

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Development of Nationwide Broadband Data to)	WC Docket No. 07-38
Evaluate Reasonable and Timely Deployment of)	
Advanced Services to All Americans,)	
Improvement of Wireless Broadband)	
Subscribership Data, and Development of Data on)	
Interconnected Voice over Internet Protocol)	
(VoIP) Subscribership)	

**COMMENTS OF THE NATIONAL ASSOCIATION
OF TELECOMMUNICATIONS OFFICERS AND ADVISORS,
THE NATIONAL ASSOCIATION OF COUNTIES,
THE U.S. CONFERENCE OF MAYORS, AND
THE NATIONAL LEAGUE OF CITIES
IN RESPONSE TO THE NOTICE OF PROPOSED RULEMAKING**

I. INTRODUCTION

The National Association of Telecommunications Officers and Advisors (“NATOA”), the National Association of Counties (“NACo”), the National League of Cities (“NLC”), and the US Conference of Mayors (“USCM”) submit these reply comments in response to the Notice of Proposed Rulemaking (“NPRM”), released April 16, 2007, in the above-captioned proceeding.

NATOA’s membership includes local government officials and staff members from across the nation whose responsibility is to develop and administer communications policy and the provision of services for the nation’s local governments.

NACo is the only national organization that represents county governments in the United States. It serves as a national advocate for counties; acts as a liaison with other levels of

government; and provides legislative, research, technical and public affairs assistance to its members.

NLC is the nation's oldest and largest organization devoted to strengthening and promoting cities as centers of opportunity, leadership and governance. NLC is a resource and advocate for more than 1,600 member cities and the 49 state municipal leagues, representing 19,000 cities and towns and more than 218 million Americans.

USCM is the official nonpartisan organization of the nation's 1,183 U.S. cities with populations of 30,000 or more. Its mission is to promote effective national urban/suburban policy, strengthen federal-city relationships and ensure that federal policy meets urban needs.

II. THE NEED FOR DATA COLLECTION

While Commissioner Copps recently expressed shock and dismay that the United States had fallen once again in international broadband rankings,¹ Commissioner McDowell instead chose to critique the methodology of the rankings and emphasized the generally good status of broadband deployment in the United States.² Regardless of our country's international rank, this divergence of opinions illustrates the need for a substantial overhaul of the Commission's broadband data collection program.

The Government Accounting Office openly criticized the current collection approach taken by the Commission, emphasizing in its report that "the data may not provide a highly

¹ Statement of Commissioner Michael J. Copps *re Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, GN Docket No. 07-45, Notice of Inquiry (rel. April 16, 2007). Available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-07-21A3.doc.

² Comments of Commissioner Robert M. McDowell to the Broadband Policy Summit 2007, p. 2-7 (rel. June 7, 2007). Available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-273742A1.pdf.

accurate depiction of local deployment of broadband infrastructures for residential service.”³

The low standard by which a ZIP code is considered served as long as there is a single subscriber, along with a lack of detail with some statistics, raises doubts about the validity of the Commission’s data – data that claims broadband has reached 99% of the American population in 99% of ZIP codes.⁴

The need for a national broadband policy is clear, and local government national associations all support the development of such a policy. But before further progress can be made in that direction, one thing is clear: the need for more precise national broadband data. Accurate and detailed broadband deployment data will help formulate a national broadband policy that will help spur the further deployment of high-capacity networks and address the continuing broadband needs of our unserved and underserved communities.

III. REPHRASING THE QUESTION

In this NPRM, the Commission asked what methods should be used to improve the quality of data collected with Form 477. But before addressing the “how,” the Commission should first establish the “why” – why is the data being collected? – and the “what” – what type of information needs to be collected? Knowing the “why” and the “what” is needed to help shape the methods used in the data collection.

Why is the Data Being Sought?

The first step in examining the current data collection process, and whether changes need to be made to that process, is to determine why and for what purpose the data is being collected. Doing so will help delineate the type of information needed to be collected. Data should not be

³ General Accountability Office, *Broadband Deployment Is Extensive throughout the United States, but It Is Difficult to Assess the Extent of Deployment Gaps in Rural Areas*, p. 2 (rel. May 2006), available at <http://www.gao.gov/new.items/d06426.pdf>.

