Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	**)**	
	)	
A NATIONAL BROADBAND PLAN	**)**	**GN Docket 09-51**
FOR OUR FUTURE	**)**	

COMMENTS OF THE

INDEPENDENT TELEPHONE & TELECOMMUNICATIONS ALLIANCE

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June 8, 2009

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SUMMARY

ITTA supports a National Broadband Plan that will facilitate the establishment and continued evolution of networks which enable maximum capacity, reliability, security, and reach. The support should be technology neutral and support maximum online functionality for consumers, with online functionality available in urban areas serving as the benchmark for successful rural deployment. The Commission should enter the marketplace only where normal economic forces are incapable of supporting deployment and subscription, and should not undertake any actions that would have the effect of discouraging private investment in broadband. Together, these guiding principles should result ultimately in greater broadband deployment and consequent consumer benefits across the Nation.

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I. INTRODUCTION

The Independent Telephone & Telecommunications Alliance (ITTA) hereby submits these comments in response to the Commission's Notice of Inquiry (NOI) in the above-captioned docket.[1] ITTA is an alliance of mid-size telephone companies that collectively serve approximately 30 million access lines in 44 states, and offer subscribers a broad range of high-quality wireline and wireless voice, data, Internet, and video services. The Commission is required by the American Recovery and Reinvestment Act of 2009 (Recovery Act) to submit to Congress "a report containing a national broadband plan."[2] The report is intended to play an integral role in the process of "ensur[ing] that all people of the United States have access to broadband capability."[3] In these comments, ITTA addresses fundamental considerations that should factor into the development of the National Broadband Plan (NBP).

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[1] *A National Broadband Plan for Our Future: Notice of Inquiry*, Docket No. 09-51, FCC 09-31 (Apr. 8, 2009).

[2] Pub. L. No. 111-5, 123 Stat. 115, § 6001(k)(2).

[3] NOI at para. 9, *citing* Recovery Act § 6001(k)(2).

In brief, the National Broadband Plan should support the establishment and continued evolution of networks that enable maximum capacity, reliability, security, and reach. The support should be technology neutral – the Plan should focus on maximizing online functionality offered to consumers. The Commission should be guided by the principles that it should enter the marketplace only where normal economic forces are incapable of supporting deployment and subscription, and should not undertake any actions that would have the effect of discouraging private investment in broadband. Online functionality available in urban areas should be the benchmark for successful rural deployment.

ITTA urges the Commission to establish a unifying National standard when evaluating broadband technologies. The Commission should look first to urban markets to gauge the level of services offered in areas where providers deploy broadband without government support. Then, where necessary, Federal assistance should be invoked to ensure that consumers in sparsely populated and high-cost areas obtain the same ability to access services capable of supporting core applications that are available to their peers in urban areas.

II. DISCUSSION

A. Approach to Developing the National Broadband Plan

As a threshold question, the Commission asks, "How should broadband capability be defined going forward, and what does it mean to have access to it?"[4] ITTA submits that the analytical construct in which these questions are answered must accommodate

[4] NOI at para. 13.

general economic principles, the dynamic nature of technological evolutions, and the types of goals recently articulated by Acting Chairman Michael J. Copps in his recent report, "Bringing Broadband to Rural America: Report on a Rural Broadband Strategy."[5] These included:

> enabling a student at a rural high school to participate in a seminar offered at a distant college, letting a patient in a rural clinic be examined by a specialist located in an urban hospital, or allowing a farm family to use a smart grid to reduce its energy consumption.[6]

Accordingly, when crafting a National Broadband Plan, the Commission should consider policies that enable the deployment of facilities that support those types of applications in all regions of the Nation.

Consistent with its title, the goal of the National Broadband Plan should be to ensure access to broadband in all regions of the Nation. The model of "reasonable comparability" fulfills the philosophical mandate of an NBP, because it would endeavor to create a comparable and unifying National standard for deployment and availability. This goal, however, can be pursued successfully only by recognizing the reality of costs of, and quality of service supported by, deployments in rural and high cost regions.

Underpinning the interest of an NBP must be the recognition that, all else being equal, providers do not offer goods or services in areas where their costs cannot be covered by sales price. The Rural Broadband Report recognized this:

> Although the free market has many benefits, such as driving down the costs of services for consumers and improving service quality,

[5] Bringing Broadband to Rural America: Report on a Rural Broadband Strategy, Michael J. Copps, Acting Chairman, Federal Communications Commission (2009) (Rural Broadband Report).

[6] Rural Broadband Report at para. 12.

