

NTCA 2002 WIRELESS SURVEY REPORT

October 2002

DISCLAIMER: Data from the survey have been presented as reported.

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EXECUTIVE SUMMARY

In late summer of 2002, the National Telecommunications Cooperative Association (NTCA) surveyed its members on a wide variety of topics pertaining to their participation in wireless markets. NTCA is a national association of more than 550 local exchange carriers in 44 states that provide service primarily in rural areas. Approximately half of NTCA's members are organized as cooperatives and the other half are commercial companies.

The survey request was distributed by email to approximately 494 NTCA member companies who are in NTCA's email database; 148 member companies (30%) responded. Most survey respondents (53%) currently hold an interest in a wireless license; 72% of those who do not would like to have a wireless license.

The most popular mobile wireless services offered by survey respondents are voice mail, caller ID, family plans and monthly packages that include free long distance.

The majority of survey respondents—84%—indicated that the ability to offer wireless services affects their standing in their community as a telecommunications carrier of choice. Almost three-fourths said that wireless was important to their company's bottom line. Despite these responses, one-half said that they have no plans to participate in future spectrum auctions because they cannot compete with large carriers at auction. The scope of the auctions has covered large areas, which results in high costs for spectrum and large areas requiring wireless deployment.

Survey respondents have loyal wireless customers: 55% are retaining greater than 90% annually, and 85% are experiencing annual customer retention of greater than 75%.

Commercial mobile radio service (CMRS) is currently the single largest use of wireless with 63% of those offering wireless offering CMRS either with personal communication service (PCS) (37%) or cellular (35%). Less than half—45%—indicate they are able to offer a wireless package that is competitive with the national carriers, and 94% find it hard to compete with promotions, such as free long distance, being offered by national carriers.

Over the course of the twelve months preceding the survey, 20% of wireless providers have either acquired spectrum or made arrangements for the utilization of previously acquired spectrum, and 15% have entered into negotiations for the acquisition of spectrum.

Unlicensed spectrum is employed by 40% of all survey respondents to provide broadband Internet, microwave, dial up, wide area network (WAN), and digital subscriber line

(DSL) service. However, difficulties associated with the use of unlicensed spectrum, specifically interference/congestion and unsatisfactory equipment reliability, limit its usefulness.

Fixed wireless services, including broadband Internet and voice, are offered by 32% of those survey respondents holding a wireless license. Respondents have primarily used unlicensed spectrum to deliver fixed wireless services: 29% are utilizing the unlicensed 2.4 GHz spectrum, and 14% unlicensed 5 GHz spectrum. Only 18% use PCS and 15% use MMDS for fixed services.

Financing wireless operations is becoming an increasingly bigger challenge, even for those currently providing wireless service. This year, 84% of those with experience obtaining financing described the process as “somewhat difficult” to “virtually impossible,” a significant increase from the 56% in last year’s survey who responded the same way.

Among those without a wireless license, 68% would enter into a partitioning agreement with a license holder if given the opportunity; 35% indicated they would be willing to enter into a leasing agreement. Only 6% of license holders indicated that they had ever entered into a partitioning agreement with a non-license holder.

Overall, a significant portion of NTCA members offer wireless services despite unfavorable auction conditions that have limited access to spectrum. The high retention rates experienced for wireless services indicates that these wireless offerings are delivering services that are valued by their customers. The large amount of unlicensed spectrum use, despite special problems associated with using this spectrum, may indicate a strong desire by our members to satisfy customer demand with wireless services. Taken as a whole, the survey indicates that wireless services are important to our carriers and their customers.

INTRODUCTION

In the summer of 2002, The National Telecommunications Cooperative Association (NTCA) surveyed its members on their wireless activities. NTCA is a national association of more than 550 local exchange carriers in 44 states that provide service primarily in rural areas. All NTCA members are small carriers that are “rural telephone companies” as defined in the Telecommunications Act of 1996 (“Act”). While some offer local exchange service to as few as 44 lines and others to as many as 50,000, nearly 50% of NTCA members have between 1,000 and 5,000 lines. Population density in most member service areas is in the 1 to 5 customers per square mile range. Approximately half of NTCA’s members are organized as cooperatives and the other half are commercial companies.

