamically relevant measures of market share or operating margin. The absence of market power, as measured by *q* ratios that are consistently less than one, is a two-edged sword. From a static efficiency (market power) perspective, it may well suggest that there is no credible basis for government intervention in the

⁸² *Id.* at 10.

⁸³ *Id.*

⁸⁴ *Id.* at 22.

⁸⁵ *Id.* at 25.

⁸⁶ *Id.* at 24.

form of price regulation or more intrusive unbundling obligations. From a dynamic efficiency (investment) perspective, the concern would be that investors are not particularly bullish on this sector and hence the prospects for continued, robust investment are not particularly promising. This begs the question of what role, if any, the government can be expected to play in stimulating investment in a sector it deems critical for economic growth and international competitiveness.⁸⁷

In the end, the conjecture regarding the potential market power of broadband providers raised in paragraphs 70 and 71 of the *NPRM* is unfounded.⁸⁸

2. The other *potential* concerns about competition discussed in the *NPRM* do not constitute market failures

The other *potential* anti-competitive concerns raised in the *NPRM* section on “Competition and Market Forces” also fail to give rise to a market failure warranting intrusive regulatory intervention. In short, there is simply no basis for assuming that “price and quality discrimination will have socially adverse effects,” that broadband providers may have an incentive to charge anti-competitive prices to content and application providers and end-users, that broadband providers “have the incentive and ability to reduce or fail to increase the transmission capacity available for standard best-effort Internet access service” relative to other services they offer, or that switching costs and so-called consumer lock-in effect are significant.⁸⁹

To begin with, the high level of competition and the limited market power of broadband providers discussed above make all of these speculative outcomes highly unlikely at best.

⁸⁷ *Id.* at 32.

⁸⁸ It is also interesting to note, as described below, that there is far more market concentration in other components of the ecosystem than at the physical layer provided by broadband providers (*e.g.*, two thirds of online Internet searches are handled by Google). See main body of comments at 10-11 and nn. 11-12.

⁸⁹ *NPRM*, 24 FCC Rcd at 13093-94 ¶¶ 70-72.

And, the record provides further evidence that these concerns do not give rise to a market failure. For example, the Commission itself, in the *NPRM*, acknowledges that there is extensive economic evidence regarding the benefits of price and other forms of discrimination,⁹⁰ especially in a “two-sided network.”⁹¹ It cites economists who argue that “the ability of a provider to price discriminate not only will benefit the provider, but may also benefit the public as a whole.”⁹² There is, in fact, extensive evidence that this is true.⁹³ The potential benefits of discrimination were also described by Professor Schwartz in his recent testimony:

One concern has been about should we let broadband providers charge applications providers for the right to access end users. Wouldn't that be terrible. Well, there's some bad aspects, but there's also a good aspect. One predictable consequence of allowing these kinds of charges that follows from the logic of two-sided markets is that if a broadband provider can charge content or application providers who derive their revenue from advertising for the right to access end users, *it makes it more attractive for the broadband providers to expand the number of end users and their utilization, which he then does by cutting the price to them.*⁹⁴ (Emphasis added.)

⁹⁰ Price discrimination is generally defined as price differences that do not reflect underlying cost differences. See James C. Bonbright, *Principles of Public Utility Rates*. New York: Columbia University Press, 1961, p. 371 (“At times, the cases suggest a distinction similar to that drawn by economists, in deeming ‘discriminatory’ any rate differential not based on a cost differential.”).

⁹¹ *NPRM*, 24 FCC Rcd at 13091 ¶ 66. Two-sided markets, sometimes called two-sided networks, are economic networks having two distinct user groups that provide each other with network benefits. As the *NPRM* states (paragraph 66), “the Internet is an example of a two-sided market. See also, *Two-Sided Markets: A Progress Report*, Jean-Charles Rochet and Jean Tirole, November 29, 2005. See http://idei.fr/doc/wp/2005/2sided_markets.pdf.