> it also can leave behind geographic areas with high costs and lower profit potential. Such is the case with many rural areas. Market forces often demand returns commensurate with investment risk. In many parts of rural America, the relatively high deployment costs per potential customer make relying on market forces alone an inadequate strategy for promoting the deployment of broadband services.[7]

It is a misnomer to characterize the need for Federal intervention in broadband policy as the result of a market that is not working. To the contrary, the market *is* working: broadband availability in more densely populated areas is generally strong, frequently with multiple competitors offering broadband over a variety of platforms. The natural forces of the market, however, are more challenging in sparsely populated or high-cost areas. Levels of deployment in such areas often reflect these challenges.

A large portion of network costs are shared and subject to significant economies of scale, the type of which typically can be found in areas with greater population density. As the Commission has noted, "a lower population density generally indicates a higher cost area."[8] The fixed costs associated with the deploying communications networks are generally high in comparison to the incremental (marginal) costs; therefore, customers in an area where there are fewer consumers must each represent recovery of a higher portion of the fixed cost of the network. The Government Accountability Office (GAO) found that "[t]he most frequently cited cost factor affecting broadband deployment was the population density of a market," and that "the cost of building a

[7] Rural Broadband Report at para. 117 (internal citations omitted).

[8] *Federal-State Joint Board on Universal Service; North Carolina RSA 3 Cellular Telephone Company; Petition for Designation as an Eligible Telecommunications Carrier in the State of North Carolina: Order*, CC Docket No. 96-45, DA 06-1628, 21 FCC Rcd 9151, at para. 23 (2006).

broadband infrastructure in areas where people live farther apart is much higher than building infrastructure to serve the same number of people in a more urban setting."[9] Sparsely settled areas will also result in higher costs, because facilities must be constructed over far longer distances to reach end-users. For example, ITTA member companies provide broadband to the vast majority of the wire centers in their service areas. Most often, however, customer locations without broadband availability are that way because they are located far from the wire center facility, not because the wire center is unserved. The distances between individual end-users and the carrier's need to aggregate a critical mass of traffic in a switch often necessitate the use of particularly long loops, a technical barrier to providing broadband service.[10] As the Commission has stated, "for universal service purposes … cost differences caused by differing loop lengths are the most significant cost factor."[11]

The topography of an area can also make it difficult to provide affordable service by making it more costly to deploy networks (whether wired or wireless).[12] Accordingly, the GAO found that "terrain was also frequently cited as a factor affecting broadband

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[9] GAO, *Broadband Deployment Is Extensive throughout the United States, But it is Difficult to Assess the Extent of Deployment Gaps in Rural Areas,* at 19 (May 2006) ("*GAO Report*").

[10] This is also an impediment to wireless broadband service, which is limited by the coverage area of transmitters, among other factors.

[11] *Federal-State Joint Board on Universal Service (Forward-Looking Mechanism for High Cost Support for Non-Rural LECs): Fifth Report and Order,* CC Docket No. 96-45, FCC 98-279, 13 FCC Rcd 21,323, at para. 75 (1998).

[12] *See, e.g., Access Charge Reform, Price Cap Performance Review for Local Exchange Carriers, Transport Rate Structure and Pricing, Usage of the Public Switched Network by Information Service and Internet Access Providers: Notice of Proposed Rulemaking, Third Report and Order, and Notice of Inquiry,* CC Docket Nos. 96-262, 94-1, 91-213, 96-263, FCC 96-488, 11 FCC Rcd 21354, at para. 28 (1997).

deployment decisions," because "infrastructure build-out can be difficult in mountainous and forested areas because these areas may be difficult to reach or difficult on which to deploy the required equipment."[13] The Rural Broadband Report cites the procurement of electronic equipment, access to rights of way, interconnection costs, and construction costs as inputs to the general costs of broadband deployment, and then notes that "rural networks can often be even more expensive to deploy and potentially more expensive to maintain than networks in non-rural areas . . . ."[14]

Providers in populous areas can defray fixed expenses across a broad pool of consumers. And, as noted above, that base is often broad enough to accommodate multiple competing providers. In smaller, sparsely populated areas, however, carriers sometimes cannot recover sufficiently the cost of deployment, as well as operational expenses and on-going maintenance, if they charge their customers affordable rates.