⁴ Federal Communications Commission, *High-Speed Services for Internet Access: Status as of June 30, 2006*, p. 5 (rel. January 2007), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-270128A1.pdf.

collected simply for the sake of collecting data. For example, is the data being collected to accurately measure broadband deployment, or is it being collected to measure not only the extent of deployment, but the quality of the service as well? Obviously, the type – and amount – of data that must be collected will depend on the “why.”

What Data Should Be Collected?

In order to gain the level of detail necessary to develop an appropriate and lasting national broadband policy, we believe the Commission should collect detailed information responsive to the following questions:

- Deployment – Who Can Access Broadband?
- Uptake – How Many are Using Broadband?
- Residential or Commercial Use – What is the Nature of Broadband Use?
- Demographics – Who is Using Broadband?
- Provider – Who is Providing Broadband?
- Technology – What Methods are Being Used to Deliver Broadband?
- Speed – How Fast is Broadband Service?
- Price – How Much are Users Paying for Broadband Service?

1. Deployment – Who Can Access Broadband?

Having more accurate information as to the extent of broadband deployment across the nation is important in shaping national broadband policy. But these efforts are clouded to some degree by the debate over the definition of “high speed” or “advanced services.” The need for a new standard is evident, and a new definition should be developed before proceeding with

fashioning a new data collection process.⁵ In addition, the Commission should consider expanding the existing list of broadband delivery options. Given the proliferation of fixed wireless systems, as well as the growing use and availability of mobile broadband solutions (a trend likely to continue with the upcoming 700 MHz spectrum auction and the subsequent 4G mobile broadband networks that should arise), it is imperative that as many broadband delivery options as possible be included in the Commission's data collection efforts.

As pointed out by a variety of entities the past, including in the review of data collection methodologies conducted by the GAO, a major problem with the current measure of deployment is how ZIP codes are used. Requiring only one user, residential or commercial, to subscribe to broadband in order for the entire ZIP code population to be considered served is obviously too low a standard. Because of the expansive geographic and population size that is inherent with most ZIP codes, to get meaningful data using this methodology, the Commission must modify its current system or apply a new measurement area so that data granularity will improve. Even the use of a higher percentage of the total homes and businesses subscribing to broadband in a measurement area would improve the data collection and provide a more realistic picture of deployment.

As the Commission has done in other contexts, another option would be to use nine-digit ZIP codes (ZIP+4). The ZIP+4 method would ostensibly place the least additional burden on providers. The downside to this method, as stated recently before the House Subcommittee on Telecommunications and the Internet, is that ZIP+4 is designed for the efficient delivery of mail

⁵ Comments of the National Association of Telecommunications Officers and Advisors, The National Association of Counties, The U.S. Conference of Mayors, and the National League of Cities, Notice of Inquiry, GN Docket No. 07-45, p. 6 (rel. May 16, 2007).

and may overweight high density areas and business addresses.⁶ This method also overlooks the fact that wireless services, both fixed and mobile, do not adhere to any ZIP code and are harder to quantify using a ZIP code approach.⁷

Another alternative is to use the Census Bureau's blocking system. This approach provides the ability to directly mesh collected data with demographic information. The major drawback to using the Census block system is the cost and effort necessary to bring providers' collection techniques in line with an unfamiliar unit of measure and the burden this standard would place on providers.

It has also been suggested to collect data using geo-location. Geo-location has the benefit of providing exact location information without disclosing exact street addresses of subscribers. The question with geo-location is if the information is readily available or if substantial investment is needed to cultivate the data. Whether providers uniformly collect geo-location data with the routine provision of service could determine the tenability of this approach.

Another suggestion is to use a service area approach, similar to that followed by ConnectKentucky. This involves tracing the extent of current DSL, cable, and fiber plant, and verifying the reach of fixed and mobile wireless systems.⁸ A quandary exists with the amount of proprietary information providers would be asked to share with either the government or third parties. Disclosure to government entities could raise concerns with respect to proprietary

⁶ Statement of Walter B. McCormick, Jr., President and CEO, U.S. Telecom Association, to the House Committee on Energy and Commerce Subcommittee on Telecommunications and the Internet, p. 3 (rel. May 17, 2007), available at http://energycommerce.house.gov/cmte_mtgs/110-ti-hrg.051707.McCormick-testimony.pdf.