OVERVIEW OF SURVEY

The 2002 Wireless Survey differed from the 2001 Survey in two important ways. First, the 2002 Survey was more comprehensive, and thus considerably longer, than the 2001 Survey. The 2001 Survey mainly pertained to member companies’ ability to obtain wireless licenses. The 2002 Survey covered that topic, in addition to unlicensed spectrum, idle licenses, customer demand issues, mobile versus fixed wireless, and relationships with national carriers. Second, the 2002 Survey was conducted entirely online. All previous surveys were conducted by sending and receiving fax messages. By pointing their Internet web browser to a specific web address, members were able to access the survey, enter responses to survey questions and to submit their responses with a single click of the mouse.

Several benefits were realized with an online survey. Using email rather than fax to distribute the survey lowered overall costs. In addition, the online survey is easier for respondents to complete, and the elimination of manual data entry saves time and eliminates a potential source of error. Overall, NTCA found that an online survey permits rapid and accurate tabulation of data. NTCA intends to conduct future surveys in this manner.

SURVEY RESULTS

The survey request was distributed by email to approximately 494 NTCA member companies who are in NTCA’s email database. The email contained instructions for online access the survey. Responses were received from 148 member companies, a 30% response rate. Seventy-nine respondents (53%) currently hold an interest in a wireless license. Of those who do not, 72% would like to acquire a license.

Thirty-eight percent of survey respondents indicated that they had at one time sold or transferred their rights to a wireless license. Among the reasons cited were the need for quick cash, being part of a partnership that decided to sell the license, and the inability to build out due to high costs and extreme competition.

An overwhelming 84% of survey respondents said that the ability to offer wireless affects their standing in their community as a telecommunications carrier of choice. Seventy-one percent said that wireless is important to their bottom line.

Respondents' customers are reinforcing this message about the importance of wireless service. We asked survey respondents how the demand for wireless was being communicated to them. Among the responses:

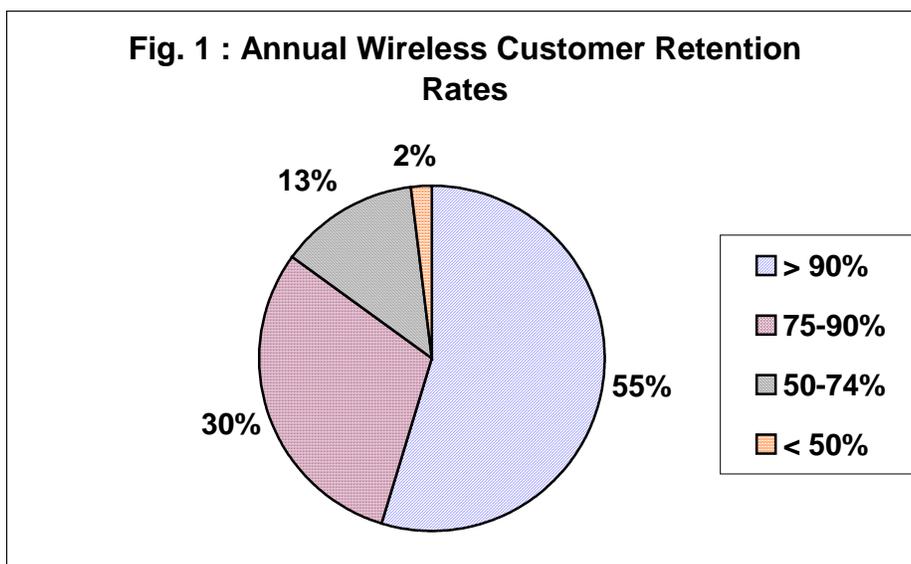
- "A county-wide technology survey through the Economic Development partnership rated wireless broadband as a top priority for development."
- "Our customers call, write, and email their desire to have wireless."
- "Some customers just want service and they don't care what technology is used. Wireless is the only answer where we do not have facilities."
- "We have seen customers leave our dial-up business for wireless providers in the area."

Yet despite this substantial recognition of the fact that wireless is important and the preexisting demand for wireless, 51% of survey respondents indicated that they wouldn't even consider participating in future spectrum auctions. Of that 51%, 75% cited an inability to compete with large carriers at auction; 71% believed that spectrum was too expensive for them to be able to afford; and 62% indicated that the cost of deployment was too high¹.

Only one-third of those respondents who hold a wireless license indicated that it was economically feasible to offer wireless service to all of their ILEC customers. Virtually all (98%) are targeting their own Rural Service Area (RSA) or their own RSA plus neighboring territory.