The telephone voice model is a good example of how market forces affect deployment decisions: Universal Service Fund (USF) support is necessary to support networks where normative economic principles would not justify construction of a telephone system. If a National mandate is created to bring advanced services to more regions, then a similar approach is necessary. Recognizing this, ITTA has offered in the USF docket a "Broadband Pilot" proposal, which would provide grants for infrastructure

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[13] *GAO Report* at 19. Topographical concerns also impact the costs of terrestrial wireless providers and hinder the use of satellite communications. *Id.*

[14] Rural Broadband Report at para. 113.

deployment.[15] Specifically, this component for broadband infrastructure support would create a new $500 million Broadband Pilot Program, funded without drawing support from another USF mechanism. Support would be distributed through the BPP to states based on relative percentage of unserved areas, with states selecting the recipients for one-time payments through a competitive bidding process. BPP support would be limited to infrastructure deployment, only, and would be directed toward areas that are unserved by terrestrial broadband; states would be permitted to petition to use a portion of the Broadband Pilot Program support for wireless broadband. The program would terminate when there are no more unserved areas. The BPP would be a component of the National Broadband Plan. The National interest in ubiquitous broadband deployment deserves the allocation of resources separate and apart from those currently dedicated to the USF. Accordingly, the National Broadband Plan should include among its major components a plan to deploy broadband to the unserved areas of the Nation, separate and apart from proposed reforms to USF.

B. ESTABLISHING GOALS AND BENCHMARKS

1. Defining Broadband Capability

Having established the need to create separate government funding for broadband deployment in rural and high cost areas, the Commission must now determine *what* is being deployed in the interest of fulfilling the NBP. In that regard, ITTA submits that the NBP must strive to provide consumer households in all regions of the Nation, including those in rural and high cost areas, with access to quality services capable of supporting

[15] *See, High-Cost Universal Service Support; Federal-State Joint Board on Universal Service Support: Ex Parte of Independent Telephone & Telecommunications Alliance,* Docket No. 05-337, Docket No. 96-45 (Oct. 10, 2008).

core applications provided in urban areas (*e.g.*, online education, remote conferencing). Urban benchmarks, from which "reasonably comparable" can be extrapolated, should be established, but any definition of broadband must be dynamic in order to accommodate near-certain technological development that will lead to increased speed, capacity, and functionality; a "Moore's Law"-type philosophy may be invoked to illustrate the futility of defining broadband speed by the numbers.[16] For example, "Nielsen's Law" postulates that the bandwidth available to end-users increases 50 percent each year.[17] Accordingly, the goals of achieving reasonable comparability across the Nation would be achieved best by periodic review of the applications that are available in urban areas, and extrapolating from those quantifiable data a "reasonably comparable" standard for service provided in rural and high cost areas. In sum, any support mechanisms should be based upon an evolving standard that is based on what is available in urban areas.

The Commission asks whether it should distinguish among various technologies.[18] The Commission also asks whether it should

> define broadband in terms of bandwidth and latency, capability to download a certain type of media in a certain amount of time, ability to

[16] Moore's Law predicts that the number of transistors that can be placed inexpensively on an integrated circuit roughly doubles every two years. *See*, "Excerpts From a Conversation with Gordon Moore: Moore's Law,"Intel Corp. (2005) (ftp://download.intel.com/museum/Moores_Law/Video-Transcripts/Excepts_A_Conversation_with_Gordon_Moore.pdf) (last viewed May 27, 2009 (13:58)).

[17] *See*, "Nielsen's Law of Internet Bandwidth," Alertbox (Apr. 1998), http://www.useit.com/alertbox/980405.html (last viewed May 27, 2009 (14:05)); *see, also*, MediaExperiences2Go, http://connectedhome2go.com/2008/03/18/nielsens-law (last viewed May 27, 2009 (14:13)).

[18] NOI at para. 16.

> access a certain online service or operate a certain application without depreciation in quality, or by some other metric.[19]

ITTA submits that any such standards should be technology neutral: the National interest in bringing the benefits of broadband to consumers everywhere should focus on the user experience. The creation of a National Broadband Plan is undermined if the focus is diverted from providing a paradigmatic end-user experience. The purpose of the NBP should be to ensure access to reasonably comparable broadband services throughout the Nation. That consumer-centric focus should drive Commission policy – an attempt to revolve end-user goals around particular technologies could risk ignoring better alternatives that might be revealed if the end-user focus is maintained. Once the paradigm of user experience is identified, whether it is streaming video and/or other applications, the Commission can then define that experience numerically, *e.g.,* the amount of capacity needed to support a particular application, in order to inform necessary analyses.

Consideration of the user experience should recognize that rural areas need adequate telecommunications and information services to ensure economic, educational, and health care standards that promote commercial success and communities' viability. In this regard, the Commission's focus should be on measures to ensure the provision of reasonably comparable services in areas where normative market forces would not support such deployment; objective measures should be employed to determine the service that provides the best combination of reliability, capacity, and "reach" (*i.e.,* the proven ability of a provider to deploy networks in otherwise unserved areas). An

[19] NOI at para. 17.

example of a study that produces this sort of relevant analysis is described in a White Paper provided to the National Telecommunications and Information Administration (NTIA) and the Rural Utilities Service (RUS) by ADTRAN, Inc.[20]

ADTRAN is a provider of networking and communications equipment for both wired and mobile networks. The ADTRAN White Paper examines "the effect of different types of access network architectures on the peak vs. sustainable speeds per subscriber."[21] The study examines factors affecting traffic loading, access network architectures, and performance. The White Paper addresses results arising out of three types of networks: DSL, hybrid fiber-coax, and broadband wireless access. The study contemplates various network load scenarios and evaluates the performance of networks with dedicated last mile resources vs. networks relying on shared last mile channels. As important as the results of the study is the evidence that objective analyses of various complementary technologies can be undertaken. The results of these types of tests can be held against the Commission's benchmarks when determining the particular type of network that best fulfills the consumer-experience goals of the NBP for any particular region.