⁷ Written testimony of Steve Largent, President and CEO, CTIA-The Wireless Association®, before the United States House of Representatives Subcommittee on Telecommunications and the Internet, Committee on Energy and Commerce, p. 7 (rel. May 17, 2007), available at http://energycommerce.house.gov/cmte_mtgs/110-ti-hrg.051707.Largent-testimony.pdf.

⁸ Testimony of Brian R. Mefford, CEO of Connected Nation, Before the U.S. House of Representatives Committee on Energy and Commerce, Subcommittee on Telecommunications and the Internet, p. 4-5 (rel. May 17, 2007), available at http://energycommerce.house.gov/cmte_mtgs/110-ti-hrg.051707.Mefford-testimony.pdf.

content of filings, but as in other contexts, the Commission could accept such information under confidentiality while aggregating the necessary data for reporting purposes.

Highly granular deployment data gives local governments the best opportunity to help improve deployment in each community. Both the ConnectKentucky and geo-location approaches provide highly detailed data on broadband deployment. The costs may be greater than other suggestions offered here, but given the importance of this initiative, cost should not be an overriding factor in selecting a method for measuring deployment.

Finally, the Commission asked whether, in a worst case scenario, representative sampling and extrapolation would suffice if no feasible alternative to data collection beyond the five-digit ZIP code level exists. This approach should not be used unless other possible methods are untenable because of cost or other significant factors. The importance of data collection cannot be overstated and should be considered before relying on sampling and extrapolation.

2. Uptake – How Many are Using Broadband?

Collecting accurate uptake data is just as important as collecting deployment data. Uptake data shows what communities have incorporated broadband usage into their lives and also identifies communities where broadband usage is not prevalent.

For uptake data to have significance, it must be collected and recorded in actual numbers and not percentages. Actual numbers will tell a more complete story about uptake. Knowing who is and is not using broadband allows local governments to gear efforts in those communities to promote home computer ownership, teaching computer literacy, or offering business grants and loans. It is important to remember that the same uptake number can mean two different things depending on demographics. Modest uptake in an older neighborhood is considered a success, but the same uptake in an area populated by young professionals is troubling. Uptake

information alone is good but must be used in combination with other indicators to create substantive data.

The Commission asked how to define a home or business as “passed” for purposes of uptake data collection. The Commission should count any home or business that can currently make use of a wireline connection, a fixed wireless connection, or a mobile wireless connection but has not done so. Like the need to consider multiple technologies on the deployment side, each option must be accounted for in defining who has been passed.

One last point applies specifically to mobile wireless. Currently, the mobile wireless providers include in their statistics anyone who carries a web-capable device, as well as users who engage in mobile-only applications (such as text messaging, picture messaging, ring tones, and wallpaper).⁹ While this activity is not without merit, it does allow for mobile broadband to portray a wider reach compared to the applications used by wireline and fixed wireless subscribers (such as personal or work e-mail, web browsing, and instant messaging). To fairly incorporate mobile wireless in both deployment and uptake, the Commission should consider including only those users who engage in e-mail, web browsing, and instant messaging applications.

Knowing how many people can access broadband and how many actually take in broadband are two important metrics that must come from the Commission’s efforts, because without detailed and accurate measures of deployment and uptake, the remaining data will be less beneficial to local governments.

3. Residential or Commercial Use – What is the Nature of Broadband Use?

⁹ Written testimony of Steve Largent, President and CEO, CTIA-The Wireless Association®, before the United States House of Representatives Subcommittee on Telecommunications and the Internet, Committee on Energy and Commerce, p. 5 (rel. May 17, 2007), available at http://energycommerce.house.gov/cmte_mtg/110-ti-hrg.051707.Largent-testimony.pdf.