⁹² *NPRM*, 24 FCC Rcd at 13091 ¶ 66, nn. 154 and 155.

⁹³ See also ANTITRUST MODERNIZATION COMMISSION, REPORT AND RECOMMENDATIONS, Washington D.C. 2007. (“The economic reality is that price differences and price discrimination typically benefit, not harm, consumers.” p. 318.)

⁹⁴ National Broadband Plan Workshop, Economic Issues in Broadband Competition, Washington D.C., October 9, 2009, Transcript at 53-54.

Dr. Schwartz also noted that “[c]harging content or application providers to reach end users” would likely result in broadband price decreases for end users.⁹⁵ This also expands the universe of broadband subscribers and bolsters the incentives for content providers to increase the scope of their content and features, thereby increasing the overall welfare of the universe of subscribers. He also pointed out that, consistent with the market power discussion above, there is a low risk of anti-competitive discrimination in the broadband market because, with unregulated broadband margins, broadband providers would have weak incentives to degrade the supply of complements (*e.g.*, content and applications) since such behavior would only reduce broadband provider profitability.⁹⁶ In addition, due to competition, broadband providers have a low ability to “exclude independent suppliers of complements from the market.”⁹⁷ Finally, he notes that there is “[I]ittle evidence of significant anti-competitive discrimination.”⁹⁸ While the *NPRM* discussion identifies another potential harm -- broadband providers vertically integrated with or affiliated with content and application providers favoring their own content -- here, again, there is no evidence of this having occurred. Experience with vertical integration between local telecommunications and the long-distance and wireless markets, where competition thrives by any measure, also suggests that this concern is not warranted.

There is also no evidence presented that broadband providers have an incentive to disadvantage best efforts Internet versus their enhanced or managed services.

⁹⁵ Marius Schwartz, Remarks on Broadband Competition and Access Regulation, FCC Workshop on Economic Issues in Broadband Competition, Washington, DC, October 9, 2009, Slide 6.

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ *Id.*

Finally, the evidence suggests that switching costs and the so-called consumer lock-in effect are not a significant factor. Clearly, each provider seeks to offer a “sticky” service to stave off defections and reduce churn. Thus, providers offer bundles, promotions, “price for life” guarantees, discounts for a longer term contract, etc. For example, Qwest offers stand-alone 7 mbps service for \$35 per month for a twelve-month commitment, with a price of \$59.99 afterwards. Customers can purchase a “price for life” of \$46.99 with a two-year commitment. However, if the service is bundled with local phone service, the customer pays only \$25.00 per month for the 7 mbps service. The month-to-month stand-alone price is \$59.99 with no commitment.⁹⁹ Certainly Qwest would like to retain existing customers and attract new ones, which drives Qwest’s -- and other providers’ -- pricing plans, bundles, data speeds, and service quality. However, there is no basis to assume that such programs are harmful -- in fact they are greatly beneficial to customers who may obtain a better deal and more options from providers who want to retain and attract customers. In addition, if a customer desires a month-to-month stand-alone broadband plan, such offerings are now available from Qwest and virtually all other providers. In sum, no customer is “locked in” to a broadband provider, although each provider will do its best to keep customers from switching -- which is to the benefit of these customers. It is also self-evident that, without a customer making a commitment to a service provider, customer prices would likely be higher to reflect the increased provider risk that results from higher churn rates.

3. There is no other demonstrated basis for intrusive regulatory intervention

There is also no evidence suggesting that any of the other *potential* issues raised

⁹⁹ See http://www.qwest.com/residential/Internet/broadbandlanding/compare_plans.html.

in other discussion sections of the *NPRM* justify intrusive regulatory intervention at this time.