Of particular interest to ITTA member companies is the Commission's interest in ensuring broadband capabilities beyond last mile connections, including backbone and

[20] *See Broadband Initiatives of the American Recovery and Reinvestment Act of 2009: Letter from Stephen L. Goodman, Counsel for ADTRAN, Inc., to Bernadette McGuire-Rivera, U.S. Department of Commerce*, Docket No. 090309298-9299-01 (Apr. 13, 2009), and Attachment, "Defining Broadband Speeds: An Analysis of Peak vs. Sustained Data Rates in Network Access Architectures" (ADTRAN White Paper).

[21] ADTRAN White Paper at 1.

feeder networks.[22] ITTA members have deployed broadband, on average, to 85 percent of their service areas. However, and as noted above, broadband is a dynamic service with capabilities that will expand constantly over time. The Commission must ensure that an evolving standard for what qualifies as sufficient deployment of broadband is matched by an evolving commitment of resources necessary to enable providers to bring that evolutionary product to consumers.

The drive toward technological neutrality should extend to *service area* neutrality.[23] The standard for what qualifies as sufficient access to broadband should not change if the service is provided in a rural, as opposed to an urban, area. The only variation should be that which falls within the boundaries of "reasonable comparability." The standard should be an evolving measure that describes user experiences as enjoyed in urban areas; a reasonably comparable type of service must then also be made available in rural and high cost areas. Modifying the standard for the service based upon the area in which it is used will likely only hamstring the possibility of bringing better services to rural and high cost areas, since the imperative of "reasonably comparable" will have been obviated by the creation of separate standards. "Reasonably comparable" should arise out of what is available in urban areas, rather than a separately-configured measure.

The Commission asks whether unlicensed providers should be considered a means of providing broadband service, particularly where no other service provider offers service.[24] ITTA submits that unlicensed providers should not be included in

[22] NOI at para. 17.

[23] *See* NOI at para. 19.

[24] NOI at para. 21.

determinations of broadband support for licensed providers. Under the Commission's rules, the *sine qua non* of an unlicensed provider is that it must accept interference.[25] An unlicensed provider whose service is subject to, and must yield to, interference is simply not positioned to provide service that is consistent with what the user-centric goals of the NBP should be, specifically, to ensure the provision of reasonably comparable services. Relying on unlicensed providers could short-shrift consumers in areas that require Federal assistance in the deployment of high-quality broadband networks. Unlicensed services are valuable outlets for technological innovation and consumer convenience, but should not be cast as substitutes for licensed providers.

2. Defining Access to Broadband

The Commission seeks a definition for "access to broadband capability."[26] ITTA submits that access to broadband capability should be defined as the user's access to at least one provider that offers service that is reasonably comparable to that which is available in urban areas; this may include one wired and one mobile provider. The access should be available at the individual subscriber location. Although community access points such as a libraries or community centers have value, they are not sufficient to meet fully the goals to which a National Broadband Plan should aspire. The greater value of the broadband network is realized when its ubiquity may be accessed without the need to leave one's home or place of business. Nor should the Commission balk at establishing robust standards for what is "reasonably comparable:" while, as described above, the National Broadband Plan should envision a technology-neutral universe, it must not

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[25] 47 C.F.R. § 15.5.

[26] NOI at para. 23.

ignore online applications available in urban regions and then provide consumers in rural or high cost regions with terrifically inferior service. As described in ITTA filings at the Commission and other Federal agencies, the primary goal at this point in time should be to bring core broadband services to the unserved areas of the Nation, and to focus secondarily on enhancing service in areas in which such service is currently available.[27]

The Commission asks how it should consider the different qualitative features in the definition of broadband, including latency, peak download speed, and mobility.[28] As stated above, ITTA submits that any such consideration by the National Broadband Plan should be technology-neutral. Therefore, to the extent any one technology boasts an advantage over another, that factor should be combined with the other characteristics of the service when determining that service's role within the universe of technologies. By way of example, the ADTRAN study noted above provides a substantive comparative analysis of wireline, hybrid fiber-coax, and wireless networks. The Commission must remain mindful of the manner in which such networks operate; the Commission may also, consistent with the Rural Broadband Report, consider such factors as scalability; weather and environmental conditions; survivability, security, and redundancy; distance and topography; maintenance and repair; and resource contention and "micro-congestion."[29]

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[27] *See, i.e., American Recovery and Reinvestment Act of 2009 Broadband Initiatives: Comments of the Independent Telephone & Telecommunications Alliance,* Docket No. 090309298-9299-01, U.S. Department of Commerce (National Telecommunications Information Administration) and U.S. Department of Agriculture (Rural Utilities Service) (Apr. 13, 2009).

