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## EXECUTIVE SUMMARY

The confluence of the recent national stimulus program and the early stages of the development of a national broadband plan have created the need for several federal agencies to define the terms of programs that will establish the metrics for both a national broadband strategy and that will be used to distribute the stimulus funds to qualified applicants across the country. We offer the following proposed definitions for consideration by the Commission as it begins to develop its initial national broadband plan:

“Unserved area” shall be defined for wireline broadband as any location that cannot receive the starting point of the current speed specified in the Basic Broadband Tier 3 service as defined by the Commission (1.5 Mbps downstream).

“Underserved area” shall be defined for wireline broadband as any location that cannot receive at least 20 Mbps downstream, as this is a common estimate of bandwidth required to subscribe to what is commonly referred to as the “triple play” of video, data, and voice service, with the ability to handle high-definition channels. [This is at the top end of the current sixth tier as per the June, 2008 Commission definition.]

“Broadband” shall be defined as communications systems capable of providing high-speed transmission of data, voice and video services over the Internet and other networks to customer locations. [If there is a need to provide various tiers or levels of a broadband definition, it would be possible to use the existing Commission tier system that is based on broadband speeds, but we recommend “starting” at the current second tier.]

In light of our recommended definitions above, we were encouraged to see some of the statements made by Acting Chairman Copps in the recent Report on Rural Broadband Strategy. In specific, we applauded the statement found at paragraph 82 where the issue of Scalability is discussed, and the report states in part:

*. . . As a consequence, we believe that networks deployed in rural areas should not merely be adequate for current bandwidth demands. Instead, they also should be readily upgradeable to meet bandwidth demands of the future. An international comparison suggests significant additional capacity may be necessary. . . . Bandwidth-intensive*

*applications could very easily become the norm in the U.S. – even in rural areas. Technologies that cannot be upgraded easily could make Internet applications less than five years from now look like the dial-up downloads of today.*

We will be curious to see if the full Commission shares such a forward-looking and much-needed vision of the future.

Universal service support from viable and sustainable federal programs is a necessity for rural areas to fully realize the promise of a broadband future. It is also the law. Section 254(b) (3) of the Telecommunications Act of 1996 requires that consumers in rural and high-cost to serve areas should have access to advanced services that are reasonably comparable in both price and quality to the services that are available in urban areas. There are benefits in a national broadband strategy of maximizing the number of broadband residents that will be included.

The unrecovered embedded costs of investment in the rural carriers' network facilities are real costs that will continue to be borne by the rural carriers. If carriers are not permitted to recover these costs, such actions would ultimately be deemed confiscatory and subject to review under the Takings Clause. Commission rules as found at 47 C.F.R. Section 65.1-65.830 require that a rural rate-of-return carrier be permitted the opportunity to earn an authorized rate of return on investment allocated to interstate services.

We respectfully request that as the Commission formulates its national broadband strategy that the circumstances related to meeting the needs of customers in high cost to serve rural areas are carefully evaluated and factored into the final decisions.

## **INTRODUCTION**

With this Notice of Inquiry (NOI), the Commission has taken an important step toward crafting its initial national broadband strategy. We applaud the Commission, both the Commissioners currently in place, and those yet to be confirmed this year, in this challenging endeavor. At paragraph 5, the NOI states that “*our goal must be for every American citizen and every American business to have access to robust broadband services.*” For many citizens living in rural areas, the challenges for this to occur are different than for those that reside in urban population centers.

GVNW Consulting, Inc. (GVNW) is a management consulting firm that provides a wide variety of consulting services, including regulatory and advocacy support on issues such as universal service, intercarrier compensation reform, and strategic planning for communications carriers in rural America.

We respectfully request that as this important national plan is developed that the circumstances related to meeting the needs of customers in high cost to serve rural areas are carefully evaluated and factored into this initial broadband roadmap.

## **SETTING THE PROPER METRICS WILL DETERMINE WHETHER RURAL RESIDENTS ARE PART OF THE BROADBAND SOCIETY**

A lot of attention has been given to where the United States stands relative to other countries with respect to broadband deployment. The Acting Chairman has been a vocal critic of where our country stands with regard to the rest of the world. We respectfully submit that the debate over certain key definitions will have a major impact on this country's progress towards a more robust broadband infrastructure over the next 3-5 years.

### **Definitional Issues**

The confluence of the recent national stimulus program and the early stages of the development of a national broadband plan have created the need for several federal agencies to define the terms of programs that will establish the metrics for a national broadband strategy and that will be used to distribute the stimulus funds to qualified applicants across the country. We offer the following proposed definitions for consideration by the Commission as it begins to develop its initial national broadband plan.