There are many differences between residential and commercial broadband use. These differences guide local governments in crafting policies specific to the needs of home users and businesses. Because of the implications on local government policy, the Commission should delineate between residences and businesses, and provide actual numbers of residences and businesses connected.

Delineation allows for greater understanding of the nature of broadband use and helps local governments develop appropriate programs. Where business usage is lagging, loans or grants can be issued to help businesses upgrade computers and pay for broadband connections. For areas with less residential use, computer literacy and home computer ownership programs can be implemented to drive up residential broadband use.

4. Demographics – Who is Using Broadband?

Demographic information, like differentiating the nature of broadband use, helps local governments craft policies and programs to meet unique and specific needs of each community. Demographic information can show what factors encourage or deter use in communities, as well as those factors that have little or no effect.

The Commission listed four demographic areas in its NPRM – age, race, education, and income – and information on all four should be collected. By meshing demographic information with uptake and deployment numbers, local governments can spot trends and develop remedies for unserved and underserved communities and drive uptake in communities where uptake is low.

5. Provider – Who is Providing Broadband?

Form 477 requires the provider be listed and this practice should continue. By matching the provider with the other information listed, local governments can see which providers have

proactively entered unserved and underserved communities and which providers have been averse to expanding service.

6. Technology – What Methods are Being Used to Deliver Broadband?

Form 477 currently requires providers to list the actual number of each kind of connection they have within a ZIP code. This practice should continue with the adoption of a measurement area and should be broken down between residential and business connections to show if the nature of use dictates what technology is used.

7. Speed – How Fast is Broadband Service?

Form 477 currently asks providers to break down the speed of their services at optimum speed across five separate tiers, ranging from the statutory minimum of 200 Kbps in one direction through 100 Mbps.

The Commission asked if it should break apart the lowest tier from the current 200 Kbps to 2.5 Mbps range into two distinct tiers covering 200 Kbps to 1.0 Mbps and 1.0 Mbps to 2.5 Mbps. Because the end user experience in the 200 Kbps to 1.0 Mbps range is different than that in the 1.0 Mbps to 2.5 Mbps range, this change in the lowest tier is recommended.¹⁰

Another question raised in the NPRM is whether the Form 477 speed tiers can be designed to shift accordingly with changes in technology and demand, and if tiers should align with the various applications that each tier can support. Aligning tiers with applications provides a clear picture of how many connections can support a particular application. This would benefit developing areas like telemedicine, and could help spur further development in video

¹⁰ This change, however, if made, must be done in conjunction with the Commission's Notice of Inquiry in GN Docket No. 07-45, *In the Matter of Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*.

conferencing and telecommuting. Even gaming applications could benefit from knowing the prevalence of certain speeds, so that games can be designed with speed limitations in mind. By keeping applications in mind when designating tiers, applications developers will be able to tailor the needs of applications to the broadband climate.

But requiring actual speed reporting raises questions about administrative and procedural issues. How many tests, over what period of time, would suffice as a true representative sample? Who is responsible for conducting the tests – providers, the FCC, NTIA, or state entities? While knowing the actual speed of connections would be greatly beneficial, the myriad problems associated with actual speed reporting may render it impractical. An alternative bottom-up approach is discussed below.

8. Price – How Much are Users Paying for Broadband Service?

The Commission does not currently require providers to report what prices are being charged for service across specific technologies and speeds. This information should be collected to learn what the price-per-bit costs are to broadband consumers. Price-per-bit provides a fair assessment of the value being afforded the consumer and, when calculated using optimum speed, allows for level comparisons among providers.

Price information should be inclusive of all technologies, both wireline and wireless. Additionally, price information should be obtained for regular monthly service costs as well as introductory offers and bundled packages. By seeing what offers drive uptake, and if uptake persists when regular rates apply, the Commission can gauge the role price plays in the decision to bring broadband into a home or business.

A question exists over how to assess the price of broadband contained in a bundled service. For equity in comparison, the cost of the bundle should be divided by the number of

distinct services contained in the bundle, with the result used as the price of broadband. While this may not be an economic reality, it prevents providers from listing an unrealistic price that would make the price-per-bit appear better than it really is.