For example, in a section entitled “The Open and Transparent Internet,” the *NPRM* discusses the generative effects of certain open aspects of the Internet ecosystem, but fails to identify any basis for regulatory intervention. That section describes the general benefits of the computer languages and communications protocols such as HyperText Markup Language (HTML), HyperText Transfer Protocol (HTTP), Transmission Control Protocol (TCP) and Internet Protocol (IP) as part of a broad discussion of the transformative effect that the Internet has had in a variety of areas.¹⁰⁰ The *NPRM* correctly observes that such features have a “generative effect.”¹⁰¹ But, it is quite a leap to conclude that, because these features arguably have an “end-to-end design,” a pure end-to-end architecture or dumb pipe normative design of the Internet should be mandated.¹⁰² To begin with, the potential broadband provider enhancement or prioritization practices that the Commission seems to have a concern about do not generally entail undoing of these languages and protocols. And, there is simply no basis to conclude from such features as open computer language and coding that broadband Internet access is now and should forever be a dumb pipe. Moreover, the *NPRM* makes no attempt to take account of ways in which the Internet is not neutral today. The record is littered with detailed examples of existing “non-neutral” practices if one takes a broad view of the Internet (*i.e.*, not just the physical layer, but the applications layer, the content

¹⁰⁰ *NPRM*, 24 FCC Rcd at 13069-72 ¶¶ 17-23.

¹⁰¹ *Id.* at 13069 n. 9.

¹⁰² *Id.* and 13070 ¶ 19.

layer, functionality deployed around the Internet edge such as caching, etc.).¹⁰³ There also continues to be much debate about whether a dumb pipe is the best normative structure for the Internet. Many parties, including notable Internet visionaries David Farber and Robert Kahn, oppose such regulation. As Kahn puts it, it would be a mistake “to mandat[e] that nothing interesting can happen inside the net.”¹⁰⁴

Similarly, the *NPRM* discussion in the section entitled “Evolution of the Internet Marketplace and Technologies” fails to identify any market failure or other basis for regulatory intervention at this time.¹⁰⁵ That discussion describes the capabilities of

¹⁰³ For example, it has been reported that E-Bay blocks certain applications on its site (e.g., Google Check-out - <http://pages.ebay.com/help/policies/accepted-payments-policy.html>) and has recently moved away from its traditional auction format to fixed price transactions where it favors larger sellers (“Buy.com Deal With eBay Angers Sellers,” http://www.nytimes.com/2008/07/14/technology/14ebay.html?_r=2&ref=business&oref=slogin)(“EBay is signaling that its future lies with big, reliable sellers, not the mom and pop shops that are objecting so vociferously to the Buy.com deal, said Tim Boyd, an Internet analyst with American Technology Research. ‘It’s a tragic ending to what was once a warm and fuzzy Silicon Valley story,’ he said.”). The Commission is also well aware of recent events where Apple began to reject the Google Voice application for the iPhone and removed related applications from its App Store (<http://www.apple.com/hotnews/apple-answers-fcc-questions/>). It is also well known that certain content providers restrict access to their content online or charge broadband providers and ISPs for the right to make the content available to their customers (see, e.g., “ESPN to Offer Sports Events on the Web Free to Some,” <http://www.nytimes.com/2008/02/04/business/media/04espn.html>). The non-neutral aspects of Google’s search engine model are also well documented (see, e.g., “Why Google Is Not Neutral,” Scott Cleland, <http://www.publiusforum.com/2009/11/13/why-google-is-not-neutral/>).

¹⁰⁴ Andrew Orlovski, *Father of the Internet Warns Against Net Neutrality*, The Register (Jan. 18, 2007), http://www.theregister.co.uk/2007/01/18/kahn_net_neutrality_warning/ (App. B Exh 3) (quoting Robert Kahn). See also David Farber, Gerald Faulhaber, Michael L. Katz & Christopher S. Yoo, *Common Sense About Network Neutrality* (June 2, 2006), available at <http://www.interesting-people.org/archives/interesting-people/200606/msg00014.html>; see David Farber, Michael Katz, Gerald Faulhaber & Christopher S. Yoo, *Hold Off On Net Neutrality*, Wash. Post, Jan. 19, 2007 at A19 (App. B Exh. 1).

