

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of )  
 )  
Reexamination of Roaming Obligations of ) WT Docket No. 05-265  
Commercial Mobile Radio Service Providers )  
and Other Providers of Mobile Data Services )

**COMMENTS OF ACS WIRELESS, INC.**

ACS Wireless, Inc. (“ACSW”) submits these comments in response to the Federal Communication Commission’s (“FCC’s”) Second Further Notice of Proposed Rulemaking (“Second Further NPRM” or “NPRM”), issued in the above-referenced proceeding on April 21, 2010.

**I. INTRODUCTION AND SUMMARY**

Based on ACSW’s experience, the wireless data market has become far more conducive to data roaming arrangements negotiated privately between carriers. Five years ago, ACSW asked the FCC to institute rules that would promote automatic mobile data roaming throughout the U.S. because, at that time, market forces had failed to ensure that customers could access mobile data services in locations outside their carriers’ coverage area.<sup>1</sup>

The market has evolved rapidly over the last five years. During that time, ACSW has negotiated numerous roaming agreements with larger and smaller carriers. Not once has a larger provider refused to negotiate a data roaming arrangement with ACSW or to include mobile data in the final agreement (assuming it was technically feasible), even though ACSW is a Tier III wireless carrier. In fact, the wireless market consolidation discussed in the NPRM has actually made it easier to negotiate roaming arrangements because there are fewer peering points to

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<sup>1</sup> Comments of ACS Wireless, Inc. WT Docket No. 05-265, dated Nov. 28, 2005.

address in agreements. IP-based data networks are more robust and have eased implementation of data roaming. ACSW's experience demonstrates that it is not necessary for the FCC to impose a mandatory data roaming requirement in these market conditions.

ACSW's agreements include both voice and data roaming. ACSW offers EvDO roaming to a number of carriers outside Alaska including Verizon and Canadian companies. It offers 1xRTT data roaming to other Alaskan wireless providers where their coverage area overlaps with ACSW's. In those cases, ACSW preserves EvDO specially for its own customers, as a means to distinguish its services from its competitors' offerings in the Alaska marketplace, to prioritize scarce backhaul capacity, and to retain some opportunity to recoup its significant investment in Alaska advanced data networks.

Imposing a mandatory data roaming requirement will impede the FCC's efforts to encourage advanced wireless network deployment, particularly for areas such as rural Alaska which are the most costly to serve and pose the greatest economic risk. Providers will be discouraged from making capital investments in rural areas if they are forced to let competitors use those new facilities and take their highest value products for their own customers. ACSW took significant business risk to deploy its advanced wireless network in rural locations, particularly since EvDO requires many more circuits to backhaul traffic, and satellite and microwave backhaul circuits to rural Alaska locations are far more scarce and expensive. Backhaul facilities to rural locations are already constrained and ACSW likely will not be able to guarantee sufficient backhaul capacity for its own customers if it is required to take all carriers' roaming traffic.

## **II. BACKGROUND**

ACSW is a Tier III regional wireless carrier that provides service across vast areas of

Alaska. ACSW launched the first commercially available 3G wireless data network in Alaska in 2004, a CDMA2000 1xEvDO network. ACSW and other smaller wireless carriers compete in Alaska against GCI/Digitel and nationwide carrier AT&T Wireless.

ACSW has over 240 cell sites located in urban and rural areas from Deadhorse on the North Slope to Ketchikan in Southeast Alaska.<sup>2</sup> ACSW's network supports 1xRTT wireless data service in all locations where it provides voice service. ACSW has invested heavily to expand its EvDO wireless broadband service, which will be available on 50% of its wireless sites by the end of Q3 2010. ACSW currently offers EvDO in Alaska's main urban areas (Anchorage, Fairbanks, Juneau, Kenai and the Matanuska Valley) as well as in smaller communities including Deadhorse and Prudhoe Bay locations on the North Slope, Whittier, Thorne Bay and Kodiak.<sup>3</sup> It has added eight EvDO sites in Southeast Alaska this year.

Because of Alaska's vast size and geography, providers generally use satellite or microwave facilities for backhaul in areas beyond the Railbelt (the Anchorage-Fairbanks corridor). Microwave facilities provide backhaul to a number of Southeast locations and along the "Haul Road" from Fairbanks to Prudhoe Bay. Providers lease circuits on AT&T's satellite to reach other far-away locations, including small communities in Northwest Alaska, in Eastern Interior Alaska, along the North Slope, and in more remote areas of Southeast Alaska.

### **III. DISCUSSION**

#### **A. Mandating Data Roaming will Discourage Providers From Investing in Advanced Data Networks in Rural Areas**

At paragraphs 72-76 of the Second Further NPRM, the FCC seeks comment on the importance of roaming for data service and what impact mandating data roaming might have on competitive entry, network deployment and providers' incentives to invest.