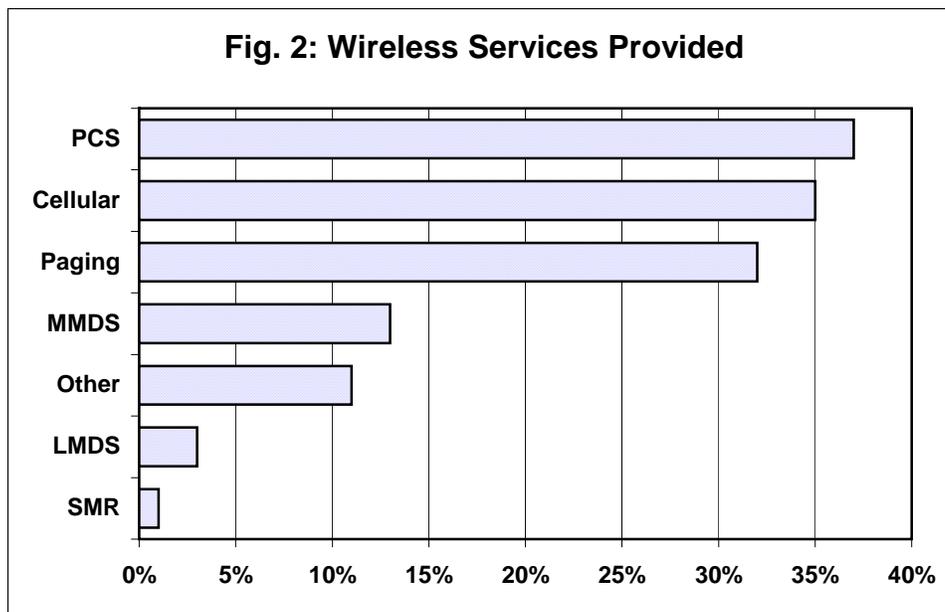
¹ Totals exceed 100% because respondents were allowed to select more than one response to the question.

Survey respondents are finding their wireless customers to be extremely loyal: 55% of survey respondents offering wireless have an annual customer retention rate greater than 90%; 30% of respondents reported customer retention rates between 75 and 90%; and 15% reported retention rates below 75%. (See Figure 1.) This indicates that the vast majority of respondents' customers find enough value in the respondents' service offerings to continue subscribing to them.



State of Wireless Today

Sixty-three percent of those survey respondents offering wireless indicated that the single largest use of wireless at this time is for commercial mobile radio service (CMRS): 37% personal communication service (PCS) and 35% cellular. Nine percent of respondents provide both PCS and cellular service, 28% provide PCS but not cellular, and 26% provide cellular but not PCS. Other services provided include paging (32%), and multichannel multipoint distribution system (MMDS) (13%). (See Figure 2.)



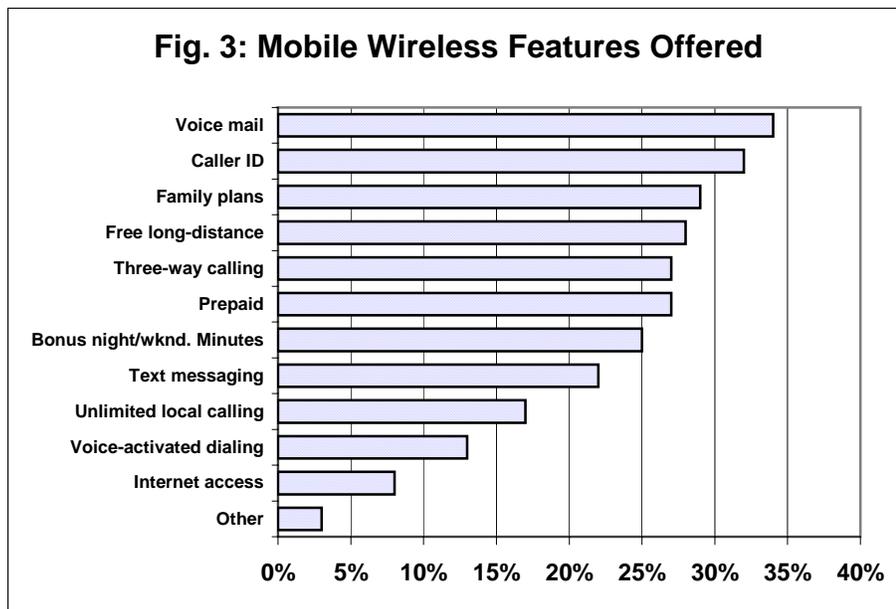
Forty-seven percent of wireless license holders indicated that they have partnership agreements with a national wireless carrier (such as AT&T, Verizon, Sprint, VoiceStream, or Nextel) to handle their roaming traffic at a contracted fee. Less than half—45 %—are able to offer a wireless package that is competitive with the national carriers. The vast majority (94%) finds it hard to compete with promotions, such as free long distance, being offered by the national carriers.