¹⁰⁵ *NPRM*, 24 FCC Rcd at 13086-88 ¶¶ 56-59.

equipment and technologies that permit broadband providers to distinguish among different classes of traffic, offer different classes of service for different traffic, or charge different prices for different traffic.¹⁰⁶ There is also some generic discussion of the capabilities of deep packet inspection (DPI) technologies.¹⁰⁷ But, again, as discussed more fully above, there is extensive economic evidence of the benefits of price and other forms of discrimination.¹⁰⁸ And, even DPI technologies indisputably have benign and/or positive uses.¹⁰⁹

4. The FCC Internet Policy Principles have proven to be an adequate regulatory tool to address any alleged market imperfections

It is also significant that the FCC Internet Policy Principles have proven in the past to be an adequate regulatory tool to address any arguable market imperfections in the past. Qwest and other broadband providers abide by the FCC Internet Policy Principles.¹¹⁰ And, notably, the only instances of purported past market imperfections cited in the *NPRM* or elsewhere are the *Comcast* and *Madison River* cases.¹¹¹ It is arguable that, even in those instances, the competitive marketplace served as the primary

¹⁰⁶ *NPRM*, at 13087 ¶ 57.

¹⁰⁷ *Id.* at 13087-88 ¶¶ 57-58.

¹⁰⁸ *Id.* at 13091 ¶ 66. *See also, supra* at 27-28.

¹⁰⁹ By way of example, many vendors advertise the use of DPI technologies as part of accomplishing CALEA compliance. *See, e.g.*, “DeepSweep™ for CALEA, CALEA-Compliant Surveillance System” advertised by IP Fabrics. <http://www.ipfabrics.com/pdf/DeepSweepCALEA.pdf>.

¹¹⁰ *See, e.g.*, Comments of Qwest Communications International Inc., GN Docket No. 09-51, filed June 8, 2009 at 16-17, 22-25; Comments of Verizon and Verizon Wireless on a National Broadband Plan, GN Docket No. 09-51, filed June 8, 2009 at 85-87; Comments of AT&T Inc., GN Docket No. 09-51, filed June 8, 2009 at 98-102; Comments of Hands Off The Internet, WC Docket No. 07-52, filed June 15, 2007 at 4.

¹¹¹ *NPRM*, 24 FCC Rcd at 13075-76 ¶ 32 and 13082 ¶ 47.

line of defense. For example, in the *Comcast* matter, Comcast unilaterally changed its practices in response to public reaction to its management practices.¹¹² And, as the Commission noted in the *Comcast* Order, the problem in that case may have been more in Comcast's immediate reaction to questions about its practices as opposed to the practice itself. But, regardless, in each case, the Commission was available as a last resort.

¹¹² See *In the Matter of Formal Complaint of Free Press and Public Knowledge Against Comcast Corporation for Security Degrading Peer-to-Peer Applications; Broadband Industry Practices Petition of Free Press et al. for Declaratory Ruling that Degrading an Internet Application Violates the FCC's Internet Policy Statement and Does Not Meet an Exception for "Reasonable Network Management,"* Memorandum Opinion and Order, 23 FCC Rcd 13028 (2008), *appeal pending sub nom. Comcast Corporation v. FCC*, Case No. 08-1291 (D.C. Cir. Oral Argument Held Jan. 8, 2010).

CERTIFICATE OF SERVICE

I, Richard Grozier, do hereby certify that I have caused the foregoing **COMMENTS OF QWEST COMMUNICATIONS INTERNATIONAL INC.** to be: 1) filed with the FCC via its Electronic Comment Filing System in GN Docket No. 09-191 and WC Docket No. 07-52; 2) served via email on the Competition Policy Division, Wireline Competition Bureau, Federal Communications Commission, at cpdcopies@fcc.gov; and 3) the FCC's duplicating contractor, Best Copy and Printing, Inc., at fcc@bcpweb.com.

/s/Richard Grozier

January 14, 2010