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<sup>2</sup> See Exhibit 1.

<sup>3</sup> Whittier, population 1,855, Thorne Bay, population 486; Kodiak, population 6,228.

Generally, it is in providers' interest to negotiate roaming arrangements that will give their customers access to data networks in areas where they cannot provide coverage themselves. Based on ACSW's experience, providers freely negotiate their own data roaming arrangements for at least basic levels of data services and these commercial relationships encourage competition.

However, mandating data roaming will discourage providers from investing in and deploying advanced data networks in more rural areas. Deploying advanced data services is at best marginally economic in rural and Bush Alaska. The small customer base in these rural areas is hardly sufficient to support providers' investments or generate revenue sufficient to cover the extremely high backhaul costs required for advanced data services. Construction of mobile infrastructure in Bush Alaska often costs twice as much as construction in the more urban areas of the State due to the high cost of transporting equipment to the site, the high costs of mobilizing and demobilizing the labor force, the high costs of engineering and constructing plant to operate in the rugged terrain and harsh climate, and other factors. Generally, the revenue opportunity at these sites is much lower because the sites serve so few customers.

If the FCC mandates data roaming, a provider that makes advanced wireless network investments will be forced to deal immediately with easy competition on its highest value service before having an opportunity to build its own customer base. No provider will be able to justify deployment because the already limited subscriber pool will be further reduced as customers are lost to competitors that can instantly offer roaming without having made any investment. No provider will be confident about recovering its investment, and therefore no provider will want to be the first to invest. It will be much less risky to wait until another provider makes the investment, and then pay roaming charges to piggy back on the newly-deployed network.

The flaw in this scheme is obvious. If no provider goes first, no investment will be made at all. Mandatory data roaming will result in less, not more, mobile broadband investment in rural America. The more rural the area, the more risk, and therefore the less investment will be made.

Additionally, a data roaming requirement will impose costs on mobile broadband providers by forcing them to modify their networks and lease more backhaul capacity to absorb increased data roaming traffic. Providers will not be able to predict how much roaming traffic they will be required to carry, causing even greater uncertainty. Thus, a mandatory roaming requirement will significantly add to a provider's investment cost and risk.

The FCC should not assume that it will achieve the same policy goals by applying voice roaming regulatory rules to data roaming. Providers' investment decisions are entirely different for voice and data networks. Providers view wireless voice service more like a commodity. Voice service is almost ubiquitous and in today's market, different providers offer fairly comparable voice service.

Investment incentives are different for data networks, which have far greater market value. Providers use their data capabilities to distinguish themselves in the marketplace. In many cases, customers choose their provider based on its data network speed, capabilities, reliability and applications.

All this comes at a much higher price, however, data networks require a significantly higher capital investment and carrying cost because providers must build or lease a much larger "pipe" to the cell site. For example, for some of ACSW's cell sites, part of a T-1 line can carry all voice traffic. At the same site, however, ACSW may need four to six T-1 lines for EvDO data backhaul. Backhaul can be very expensive in Alaska because providers use satellites to

relay mobile traffic in and out of some rural areas. At \$6,000 - \$9,000 per month for satellite T-1, buying six T-1 lines is far more expensive per month than buying a partial T-1 for voice. Also, at \$3,000 - \$4,000 per month, microwave circuits for backhaul are expensive, particularly since four or more may have to be purchased to serve one small community.<sup>4</sup> Providers have a greater interest to invest in data networks because of their higher value, but that investment is more costly.

If the FCC requires automatic data roaming, the first-in provider will lose its ability to market its data network's capability as a unique product. ACSW wholesales all its services to carriers whose coverage areas do not include Alaska. However, it is not in the business to wholesale its highest market value service to Alaskan competitors. If ACSW cannot pursue the business model it has developed for the Alaska market, it cannot justify the cost and risk of expanding service to more areas in rural Alaska.

**B. ACSW Has Entered Multiple Roaming Agreements on its own with Smaller and Larger Providers, and Has Never Been Refused an Agreement**

At paragraphs 77-79 of the Second Further NPRM, the FCC seeks data that will help it assess the availability of roaming arrangements for non-interconnected mobile data services. ACSW's success in this area demonstrates that a functioning market is in place and that there is no need for FCC intervention. In the five years since it last filed comments in this proceeding, ACSW has found that it can enter commercial roaming arrangements freely, on its own, without the need for FCC rules imposing a data roaming obligation.