Over the course of the twelve months preceding the survey, 20% of wireless providers have either acquired spectrum or made arrangements for the utilization of previously-acquired spectrum, while 15% have entered into negotiations for the acquisition of spectrum. Most of this spectrum will be used to better serve the providers' current customers, as only 30% indicated that they are currently expanding their service area.

Given the difficulties survey respondents described in obtaining spectrum or access to spectrum, it is not surprising that 40% of respondents indicated that they are utilizing unlicensed spectrum to serve their customers. The primary uses for unlicensed spectrum include broadband Internet, microwave, dial up, wide area network (WAN), and DSL.

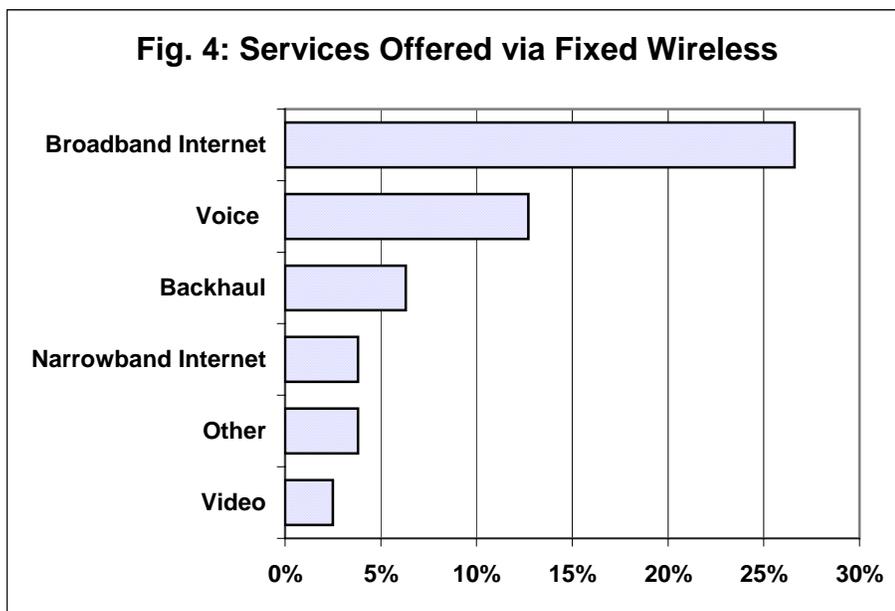
Utilizing unlicensed spectrum is hardly an ideal situation, however. The most commonly cited difficulties include interference/congestion and unsatisfactory equipment reliability.

Despite all of the challenges rural wireless carriers must overcome to provide service to their customers, survey respondents indicated that they are providing an impressive array of services. The most popular mobile wireless services include voice mail (offered by 34% of those respondents providing wireless service), caller ID (32%), family plans (29%), free long distance (28%), prepaid calling (27%), three-way calling (27%), and bonus night/weekend minutes (25%). (See Figure 3.)



Survey respondents are utilizing the following mobile wireless technologies to serve their customers: code division multiple access (CDMA) (38% of respondents), time division multiple access (TDMA) (31%), Global System for Mobile Communications (GSM) (26%), and advanced mobile phone service (AMPS) (5%).