To set the proper context, it is important to remember that almost one year ago, the Commission provided its "current" view with regard to certain of these definitions. On June 12, 2008, the FCC offered its 2008 version of definitions of broadband tiers in WC Docket No. 07-38:

*The FCC has established the following levels of broadband: (1) greater than 200 kbps but less than 768 kbps; (2) equal to or greater than 768 kbps but less than 1.5 mbps; (3) equal to or greater than 1.5 mbps but less than 3.0 mbps; (4) equal to or greater than 3.0 mbps but less than 6.0 mbps; (5) equal to or greater than 6.0 mbps but less than 10.0 mbps; (6) equal to or greater than 10.0 mbps but less than 25.0 mbps; (7) equal to or*

*greater than 25.0 mbps but less than 100.0 mbps; and (8) equal to or greater than 100 mbps.*

One of the biggest challenges in the context of formulating a national broadband strategy is to obtain a consensus on what the proper working definitions of “underserved” and “unserved” areas should be. We believe that there are several points that are germane to developing working definitions for these important terms.

First, if the goal is to develop what may be termed as “point in time” definitions, then it will be necessary to conduct periodic updates so as to avoid setting a definition that becomes quickly outdated. One only need to examine the first two tiers of the FCC definition of broadband levels to understand that many observers question whether these lower tier speeds are legitimately “broadband” on the world telecommunications stage. Many commenters and observers are hopeful that the recently approved stimulus funding will serve to act as a down payment and jumpstart the average U.S. connection speed in the short-term<sup>1</sup>.

Second, given the many and varied pressures on the Commission’s workload, we question whether it is practical to assume that it is achievable to create an effective mechanism to periodically update such key definitions. Accordingly, we recommend that these initial definitions be considered more of a forward-looking definition than a 2009-vintage definition. With the above considerations in mind, we offer the following proposed definitions for consideration by the Commission for the development of its initial national broadband plan:

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<sup>1</sup> Setting a properly calibrated definition for the purpose of dispensing stimulus funding can be an important catalyst for such events to occur.

“Unserved area” shall be defined for wireline broadband as any location that cannot receive the starting point of the current speed specified in the Basic Broadband Tier 3 service as defined by the Commission (1.5 Mbps downstream).

“Underserved area” shall be defined for wireline broadband as any location that cannot receive at least 20 Mbps downstream, as this is a common estimate of bandwidth required to subscribe to what is commonly referred to as the “triple play” of video, data, and voice service, with the ability to handle high-definition channels. [This is at the top end of the current sixth tier as per the June, 2008 Commission definition.]

“Broadband” shall be defined as communications systems capable of providing high-speed transmission of data, voice and video services over the Internet and other networks to customer locations. [If there is a need to provide various tiers or levels of a broadband definition, it would be possible to use the existing Commission tier system<sup>2</sup> that is based on broadband speeds, but we recommend “starting” at the current second tier.]

### **Will the Commission support the steps needed for rural broadband success?**

In light of our recommended definitions above, we were encouraged to see some of the statements<sup>3</sup> made by Acting Chairman Copps in the recent Report on Rural Broadband Strategy. In specific, we applauded the statement found at paragraph 82 where the issue of Scalability is discussed, and the report states in part:

*. . . As a consequence, we believe that networks deployed in rural areas should not merely be adequate for current bandwidth demands. Instead, they also should be readily upgradeable to meet bandwidth demands of the future. An international comparison suggests significant additional capacity may be necessary. . . . Bandwidth-intensive applications could very easily become the norm in the U.S. – even in rural areas. Technologies that cannot be upgraded easily could make Internet applications less than five years from now look like the dial-up downloads of today.*

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<sup>2</sup> At the present time, the Commission has categorized the following levels of broadband: (1) greater than 200 kbps but less than 768 kbps; (2) equal to or greater than 768 kbps but less than 1.5 mbps; (3) equal to or greater than 1.5 mbps but less than 3.0 mbps; (4) equal to or greater than 3.0 mbps but less than 6.0 mbps; (5) equal to or greater than 6.0 mbps but less than 10.0 mbps; (6) equal to or greater than 10.0 mbps but less than 25.0 mbps; (7) equal to or greater than 25.0 mbps but less than 100.0 mbps; and (8) equal to or greater than 100 mbps.

<sup>3</sup> *Bringing Broadband to Rural America: Report on a Rural Broadband Strategy*, Acting Chairman Michael J. Copps, Federal Communications Commission, May 22, 2009 (Rural Broadband Strategy Report/Copps’ Report).