Even as a smaller carrier, ACSW has not felt disadvantaged in the least in entering commercial roaming relationships in the last several years. It has never been refused an agreement where the arrangement was technically feasible. Market consolidation has made

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<sup>4</sup> In contrast, providers can buy an OC-48 (48 DS-3s x 28 T-1's or 1354 T-1's) for \$8,000 a month to backhaul traffic from Hillsboro, Oregon to Seattle, Washington.

negotiations even easier, as agreements now need to address fewer peering points. Data networks are more robust, making interface easier. In the last year alone, ACSW has negotiated data roaming agreements with eight different small wireless carriers in Kentucky, Wisconsin, Texas, Montana, California and Illinois.

ACSW has also had no difficulty reaching mobile data roaming agreements with the large and mid-sized national carriers. ACSW has EVDO roaming arrangements in place with national wireless service providers in the United States and Canada.

ACSW is also currently in negotiations with US Cellular and other Lower 48 carriers to establish mobile data roaming capabilities. Based on all these commercial relationships, ACSW can offer its customers virtually ubiquitous coverage across the United States.<sup>5</sup>

ACSW's general practice is to enter basic data roaming arrangements with any requesting provider if the carriers can reach commercially reasonable terms and the networks and interfaces are technically compatible. ACSW has agreements with other providers (MTA Wireless and Copper Valley Wireless) for basic data roaming throughout the ACSW coverage area. ACSW has not offered competitors advanced data roaming in areas where their coverage overlaps, so that it can market EvDO as a special feature to its own customers and give them first priority for constrained backhaul capacity.

### **C. Mandatory Data Roaming will Exacerbate Already Constrained Backhaul Capacity in Alaska**

At paragraphs 80-84 of the Second Further NPRM, the FCC generally seeks comment on whether roaming obligations present issues regarding network capacity, integrity or security. At paragraphs 80-81, the FCC also seeks comment on automatic roaming's effect on the capacity of data networks and the ability of providers to offer full access to their own customers.

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<sup>5</sup> ACSW also has roaming agreements with carriers in Canada, Asia and Mexico, in place or in progress.

If the FCC imposes automatic mobile data roaming, it will impair ACSW's ability to offer advanced data service to its own customers. Right now, backhaul capacity is scarce or already full to serve communities beyond the Railbelt. Providers often rely on third parties such as GCI or AT&T for backhaul so that they do not have to construct their own backhaul facilities for smaller communities. In these cases, providers are dependent on other carriers' microwave facilities or satellite for backhaul from rural locations.

ACSW has already experienced capacity constraints that have limited its ability to deploy EvDO. For example, ACSW has installed EvDO equipment and facilities in eight cell sites in Southeast Alaska. Microwave backhaul capacity required to support these sites is very scarce.<sup>6</sup> Capacity constraints create a disincentive to deploy EvDO or Long Term Evolution ("LTE")<sup>7</sup> networks in rural locations because ACSW cannot predict whether facilities will be available to backhaul the traffic.

If ACSW is required to provide data roaming to all requesting carriers, its capacity constraints will become even worse. ACSW is concerned that it may not have backhaul bandwidth to support its own customers fully. It is unclear how ACSW could differentiate its own traffic to ensure that its own customers' backhaul needs are met first, or even if it could, whether such traffic management would be permissible under the FCC's net neutrality principles.

Also, if the FCC imposes mandatory data roaming, ACSW may not be able to meet the terms of its existing roaming agreements. ACSW has guaranteed a specific level of network performance to other carriers in its roaming agreements, such as with Verizon. It makes business

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<sup>6</sup> Alaska Power and Telephone has recently constructed fiber in parts of Southeast Alaska, but it is unclear how much capacity will be added, whether it will be available to third parties and, if so, what the cost will be.

<sup>7</sup> ACSW has not been able to develop a plan to provide LTE to its own customers because of capacity constraints.

decisions about how much roaming traffic to take from other providers, based on backhaul capacity that will be available. If it is forced to take any providers' roaming traffic, the extra traffic load may prevent it from supplying the level of backhaul it has already guaranteed to its current roaming partners.

#### **IV. CONCLUSION**

Market forces are working well to allow providers to enter commercial data roaming requirements without regulatory intervention. If the FCC wants rural Alaska to have broadband data service, it should adopt policies that encourage the extension of advanced data networks to rural areas without making the investment economically impractical.

Dated this 14<sup>th</sup> day of June, 2010.

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**EXHIBIT 1**  
**ACS COVERAGE**  
**MAP**



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- **SECURE:** Your traffic is isolated from the public Internet, so your data is protected from security threats.
- **RELIABLE:** Our network is designed to protect your data in case of emergency; we can automatically reroute traffic to other locations to ensure business continuity.
- **SCALABLE:** Our network allows you to converge all of your voice, video, Internet and data needs and by defining priorities, you can scale the network to fit your needs so mission critical applications will run ahead of less sensitive ones.
- **QUALITY OF SERVICE:** ACS offers guaranteed end-to-end quality of services levels.

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\* Requires 3G coverage