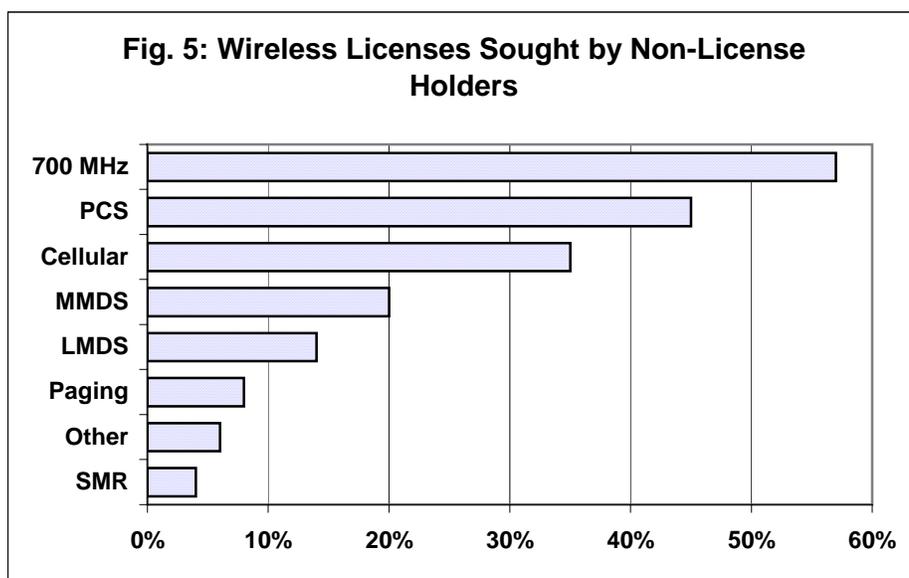
Thirty-two percent of those survey respondents holding a wireless license are offering fixed wireless services. Broken down by type of service offered, 27% are providing broadband Internet, 13% voice, 6% backhaul, and 4% narrowband Internet. (See Figure 4.)



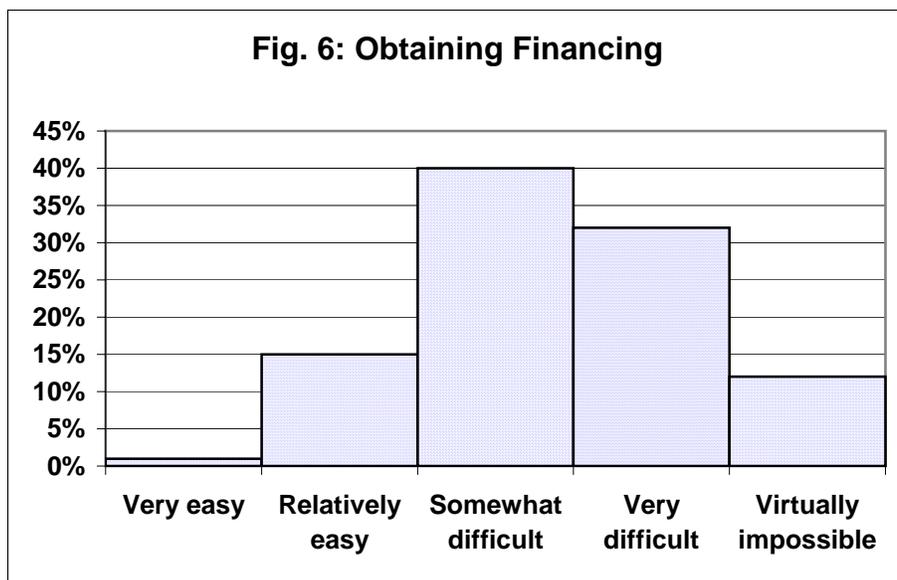
Twenty-nine percent of those respondents holding a wireless license are utilizing the unlicensed 2.4 GHz spectrum to provide fixed wireless service, 18% are utilizing PCS, 15% MMDS, 14% unlicensed 5 GHz spectrum, 10% cellular, 7% 802.11x (Wi-Fi), and 4% LMDS.

The Future

Many of those currently on the sidelines would like to get into the game: nearly three-quarters of the non-license holder survey respondents (72%) indicated that they would like to have a wireless license. Of those, 57% would like to have a 700 MHz license, 45% a PCS license, 35% a cellular license, and 20% an MMDS license. (See Figure 5.) Sixty-eight percent would like to offer their customers wireless broadband service, 49% high-speed data/video, and 44% mobile wireless service.



Even for those currently providing wireless service, however, financing wireless operations is becoming an increasingly bigger challenge. Eighty-four percent of those with experience obtaining financing described the process as “somewhat difficult” to “virtually impossible,” a significant increase from the 56% in last year’s survey who responded the same way. (See Figure 6.)



Among those currently without a wireless license, 68% would enter into a partitioning agreement with a license holder if given the opportunity. Approximately half as many (35%) indicated that they would be willing to enter into a leasing agreement. Partitioning arrangements are rare: only 6% of license holders indicated that they had ever entered into a partitioning agreement with a non-license holder.