[28] NOI at para. 26.

[29] *See,* Rural Broadband Report at paras. 73-87.

3. Measuring Progress

The Commission seeks comment on its existing data collections, and possible others that it could undertake.[30] ITTA submits that prior to imposition of any additional data collection requirements, the Commission should utilize fully the data it has already collected. The accuracy of the data can be assured by relying on the certifications of those delivering the data to the Commission. In any review effort, however, the Commission must ensure that the confidentiality of proprietary carrier information is maintained strictly. The public's general interest in "measur[ing] and review[ing] progress"[31] must not supersede sensitive competitive issues relating to carrier data. Ultimately, the measure of success for the National Broadband Plan[32] can be traced to a single data point: Are people subscribing to services capable of supporting access to core broadband applications?

C. Effective and Efficient Mechanisms for Ensuring Access

The Commission seeks comment on the effectiveness of existing mechanisms for ensuring broadband access, including those offered by the government and the marketplace. ITTA members are at the forefront of providers bringing advanced services to rural America. Their respective efforts have included not only network deployment, but also programs such as partnering with computer manufacturers to bring value-priced computers to consumers. These initiatives increase not only availability, but "take rates," as well. ITTA members have deployed broadband of increasing speeds in, on average,

[30] NOI at para. 29.

[31] *See* NOI at para. 32.

[32] *See* NOI at para. 33.

more than 85 percent of their service areas.[33] Generally, no sound economic model supports the deployment of broadband absent external support in the remaining unserved areas. ITTA has participated actively in Commission, NTIA, and RUS proceedings to address supplemental measures that are necessary when general economic forces are not sufficient to support broadband deployment in rural and high cost areas. Toward this end, ITTA would support a Commission analysis that would include evaluating the effect of the Recovery Act. The facilitation of grants to unserved areas is, in the words of the Administration, a "down payment" on the enormous task of deploying broadband further,[34] and the results of that effort should inform the Commission's instant inquiry.

1. Market Mechanisms

The Commission asks, "What is the best way to attract capital to broadband infrastructure projects?" ITTA submits that the marketplace, whether regarding broadband or narrowband, has proven general economic theories to be correct, specifically, that in the absence of revenues sufficient to offset costs, external support must be injected in order to ensure the availability of a service. ITTA's "Broadband Pilot Program," which proposes grants for unserved areas, is consistent with this approach, in that it funds initial deployment in prioritized unserved areas. Providers, however, must not be subject to regulations that have the effect of devaluing their networks, or inhibiting

[33] A survey of ITTA members drew sample data representing approximately 12 million access lines served by mid-size carriers.

[34] *See, e.g.*, "Vislack, Copps, and Wade Kick Off American Recovery and Reinvestment Act's Broadband Initiative," Press Release, NTIA, USDA, and FCC (Mar. 10, 2009), at 2 (Commerce Dept. Senior Advisor and Acting Chief of Staff Rick Wade: "President Obama believes in the power of broadband. Broadband deployment throughout the country will help drive the nation's economic recovery and growth. The grant represents a down-payment on President Obama's communications priority.").

them from maximizing the returns they may make on them, and which are critical to achieving maximum self-sufficiency. The provision of broadband services in rural and high cost areas implicates private investment, as well, and the Commission must be certain not to take steps that would discourage broadband investment.

For example, the Commission seeks comment on the so-called "Fifth Principle" of non-discrimination.[35] ITTA submits that broadband services have emerged successfully because technical and marketplace development has occurred outside the realm of artificial governance, *i.e.*, regulation. Technology developers acting in a free market have developed products to meet consumer demands, and have introduced new ways for citizens to interact; participate in politics; and obtain information, commentary, and entertainment. The Commission has found "that the public interest is best served if we permit competitive marketplace conditions to guide the evolution of broadband Internet access services."[36] The Commission's approach has worked. For example, in 2006, YouTube reportedly played 2.5 billion videos;[37] 2007 was characterized as a year of "massive growth," with Nielsen Online reporting growth in on-line viewer-ship among several sites following the Writers Guild of America (WGA) strike.[38] It is clear that users are taking full advantage of broadband capabilities. Similarly, as demonstrated below,

