

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

In the Matter of)
)
International Comparison and Consumer Survey Requirements in the Broadband Data Improvement Act) GN Docket No. 09-47
)
A National Broadband Plan for Our Future) GN Docket No. 09-51
)
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, as Amended by the Broadband Data Improvement Act) GN Docket No. 09-137
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TO: The Commission)

COMMENTS – NBP PUBLIC NOTICE #11

The Western Telecommunications Alliance (“WTA”), by its attorney, submits Comments in response to the Commission’s Public Notice (*Comment Sought on Impact of Middle and Second Mile Access on Broadband Availability and Deployment*), GN Docket Nos. 09-47, 09-51 and 09-137, DA 09-2186, released October 8, 2009.

WTA’s dominant concern is with the availability and pricing of the Middle Mile connectivity that its rural telephone company members must obtain from unrelated carriers. Whereas WTA members are investing substantial sums and working hard to deploy higher and higher speed broadband facilities within their own “last mile” and inter-office networks, many members are becoming increasingly concerned: (a) that they will not be able to obtain adequate and sufficient Middle Mile connectivity from other carriers to transport the broadband traffic of their rural customers to and from the Internet at the higher and higher data speeds required to provide the broadband services demanded by those customers; and/or (b) that, even if it is

available, such higher-capacity Middle Mile connectivity will become so expensive that they will not be able to continue to provide the broadband services sought by their rural customers at rates that are both affordable and reasonably comparable to those charged in urban areas.

The Western Telecommunications Alliance

The Western Telecommunications Alliance is a trade association that represents more than 250 rural incumbent local exchange carriers (“RLECs”) operating within the twenty-four states located west of the Mississippi River, including Alaska and Hawaii.

The conspicuous characteristic of WTA’s RLEC members (as well as of the more than 1,000 RLECs nationwide) is that they are highly diverse, and not effectively subjected to general models or “one size fits all” rules. Most WTA members are small companies and cooperatives that were developed at separate times and under a variety of circumstances to serve differing remote and sparsely populated rural areas that larger carriers did not want because the per-customer costs of constructing, operating and maintaining rural networks were then (and remain today) much higher than those in urban and suburban America. The service areas of WTA members range from sparsely populated farming and ranching regions from the Canadian to the Mexican border; to rugged and isolated mountain, desert and mining areas; to Native American reservations, Arctic villages and the Hawaiian Home Lands. Most members serve fewer than 3,000 access lines in the aggregate, and fewer than 500 access lines per exchange.

WTA members have made considerable efforts to install broadband inter-office and “last mile” (in the West, this is more accurately characterized as “last 20-to-50 mile”) facilities and to make advanced services available to their rural customers. The typical WTA member presently offers broadband service to 70 percent or more of its customers. The speeds of these predominately digital subscriber line (“DSL”) and hybrid fiber-DSL services range from 200-to-

500 kilobits per second (“kbps”) to more than 10 megabits per second (“Mbps”). Many WTA members have been deploying fiber optic facilities further and further out into their distribution networks in order to extend the range of their DSL services, and some are beginning to offer fiber-to-the-home (“FTTH”) service as they construct “green field” facilities to serve new developments and as they replace degrading copper loops in existing service areas.

Definition of “Middle Mile”

WTA will focus herein upon “Middle Mile” connectivity, which it defines as those facilities (generally, T1, DS3, OC3 and OC12 lines or microwave routes) of unrelated third party carriers: (a) that transport the traffic of RLEC customers to and from the Internet; and (b) that extend from RLEC points of interconnection to the applicable Internet gateways. These facilities (some of which extend for 40-to-120 miles or more in remote portions of Western states) are of great significance to both RLECs and regulators because: (a) they are essential to the provision of broadband services by RLECs to their rural customers at speeds and prices that are reasonably comparable to those in urban areas; but (b) are largely outside the control of the RLECs that must rely upon them.