We will be curious to see if the full Commission shares such a forward-looking and much-needed vision of the future.

Within this same Capps' report, there are two references in footnotes that also address some of the key issues in the broadband debate:

*At footnote 173, "...the next-generation broadband applications require functionalities such as, for example, dramatically faster file transfer speeds for both uploads and downloads, and the ability to transmit streaming video."*

This statement reinforces the need for achieving what the Acting Chairman references in his paragraph 82 statement and is supported by GVNW's proposed definitions detailed above.

Another relevant infrastructure issue is highlighted at footnote 176 of the Rural Broadband Strategy Report:

*"...The lack of middle-mile infrastructure is one of the greatest obstacles to building sustainable rural broadband networks. Many middle-mile facilities were originally built by telephone and cable companies for ordinary telecommunications or cable television services. Rural communities are often still reliant upon these antiquated copper telephone and cable infrastructures, which lack the capabilities to deliver high-speed, broadband access."*

In this instant NOI, the Commission raises the "middle-mile" issue at paragraph 17.<sup>4</sup> This is especially important since the service that customers ultimately receive will only be as sound as the weakest part of the entire network. Many rural carriers are located a considerable distance from the nearest Internet peering point.

Some of the causes for this phenomenon are discussed in the next section of these comments that address universal service issues.

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<sup>4</sup> To what extent should our consideration of access to broadband capability take account of the middle mile?

## **UNIVERSAL SERVICE SUPPORT IS STILL A NECESSITY IN RURAL AREAS IN A BROADBAND PARADIGM**

Universal service support from viable and sustainable federal programs is a necessity for rural areas to fully realize the promise of a broadband future. It is also the law. Section 254(b) (3) of the Telecommunications Act of 1996 requires that consumers in rural and high-cost to serve areas should have access to advanced services that are reasonably comparable in both price and quality to the services that are available in urban areas.

There are benefits in a national broadband strategy of maximizing the number of broadband residents that will be included. As noted in the Copps' Report at paragraph 16, *"As with the basic telephone network, the more people that connect to the broadband network, the more value the network has for everyone on it, including initial users. . . . Simply put, broadband buildout to rural Americans promotes and encourages sustained economic development, to the benefit of us all."*

A rural customer being accessible on the broadband network should be one of the foundational aspects of federal universal service policy going forward. This concept is commonly referred to as "the network effect." As explained in the Copps' report in footnote 297, *"this 'network effect' is a reason why the Commission has an explicit universal service program to ensure that people are connected to the telephone network."* The footnote further states that everything else being equal, a customer is more likely to choose a network that serves 80% of the population, instead on one that serves 20% of the population, because the larger network is more likely to serve more people that the customer may want to call.

**The size of the “pipe” may not affect fundamental economic and business case issues in some parts of the country**

Over the past decade, the Commission has relied on the important work of the Rural Task Force to develop rational public policy that considered the needs of rural, high-cost-to-serve regions. With the substantial costs involved in deploying broadband to very rural territories, the question must be asked: “Will all areas be served, and if not, what cost is too high from a public policy perspective?” Some may argue that there are situations where providing very remote or isolated customers with robust wireline broadband services is not feasible from a dollars and cents perspective. We respectfully submit that the Commission should be cautious in settling to a standard in which large numbers of very rural residents are excluded from the broadband world. The public policy benefits of the “network effect” addressed on the previous page should be carefully considered in the setting of a national broadband policy.

The Commission should consider as a part of its national broadband policy the differentiation it used in adopting the Rural Task Force rules for universal service. Simply stated, the prescription to keep communications in rural areas viable<sup>5</sup> is to continue the principles that serve as the foundation of the earlier Rural Task Force rules.

This was the conclusion reached by the Rural Task Force. Rural is still different in 2009, and will still be different in future years<sup>6</sup>. The rural difference is a valid

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<sup>5</sup> Rural areas provide benefits to the entire society through the provision of agricultural, energy and recreational resources that are enjoyed by both urban and rural residents.

<sup>6</sup> In the RTF Report, the concept of the Law of Large Numbers was discussed, explaining the phenomena that with a large number of offices, urban carriers are able to flatten out any discrepancies. In the rural arena, the corollary of the 3D rule (Drastically Different Denominators) is applicable. With fewer customers in the ratesetting equation, the mathematics is different for rural carrier ratesetting.

consideration in developing broadband public policy in 2009<sup>7</sup>. Any viable broadband policy for rural carriers must reflect the diversity of cost between rural and non-rural carriers, and among the subset of rural carriers.