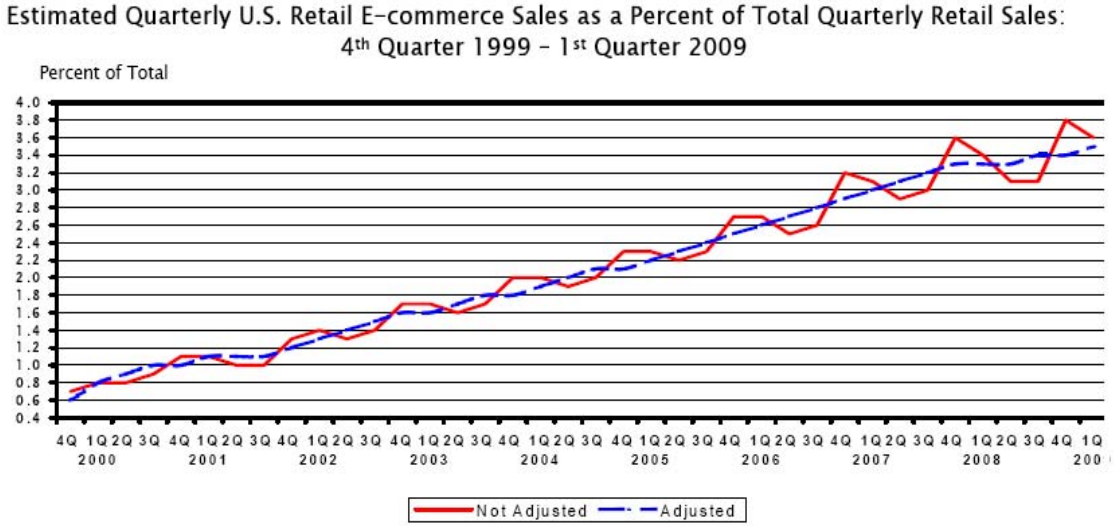
[35] NOI at 48.

[36] Wireline Broadband Order at para. 85.

[37] http://www.usatoday.com/tech/news/2006-07-16-youtube-views_x.htm (last viewed Jun. 5, 2009 (15:14)).

[38] *See* http://www.viralmanager.com/strategy/research_documents/youtube-stats-final-quarter-2007.pdf, (last viewed Jun. 5, 2009 (15:15)).

Internet "e-commerce" sales have increased steadily and dramatically during the past decade:[39]



As traffic increases, network operators must be able to direct traffic efficiently in order to ensure a viable, functioning network. The exponential growth of network usage demands traffic management in order to ensure optimal operation as carriers deploy additional capacity that enables consumers to navigate greater functionality afforded by the broadband network. As needs outpace growth, carriers must be assured that their authority to manage their networks in the most efficient manner possible remains preserved. As described by the U.S. Department of Justice,

> Packets of traffic on the Internet are processed on a "best effort" basis, which does not provide any guarantees regarding speed, delivery, service quality, or priority treatment when the network is congested. When routers have more packets to process than capacity to do so, the overflow packets are queued up for processing in the order they arrive, up to the router's physical capacity. Any additional packets beyond the router's capacity are lost.[40]

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[39] "Quarterly Retail E-Commerce Sales, 1st Quarter 2009," U.S. Department of Commerce, May 15, 2009 (http://www.census.gov/mrts/www/data/pdf/09Q1.pdf (last viewed Jun. 8, 2009, 14:00)).

[40] *Broadband Industry Practices: Ex Parte Filing of United States Department of Justice*, Docket No. 07-52, at n.17 (filed Sep. 6, 2007).

Traffic management practices that can mitigate these problems should not be foreclosed.

The Commission's Broadband Policy Statement[41] establishes reasonable guidelines by which carriers can operate. The Policy Statement, coupled with existing consumer protection and business practices laws, make additional layers of Commission regulation at best unnecessary, and at worst a threat to the successful evolution of the broadband Internet marketplace. The Commission must ensure that regulations do not obstruct successful market mechanisms.

2. Determining Costs

The Commission asks, "In order to capably develop a national broadband plan, how useful or necessary is it for the Commission to understand the costs of deploying broadband networks to the unserved and underserved parts of our country?"[42] In response, ITTA submits that the Commission should seek to develop its understanding of the costs involved to deliver broadband services capable of supporting core applications. Failure to consider data on the extent of both costs and benefits would result in irrational decision-making and an abdication of the public trust. Certain relevant information is already in the record of other proceedings.

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[41] *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities; Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services; Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services, 1998 Biennial Regulatory Review – Review of Computer III and ONA Safeguards and Requirements; Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities; Internet Over Cable Declaratory Ruling; Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities: Policy Statement*, CC Docket Nos. 02-33, 01-337, 95-20, 98-10, GN Docket No. 00-185, CS Docket No. 02-52, 20 FCC Rcd 14986, FCC 05-151 (2005) (Broadband Policy Statement).