WTA notes that its members have made substantial investments to upgrade the inter-office facilities within their local networks that, among other things, transport the Internet-bound traffic of their customers between their end offices and their points of interconnection with their “Middle Mile” carriers. It is not clear to WTA whether these inter-office facilities are included within the scope of what the Public Notice refers to as “Second Mile” facilities. Given that RLEC networks were constructed at different times and under different circumstances, these inter-office facilities can be very different for different RLECs, and are not readily modeled or generalized. Where they are constructed with fiber, their installation costs can range from

\$24,000 to \$35,000 per mile (or for as much as \$50,000 to \$60,000 per mile in Alaska). At the present time, the costs of these inter-office facilities are recovered primarily from interstate and intrastate access charges

Availability of “Middle Mile” Connectivity

Some RLECs participate in joint ventures such as statewide equal access networks and regional fiber transport networks that furnish some or all of their Middle Mile connectivity for broadband services. These ventures give participating RLECs some control over the capacity of their Middle Mile connections and over the prices they pay for Middle Mile transport.

However, most RLECs have not had the luck or opportunity to participate in state or regional fiber networks. Rather, they must rely upon Regional Bell Operating Company (“RBOC”) or other unrelated third party networks to transport their broadband traffic to and from the Internet. This lack of control by isolated RLECs over the capacity, upgrade, maintenance and pricing of essential Middle Mile facilities is going to lead to increasing bottlenecks and related service problems as broadband services expand and broadband speeds increase.

In the rural West, many RLECs serve isolated areas that are located 40-to-120 miles or so from the nearest Internet gateway. These RLECs are predominately small companies that simply do not have the financial resources or access to sufficient capital to acquire the requisite rights-of-way and to construct their own fiber or microwave Middle Mile facilities most or all of the way to the closest Internet gateway. As a result, they have no choice but to use whatever Middle Mile facilities are available. Such facilities are often comprised of a single low capacity route owned and operated by an unrelated entity.

At the present time, many Western RLECs are forced to rely upon aging T1 and DS3 facilities of RBOCs or mid-sized carriers for their Middle Mile transport. These older facilities

are already creating bottlenecks that prevent the RLECs from providing their rural customers with broadband services at speeds that otherwise could be supported by the fiber-DSL and FTTH facilities deployed on the RLEC networks. For example, one WTA member in the Upper Northwest has upgraded its fiber-DSL network so that it is capable of delivering broadband services to its rural customers at speeds up to 12.5 Mbps, but is prevented from doing so at most times because it cannot obtain more than 10-to-20 Mbps of Middle Mile transport capacity from one of the unrelated carriers along the only viable route between the WTA member and its closest Internet gateway.

WTA believes that the availability of, and the access of RLECs to, sufficient Middle Mile capacity is going to become an increasingly serious problem as broadband services and speeds evolve. WTA members report that their Middle Mile capacity needs are increasing rapidly by 33-to-50 percent or more per year. This pace of increase is likely to speed up significantly within the future as gaming and video¹ demands increase. The RBOC and other third party entities that own and operate the transport routes relied upon by many RLECs have little incentive to make the substantial investments necessary to deploy more fiber and to upgrade their existing T1 and DS3 Middle Mile facilities to OC3 or OC12 capacities. Hence, as broadband services and service volumes continue to increase, RLECs dependent upon bottleneck T1 and DS3 Middle Mile facilities are going to become increasingly unable to satisfy the broadband service needs of their rural customers.

In many instances, the only practicable solution is for the Commission or state commissions to implement legal requirements and/or provide sufficient economic incentives to motivate existing carriers to upgrade their Middle Mile networks. Unless a mechanism is

¹ For example, ultra high definition television services already on the drawing board may require broadband speeds of 120 Mbps or more.

developed to spur Middle Mile carriers to invest in and deploy OCn facilities as evolving broadband services require more and more Middle Mile bandwidth, RLECs and other rural service providers will not be able to offer their rural customers broadband services reasonably comparable to those available in urban areas no matter how much they invest in and upgrade their own “last mile” networks.

Pricing of “Middle Mile” Connectivity

In response to the Public Notice herein, WTA informally surveyed its RLEC members and found that those responding paid anywhere from \$45 per Megabit per month to \$600 per Megabit per month for Middle Mile connectivity in the continental United States. A majority of WTA respondents appear to pay within the \$100-to-\$200 range per Megabit per month. In Alaska and Hawaii, the cost of Middle Mile connectivity is even more expensive, with one WTA member reporting costs of approximately \$8,000 per Megabit per month.