In considering the initial national broadband policy, it is important to note that much of the success to date in rural areas has been based on the foundational cornerstone of federal universal service support. While the latest paper issued by Free Press<sup>8</sup> is but the latest in the recent series of pundits that seek headlines from conducting various forms of “universal service bashing,” the Universal Service Joint Board has recognized the successes<sup>9</sup> of current programs by stating that while universal service “may need adjustments, we recognize its effectiveness in maintaining an essential network for [providers of last resort] POLRs and in deploying broadband.”

We trust the Commission will continue to see the transparency in the arguments of parties such as Free Press.

### **Sustainability Issues**

In the search for a viable national broadband policy, one early policy question is what factors should be given priority in determining which proposals or platforms will encourage sustainable adoption of broadband service.

One obvious factor that we recommend be considered is a demonstrated track record of providing communications services in a sustainable fashion. While some may criticize this as providing an advantage to incumbent providers, the plain fact of the matter is that broadband penetration must be sustained in order for the national

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<sup>7</sup> Rural carriers exist because larger carriers chose not to serve the areas that were most costly to serve. The recent large carrier sales of entire states prove this is still the case in 2009.

<sup>8</sup> *Dismantling Digital Deregulation: Toward a National Broadband Strategy*, Free Press, May, 2009.

<sup>9</sup> Recommended Decision, 22 FCC Rcd 20486, paragraph 30.

broadband strategy to be considered a success. Especially in rural areas, there will be a challenge to provide broadband in a sustained fashion. The situations where only one business case can be made may best be served by the incumbent provider.

In addition, we would encourage that a careful review be given to proposals from the large national carriers that to this point have ignored substantial portions of their service territory. We believe that an additional burden of proof is required for these providers to demonstrate that broadband is “sustainable” when to this point they have virtually ignored deploying the necessary facilities.

### **There is unfinished business which will impact the transition to broadband**

The last several years have seen a number of key regulatory issues elude a consensus settlement, most notably in the area of intercarrier compensation and access charge reform. For these comments in this NOI, we will concentrate on several specific issues, including: whether broadband should be supported as a universal service; Middle-mile/rural transport issues; and the need for a restructure mechanism for rural carriers.

### **Should broadband be included in supported services**

As the Commission develops its initial national broadband plan, a threshold question to be addressed is as follows: Should broadband be a supported service?

While we expect that comments filed in this NOI will indicate that such a reclassification is inevitable, if the Commission makes a decision to include broadband as a supported service, we respectfully suggest that it be done in a manner that includes a calculation of the full cost including maintaining the broadband network. It is patently

obvious that the current high-cost program is not funded at a level to support the ubiquitous deployment of broadband in all rural service territories.

#### Middle-mile issues

In golf, it is essential to make good shots from tee to green. A good drive and a good putt are wasted without a good middle shot from the fairway. Thus is also the case with respect to broadband delivery. The portion of the network in the middle is as important as the facilities on either end. This “middle mile” or rural transport cost issue was addressed in both the Coppins’ Report and was mentioned previously by the Joint Board.

In the Coppins’ Report, paragraph 114 observes that many rural broadband networks are located considerable distances from Internet backbone nodes, creating a situation where the transport costs are “*significantly higher than for networks in other areas.*” In the Joint Board’s Recommended Decision two years ago, the Joint Board observed that support for such transport costs does not exist, and that it is harmful from a public policy perspective to ignore such costs. We respectfully suggest that the time is at hand to stop ignoring these costs that will impede the transition to broadband for rural areas.

#### Restructure mechanism

One of the most elusive public policy objectives of the last decade has been the crafting of a consensus solution to the intercarrier compensation conundrum. While we expect parties such as AT&T to renew their proposals for the elimination<sup>10</sup> of access

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<sup>10</sup> AT&T has previously supported a \$0.0007 rate and has indicated their intent to support a rate of zero.

charge compensation, one simple and plain fact remains with respect to rural carrier service areas. Such a proposal will not work.

Establishing a zero rate for originating access creates several public policy consequences, as neither the IXC nor the customer has a good reason to limit its use of the local circuit. The deleterative consequences of such an approach include the creation of new forms of arbitrage, as the IXCs (or the portion of the acquiring company that uses those assets) are able to use the network for free. By requiring all users of the network, not just the end-user subscribers to pay for use of the network, resources are allocated efficiently as demand will be driven based on the cost of using the network. This concept is supported by a 2004 NASUCA statement<sup>11</sup> that any plan for intercarrier compensation reform must recognize that a carrier that “originates, transits or terminates traffic on the network of another carrier imposes costs on that carrier. As a result, the cost of intercarrier compensation cannot be zero.”