[42] NOI at 38.

Within the specific discussion of broadband deployment, ITTA has previously cited studies that estimate a cost in excess of $10.9 billion ($13.63 billion in 2008 dollars) to upgrade 3.3 million rural study area lines to provide broadband via DSL.[43] And, a study by CostQuest determined that it would cost $22 billion 3G wireless (a service that fails to offer all rural households in a region consistently robust online functionality that rivals service offered via DSL at the household level) throughout the Nation.[44] These data alone are cause for revisiting the assertion in the Rural Broadband Report that wireless infrastructure costs are "frequently less significant than comparable wired broadband deployment . . . ."[45] In all events, the raw cost data must be analyzed within a rigorous cost/benefit analysis that considers the strengths and weaknesses of various technologies used to deliver broadband.[46]

The Commission should carefully evaluate cost estimates. Carriers are certainly in a position to assess their own numbers, but when establishing policy of general application, the Commission should seek to ensure that the factors that flow into any determinative calculation are uniform among all participants. Toward that point, the

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[43] *See* Glass, Victor, *NECA Rural Broadband Cost Study: Summary of Results*, National Exchange Carrier Association, Inc., at 4 (Whippany, NJ, 2000). The $13.9 billion in 2007 dollars calculation represents 2000 values against 2008 using an average of Consumer Price Index, GDP deflator, estimated values of consumer bundle and unskilled wages, nominal GDP per capita, and relative share of GDP. *See* http://www.measuringworth.com (last viewed Jun. 8, 2009, 13:45).

[44] CostQuest Associates, "U.S. Ubiquitous Mobility Study," at 20 (Apr. 17, 2008).

[45] Rural Broadband Report at para. 142.

[46] *See*, Sections II.B.1 and II.B.2, above, *citing* ADTRAN White Paper and Rural Broadband Report at paras. 73-87, respectively.

Commission asks whether cost models are a viable tool.[47] In this regard, modeling is useful. Moreover, the Commission can utilize information submitted with NTIA and RUS applications. Those data, along with information culled from Form 477s, can be integrated in order to produce predictive cost estimates.

The Commission asks about "[w]hich broadband technologies might work best and deliver the most effective, efficient services in various parts of the nation."[48] In addressing this issue, the Commission should not seek to identify one-size-fits-all technology "winners" and "losers." In areas where external support is necessary to achieve build-out of networks, the Commission should factor the speed, reliability, capacity, and costs of alternative technologies in those particular areas. There is no uniform answer to the Commission's question; the determination of any inquiry will likely be as individual as the characteristics of the relevant service area.

3. Universal Service Programs

The Commission seeks comment on the impact of broadband on existing USF programs.[49] Generally, many carriers have been able to leverage some USF-supported assets, which can have a dual use, to help support broadband services. As noted by the Federal-State Joint Board, "[t]he High-Cost Loop program supports investment and expenses associated with local loops, even when those loops are broadband-capable."[50]

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[47] NOI at para. 38.

[48] NOI at para. 38.

[49] NOI at para. 39.

[50] *High Cost Universal Service Support, Federal-State Joint Board on Universal Service: Recommended Decision,* Docket Nos. 96-45, 05-337, FCC 07J-4, at n.55 (2007) (Joint Board RD).

Accordingly, support for narrowband networks that are necessary to bring COLR-obligated services to outlying areas can result in broadband network deployment. Indeed, the Federal-State Joint Board recognized this fact when it noted the "commendable" achievements of rural LECs in providing voice and broadband to their subscribers.[51] The job, however, is far from complete. Even the addition of $7.2 billion, in the guise of Recovery Act stimulus funding, has been characterized by the Administration as a "down payment." And, as noted above, the costs of deploying broadband, whether for wireline or wireless networks, will be an expensive endeavor.

While the USF should support networks that support broadband, an attempt to capture the Nation's broadband aspirations within the USF could risk obscuring the needs of networks that rely upon USF for the on-going needs of narrowband networks. It would be extraordinarily expensive to replace all narrowband networks with broadband-only facilities capable of supporting ubiquitous voice and broadband. To the extent that occurs, the change will likely be a generational shift. Until that point, however, the Commission should continue current USF programs that enable support for dual-use networks, and craft a separate program aimed at ensuring broadband availability throughout the Nation. That separate program, of course, would be informed by endeavors such as the BTOP, the BPP, and current USF support.

4. Open Networks

In the NOI, the Commission seeks comment on the "value of 'open networks' as an effective and efficient mechanism for ensuring broadband access for all Americans."[52]

[51] Joint Board RD at para. 39.