It appears that geography, terrain, demographics and distance to the Internet gateway all have some influence on price. Some WTA members report that the monthly price per Megabit of Middle Mile connectivity decreases somewhat as larger capacities are purchased, and that prices are impacted by whether the purchased amount of capacity lies in a DS3, OC3 or OC12 band. Other members report that prices appear to have decreased somewhat in those relatively rare cases where two or more carriers offer competing Middle Mile service in a rural area. On the whole, WTA members believe that Middle Mile prices are predominately market driven, and are generally set at the highest level that RLECs and other service providers will bear.

Middle Mile connectivity appears to constitute about 20-to-40 percent of the broadband service costs of the typical WTA member at the present time. It is expected that such Middle Mile transport costs – at least in aggregate dollar terms – will increase significantly as broadband

service demands evolve and expand. It is also expected that the Middle Mile transport costs will be much higher – both in absolute dollars and as a percentage of total costs – for RLECs and other rural broadband service providers than for their urban counterparts.

As the current telecommunications network is transformed into a packet-switched broadband network, sufficient and predictable federal High Cost support is going to be needed to help RLECs and other small rural carriers recover the above-average costs of Middle Mile connectivity if they are going to be able to charge monthly broadband service rates to their rural customers that are affordable and reasonably comparable to broadband service rates charged in urban areas. An RLEC simply cannot bear Middle Mile transport costs of \$100 or more per Megabit per month (much less, costs of \$500 or \$600 or \$8,000 per Megabit per month) without either recovering the “above average” portion of these costs from a federal High Cost support program or charging its rural customers monthly rates far in excess of the statutory “affordable” and “reasonably comparable” criteria.

Finally, WTA notes that increasing amounts of broadband traffic are being generated not consciously by customers, but rather automatically by web browser, anti-virus and other software programs that are installed in customer computers and that provide periodic or continuous feedback to vendors or monitoring centers. As this type of automatic and involuntary feedback traffic increases, it will impose significant additional Middle Mile transport costs upon RLECs and other rural carriers.

Conclusion

WTA believes that the most pressing and complex Middle Mile problem is the absence or uncertainty of sufficient Middle Mile transport capacity for the many small RLECs that must depend upon unrelated entities for their Middle Mile connectivity. Whereas the Commission has

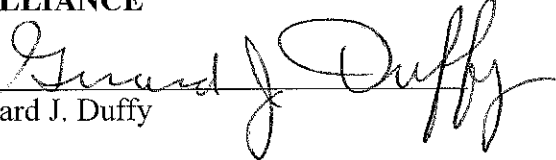
authority under Section 201(a) of the Communications Act to require RBOCs and other interstate common carriers to furnish communications services upon reasonable request for them, it is not clear whether Section 201(a) and its existing implementing rules and policies presently require Middle Mile carriers to upgrade their facilities to provide OCn facilities as increased Middle Mile capacity is needed. WTA believes that the Commission's National Broadband Plan should determine what construction requirements and investment incentives are needed to ensure that RLECs and other rural broadband providers are able to obtain adequate and sufficient Middle Mile connectivity to support and sustain rural broadband services reasonably comparable to those available in urban areas.

The continuation of sufficient and predictable federal High Cost support mechanisms and the adaptation of them to the broadband network is the most reasonable and efficient way to deal with above-average "Middle Mile" costs in rural areas. Such support will enable rural customers to receive broadband services at rates that are both affordable and reasonably comparable to those prevailing in urban areas.

Blooston, Mordkofsky, Dickens,
Duffy & Prendergast, LLP
2120 L Street, NW (Suite 300)
Washington, DC 20037
Phone: (202) 659-0830
Email: gjd@bloostonlaw.com

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Respectfully submitted,
**WESTERN TELECOMMUNICATIONS
ALLIANCE**

By 
Gerard J. Duffy

Its Attorney