IV. THE BOTTOM-UP SUPPLEMENTAL ALTERNATIVE

The focus thus far has been on traditional top-down approaches to collecting data. Top-down collection involves numerous checks and balances to ensure the accuracy of the data being collected. In an effort to supplement this approach, it has been suggested that consumers become actively involved with the process from the bottom-up. Two ideas have been put forward: The Commission-proposed voluntary phone registry for unserved consumers and consumer-generated actual speed testing.

The Commission inquired in this NPRM about whether a registry, similar to the Do Not Call telemarketing registry, could help identify where broadband service is currently unavailable. This approach can help mobilize providers to build-out unserved areas. Consumers, by the very act of calling, indicate an awareness of broadband along with a desire for broadband service.

The other bottom-up idea is to have connected consumers participate in actual speed testing. Currently, a bevy of websites offer to test the download speed of consumers, but one site in particular has gone further to act as a compendium of broadband connectivity information. The eCorridors project at Virginia Tech developed an online broadband speed test that not only logs the user's connection speed, but additional information entered by the user. The actual speed, once tested, is placed on a map along with the entered data.¹¹ This creates a rough picture of the broadband universe in a given area, and much like the unserved consumer phone system, provides another tool to help local governments and providers better serve communities.

¹¹ This additional information includes provider, connection type, geographic location, and the nature of the connection (residential, business, etc.). eCorridors Community Broadband Map Beta 1.0, (rel. 2006), *available at* <http://www.ecorridors.vt.edu/maps/broadbandmap.php>.

Both ideas have shortcomings since they rely on the consumer to enter the information accurately. Through innocent error or intentional acts, the data can be tampered with, but if a large enough sample participates in either activity these errors should not skew results. Also evident is the potential criticism for the “snapshot” of connection speed taken by a speed test, as well as the multiple testing options that currently exist. Both criticisms are defused if the consuming public inputs enough data. This can also be mitigated by the administering body ensuring that its standards are open for the public to see and question.

One last problem with any consumer driven data collection initiative is the need to generate awareness. Advertising campaigns need to be conducted not only in larger markets, but also to the smallest corners of the nation. Only through broad awareness and participation can any bottom-up method be successful, and this requires a substantial commitment.

V. PRIVATE-PUBLIC PARTNERSHIPS

The final question posed in the NPRM focuses on the success of the ConnectKentucky program and its private-public nature.¹² ConnectKentucky not only established a broadband resource map for the state of Kentucky, but involved local governments and other local entities to help drive demand for broadband access in the state. The lesson learned from the ConnectKentucky approach is that both the “need” and the “demand” for broadband must exist to fuel deployment.

Public-private partnerships allow for some of the cost of data collection to be paid by private parties with a vested interest in creating a complete broadband inventory. These partnerships also encourage providers to build-out once they know what areas are underserved or

¹² See generally, Testimony of Brian R. Mefford, CEO of Connected Nation, Before the U.S. House of Representatives Committee on Energy and Commerce, Subcommittee on Telecommunications and the Internet, (rel. May 17, 2007), available at http://energycommerce.house.gov/cmte_mtgs/110-ti-hrg.051707.Mefford-testimony.pdf. Additional information can be found at www.connectkentucky.com.

unserved. More importantly, the ConnectKentucky approach sends local eCommunity teams into each county to assess broadband needs at the local level and involves local governments allowing them to work toward driving demand for broadband connectivity.¹³

VI. CONCLUSION

The Commission is to be commended for its efforts in evaluating and improving its broadband data collection process. A national broadband policy can only be crafted once we have better, and more reliable, data on the current state of broadband deployment and usage. By issuing this NPRM, the Commission has taken an important first step in ensuring the continued growth and deployment of affordable broadband to all our communities.

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¹³ While ConnectKentucky is making important contributions, some concerns with the program have been raised. For example: (1) its activities revolve around a definition of “broadband” as 256 kbps, which is too low in the current environment; (2) it is heavily influenced by incumbents, whose interests do not always coincide with those of communities that ConnectKentucky serves; and (3) it views community broadband only as a last resort, even when a public broadband system would serve a community’s interests significantly better than any system that a private entity is proposing to develop.