[52] NOI at para. 47.

The goal of the instant proceeding should be to craft a strategy that will bring networks to where they are not today, *e.g.,* "to enable the build-out and utilization of high-speed broadband infrastructure."[53] To that end, the Commission should avoid "open network" policies that produce uncertainty and potentially undermine future private investment in broadband deployment.

5. Competition

The Commission seeks comment on "whether multiple providers of broadband services are useful or necessary for achieving the goal of providing broadband services to unserved and underserved areas."[54] ITTA submits that while competition may in many instances engender consumer benefits in the marketplace, the Commission should recognize the distinction between mandating *access to broadband* and mandating *broadband competition*. It is even more expensive to deploy and operate multiple networks in high cost areas. While the facilitation of competition can be mandated, competition itself should not be mandated. In instances in which a single provider is assisted by Federal support, there can be no rationale to mandate supporting two substantively similar providers in a single area. The goal of the instant proceeding is to extend broadband further to the regions where it is not available today. It would be an imprudent use of scarce resources to apply support to multiple duplicative carriers in a single environment that is otherwise unable to support a single provider.

[53] NOI at para. 1.

[54] NOI at para. 48.

D. Affordability and Maximum Utilization

1. Affordability

The provision of support for broadband deployment, whether via grants, on-going cost recovery, tax credits, or other mechanisms can enable carriers to deploy facilities and provide service where they would otherwise be unable to charge rates that would recover extraordinary costs. Despite those remedies however, some consumers in urban and rural markets will generally find services unaffordable. In those instances, the NBP should consider recommending the creation of a broadband adoption program that provides broadband service discounts to low-income consumers. Benefits under such a program would be based upon the income of the household subscribing.

2. Maximum Utilization

Maximum utilization can be achieved by cross-pollination of expertise among relevant Federal agencies. While the Commission may take charge of issues related to providers, technology, and deployment, other agencies, including but not limited to those related to health and human services, education, and social services, might obtain a stake in the effort in order to ensure that the benefits of broadband are not only disseminated to the greatest number of subscribers possible, but also that those users may advantage themselves of the full resources broadband offers. Toward that end, the coordination among agencies suited to facilitating wider broadband adoption and usage would benefit the overall goals of the National Broadband Plan.

3. Broadband Privacy

The Commission seeks comment on the implication that privacy concerns may have on the development of a National Broadband Plan.[55] ITTA submits that self-regulation has been effective in the development of innovative and advanced services on the Internet, and ITTA trusts that self-regulation will continue to evolve as a mechanism for protecting consumer interests. Self-regulation is a particularly effective tool in technologically-oriented environments, where rapid evolution of applications and services can outpace regulators' ability to address changing situations. Businesses attuned to the need to protect consumers, and fluent with existing regulations and legal standards, are in a good position to self-regulate as emerging technologies evolve to meet new consumer demands. By contrast, ITTA cautions that overly prescriptive or restrictive "self-regulatory" principles imposed by regulatory fiat may thwart innovation and create unnecessary consumer "make work" or confusion. With this in mind, ITTA previously provided the Federal Trade Commission comments on specific principles that might most directly, and adversely, affect ITTA members and consumer choice. [56]

E. Status of Deployment: Stimulus Grant and Loan Programs

The Commission seeks comment on how the programs in the Recovery Act should be considered as the Commission develops a National Broadband Plan. Inasmuch as the BTOP should enable broadband deployment in various areas of the Nation, those achievements will be relevant to the Commission's future analyses to determine which areas are most in need of focused support mechanisms to enable broadband deployment

[55] NOI at para. 58.

consistent with the standards the Commission will establish. Accordingly, while the *results* of Recovery Act implementation should be factored into the Commission's future determinations, the *existence* of the Recovery Act mechanisms do not engender impacts until they are implemented and bear results. Data accrued during application processes pursuant to the Recovery Act, however, may inform the Commission's determinations regarding costs, technologies, and other objective data.

III. CONCLUSION

The National Broadband Plan should support the establishment and continued evolution of networks that enable maximum capacity, reliability, security, and reach. The support should be technology neutral and support maximum online functionality for consumers, with online functionality available in urban areas serving as the benchmark for successful rural deployment. The Commission should enter the marketplace only where normal economic forces are incapable of supporting deployment and subscription, and should not undertake any actions that would have the effect of discouraging private investment in broadband. Together, these guiding principles should result ultimately in greater broadband deployment and consequent consumer benefits across the Nation.

Respectfully submitted,

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DATED: June 8, 2009

[56] *See, generally, On-Line Behavioral Advertising Self-Regulatory Principles: Comments of the Independent Telephone & Telecommunications Alliance,* Federal Trade Commission (Apr. 11, 2008).