CONCLUSIONS

The overwhelming majority of survey respondents recognize the importance of wireless, yet more than half do not intend to participate in any future spectrum auctions.

Survey respondents indicate that providing wireless service is indeed a priority to them and their customers: 84% said that wireless affects their standing in their community as a telecommunications carrier of choice, and 71% said that wireless is important to their bottom line. Numerous respondents also reported being contacted by customers anxious to know when additional wireless services would become available. Despite these factors, however, just over half of survey respondents indicated that they would not participate in any future spectrum auctions. Clearly, these seemingly contradictory responses indicate that the auction system is simply not working for many rural carriers.

Survey respondents are finding it increasingly difficult to compete with the large nationwide carriers.

Large, nationwide carriers have numerous advantages in terms of greater assets upon which to draw, and easier and cheaper access to capital, in addition to economies of scope and scale. In head-to-head competition against smaller, rural carriers, they are often able to put these advantages to use and drive the smaller carrier out of business. The large carriers, however, typically have little interest in serving the most remote, high-cost customers.

Forty percent of respondents have turned to unlicensed spectrum in order to be able to provide wireless service to their customers. They report confronting numerous barriers, however.

Faced with the fact that obtaining spectrum at auction is often practically or financially prohibitive, survey respondents desperate to provide their customers with the services they demand are turning to unlicensed spectrum. While unlicensed spectrum may provide a solution in some instances, numerous survey respondents report facing considerable barriers in the use of unlicensed spectrum, including interference and congestion and equipment problems. Those who ultimately suffer are the rural customers, who are unable to receive an acceptable quality of service.

Despite all the obstacles, survey respondents are able to offer an impressive variety of wireless services to their customers.

According to the survey responses, NTCA's members are making impressive efforts at giving their customers a wide variety of wireless services. Mobile wireless customers have access to voice mail, caller ID, family plans, free long distance, three-way calling, prepaid service, bonus night and weekend minutes, and text messaging, in addition to other services. Where fixed wireless is utilized, customers have access to broadband Internet and voice service, among others.

Survey responses indicate that obtaining financing for wireless projects is a much greater challenge now than a year ago.

In NTCA's 2001 Wireless Survey, 57% of survey respondents classified the process of obtaining financing for wireless projects as "somewhat difficult" to "virtually impossible." A year later, 84% of respondents used those terms to describe their experience. Undoubtedly, the violent upheaval in the telecommunications industry deserves much of the blame for this change. Regardless of the culprit, however, the bottom line is that providing wireless service to rural customers has become a bigger challenge now than ever before.

While survey respondents consider partitioning superior to leasing, neither is feasible at this time.

Nearly 70% of survey respondents would enter into a partitioning agreement with a license holder if given the opportunity; 35% would be willing to enter into a leasing agreement, should that become an option in the future. Today, however, only 6% of license holders have ever entered into a partitioning agreement with a non-license holder. Given the difficulty associated with obtaining spectrum at auction, it is apparent that survey respondents' opportunities to gain access to spectrum are extremely limited.

THE BOTTOM LINE

In the survey, we gave respondents the last word, allowing them the opportunity to tell us anything that they considered to be important. The following is a representative sampling of their hopes and concerns for the future.

- “We need to be able to compete with the national carriers in price and product.”
- “Rural carriers need access to affordable spectrum set aside for rural carriers only, similar to the rural set-aside during the 800 MHz lottery.”
- “Wireless needs to be deployed today because there will be a slow migration from customers having both landline and wireless phones to wireless only.”
- “As a small ILEC, my company is unable to compete in the wireless market, but as a consortium member we hold a license that operates under the consortium name.”
- “Wireless is not the future: it is today and our very existence. We need to purchase 700 MHz as part of a consortium because we already own 1.9 GHz [spectrum] and can’t afford to buy more. Rural areas can’t afford to deploy \$60,000 towers every five miles.”
- “How do we bring wireless service to our rural area without assistance such as was made available to bring wired services to areas not served by for-profit companies?”
- “We don’t have access to spectrum as the FCC bundles low density counties in with urban counties for auction.”
- “Leasing or partitioning of spectrum is not really an answer for small companies. What if we build and successfully operate a wireless entity only to have a lessor not renew our lease?”