The unrecovered embedded costs of investment in the rural carriers’ network facilities are real costs that will continue to be borne by the rural carriers. If carriers are not permitted to recover these costs, such actions would ultimately be deemed confiscatory and subject to review under the Takings Clause. Commission rules as found at 47 C.F.R. Section 65.1-65.830 require that a rural rate-of-return carrier be permitted the opportunity to earn an authorized rate of return on investment allocated to interstate access services.

Established precedent in this regard may be found in Duquesne Light Co. v. Barasch, 488 U.S. 299, 308-10 (1989); and FPC v. Hope Natural Gas Co., 320 U.S.

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<sup>11</sup> National Association of State Utility Consumer Advocates (NASUCA) Intercarrier Compensation Proposal, CC Docket No. 01-92, filed December 14, 2004, page 1.

591,602 (1944). Any changes to access rates that result in revenues that do not recover total costs associated with past investment decisions reviewed by regulators do not comport to the intent of the Telecommunications Act of 1996.

Any ultimate Commission decision that would prevent a rural carrier from a compensatory return would violate the carrier's due process under the law and undermine its legitimate, investment-backed expectations. Such interference with carrier property rights in a manner that undermines such expectations constitutes a taking<sup>12</sup>.

An important component of any viable intercarrier compensation reform scheme is that the plan supports the creation of a non-portable Restructure Mechanism (RM) that is designed to retain access revenues that are proposed to be displaced when intrastate intercarrier compensation rate levels are reduced to interstate levels<sup>13</sup>. For rural carriers, these revenues are vital to the provision of maintenance of plant facilities and the upgrading of network functionalities in rural areas, as well as the provisioning of universally available basic and advanced (e.g., broadband-based) services.

Rural infrastructure also supports wireless networks and VoIP services, as detailed in a March, 2006 study sponsored by the Foundation for Rural Service. Current wireless, VoIP, and satellite networks require a connection to land line infrastructure to provide full functionality. This network reality is documented in the white paper *Wireless*

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<sup>12</sup> Penn Central Transp. Co. v. New York City, 438 U.S. 104, 124 (1978).

<sup>13</sup> In recent proposals such as the Missoula Plan, Track 3 carriers would have made the largest rate reductions of all carriers if the Missoula Plan proposal had been enacted. Thus, previous commenters such as Time Warner Cable appear to have ignored this fact when they incorrectly asserted that there is no basis for rate-of-return carriers to maintain their existing revenue streams and thereby earn a compensatory rate-of-return. Other commenters such as Alltel seem to be continuing the legacy of their acquired company Western Wireless by attempting to shift the debate in this proceeding to one of whether rate-of-return regulation should continue. The Commission should ignore any future assertions of this nature.

*Needs Wires: The Vital Role of Rural Networks in Completing the Call*, published by the Foundation for Rural Service in March, 2006. This paper states in part:

*Without thoughtful consideration by policymakers of the challenges of providing wireless services in rural America, as well as the dependence of wireless services on wireline networks, portions of the nation are likely to remain underserved . . . Most importantly, one must recognize that without the underlying wireline network, wireless networks could not exist in their current form. In spite of this obvious fact, large wireless carriers and policymakers alike continue to pursue practices and policies that will in fact undermine the critical wireline network. While discussions on how to modify reciprocal compensation, access charges, and universal service continue, attention must be placed on ensuring these mechanisms are capable of maintaining the fiscal health of that wireline network.*

Simply stated, without a sustainable RM, any attempts at intercarrier compensation reform will not work for rural carriers<sup>14</sup>. Without the reasonable prospect of an opportunity to recover infrastructure costs, investment will not continue to be deployed<sup>15</sup> in many sparsely populated and high-cost to serve areas. We respectfully recommend that the Commission be prepared to recognize the RM as an access element under Section 201 of the Communications Act if it decides to enact intercarrier compensation reform.

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<sup>14</sup> Rural carriers realize revenue from end users, intercarrier compensation for use of their network facilities, and the universal service funding mechanisms. Balanced cost recovery among these three revenue streams is prerequisite to the Communications Act mandate that end-user rates remain reasonable and comparable for rural customers to their urban counterparts.

<sup>15</sup> Opponents of the RM also appear to conveniently ignore the carrier of last resort/provider of last resort responsibilities that reside with incumbent local exchange carriers that stand ready to serve in areas where competitors are not required to deploy infrastructure or provide reliable communications services.

GVNW Consulting, Inc.  
Comments in GN Docket No. 09-51  
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Respectfully submitted,

*Submitted via ECFS*

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