NATIONAL TELECOMMUNICATIONS COOPERATIVE ASSOCIATION
The Voice of Rural Telecommunications
www.ntca.org

NTCA 2012 WIRELESS SURVEY REPORT

September 2012

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

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EXECUTIVE SUMMARY

In the early summer of 2012 the National Telecommunications Cooperative Association (NTCA) surveyed its members on their activities in the area of providing wireless services to their customers. The survey was sent to each of the companies in NTCA's membership database; 108 members (21%) responded.

Fifty-seven percent of survey respondents indicated that they hold at least one wireless license below 2.3 GHz; 29% hold at least one license above 2.3 GHz. Sixty-two percent are providing wireless service to their customers.[1] Seventy-seven percent of those providing wireless service offer fixed broadband, 64% mobile voice, and 54% mobile broadband. Thirty-eight percent of survey respondents not currently offering wireless service are considering doing so.

The average total (cumulative) investment in wireless facilities, excluding spectrum, is $11.7 million; average total (cumulative) investment in spectrum totaled $1.4 million.

Sixty-six percent of survey respondents characterized the process of obtaining financing for wireless projects as "somewhat difficult" or "very difficult;" 25% characterized the process as "relatively easy."

Forty-five percent of respondents are utilizing unlicensed spectrum to provide some wireless services, despite problems such as interference.

Ninety-two percent of all respondents indicated that competition from nationwide carriers was their greatest concern, 69% selected the ability to make necessary investments to be able to offer the latest services, 61% handset/equipment availability, 58% the ability to negotiate roaming agreements with national carriers, and 50% the ability to obtain spectrum at auction.[2]

Sixty-nine percent of survey respondents categorized their experience in negotiating data roaming and in-market roaming agreements with other carriers as moderately to extremely difficult.

Fifty-two percent of those respondents who have a reciprocal roaming agreement with another carrier indicated that they pay about as much as they themselves are paid, while 33% pay more and 14% pay less.

Thirty-one percent of those survey respondents offering wireless resell another carrier's service under their own brand, 5% do so under a national brand. Fifty-eight percent sell

[1] Includes respondents utilizing unlicensed spectrum to provide wireless service.
[2] Totals exceed 100% as respondents were allowed to select more than one concern.

service for which they own spectrum under their own brand, and 5% do so under a national brand. Fifty-one percent find it difficult to compete with promotions offered by the national carriers.

Ninety-seven percent of all respondents offer their customers wireless customers voice mail. Ninety-four percent offer text messaging, 90% offer Internet access, 87% family plans and caller ID, 77% offer unlimited local calling, and 74% three-way calling, bonus minutes, and ring tones. Seventy-four percent of survey respondents experience annual customer churn of less than 10%, while 27% reported annual churn of between 10% and 25%. These figures are well below the FCC's reported industry annual average of between 18% and 40%.

INTRODUCTION

In the early summer of 2012, the National Telecommunications Cooperative Association (NTCA) surveyed its members on their activities in the areas of providing wireless services to their members/customers. NTCA is a national association of more than 570 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 Communications Act of 1934, as amended ("Act"). While some offer local exchange service to as few as 44 lines and a small handful to 50,000 or more, nearly 50% of NTCA members serve 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.

This latest wireless survey is a follow-up to a similar survey last conducted by NTCA in 2011, and seeks to build upon the results of that survey.[3]

OVERVIEW OF SURVEY

The 2012 NTCA Wireless Survey was conducted online. Member companies were provided with a URL through which they could access the survey. Every effort was made to minimize the reporting burden on the survey respondents.

The survey itself was organized into two sections. The first section was comprised of general questions about the respondent's current operations and future plans. The second section, which applied only to those respondents providing CMRS services to their customers, asked more specific questions about technology, customers, revenues, features offered, and capabilities.

SURVEY RESULTS

The survey URL was distributed via email to all of the NTCA member companies in NTCA's database. The messages contained instructions for online access to the survey. Responses were received from 108 member companies, a 21% response rate.[4]

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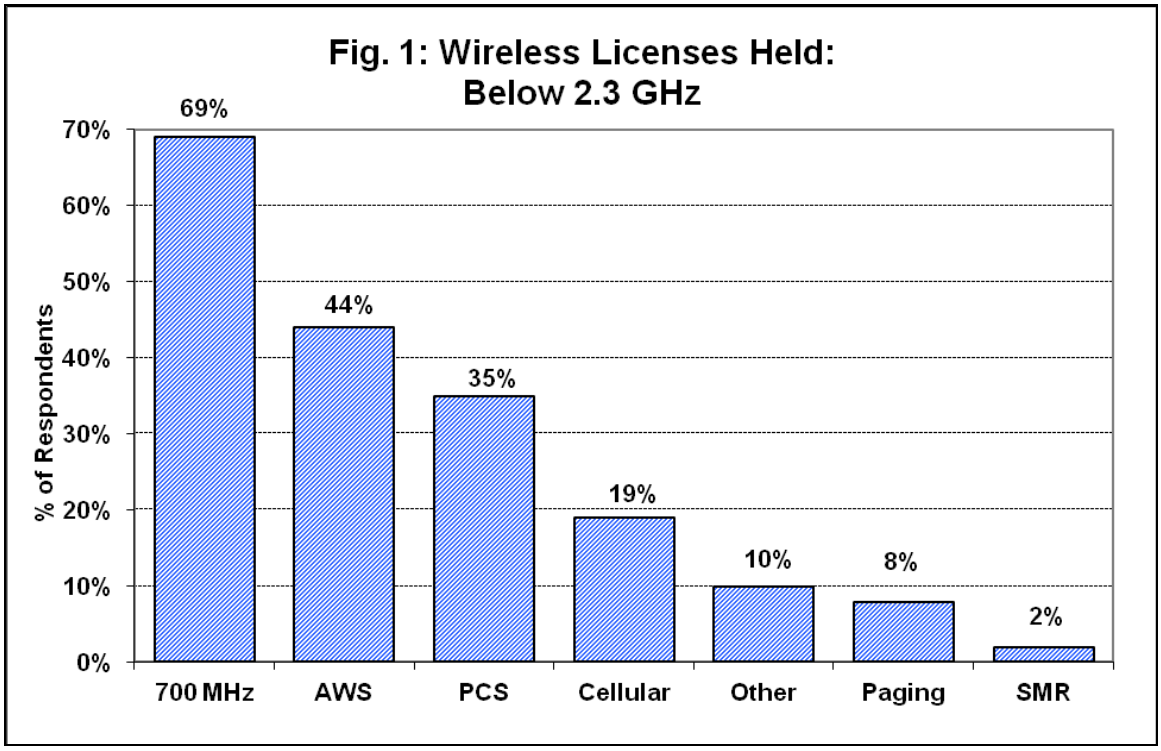
[3] Copies of this and previous NTCA survey reports may be downloaded from the NTCA website, www.ntca.org.

[4] Response rate is calculated based on the number of verified email addresses in NTCA's member database. Based on the sample size, results of this survey can be assumed to be accurate to within ± 8% at the 95% confidence level.

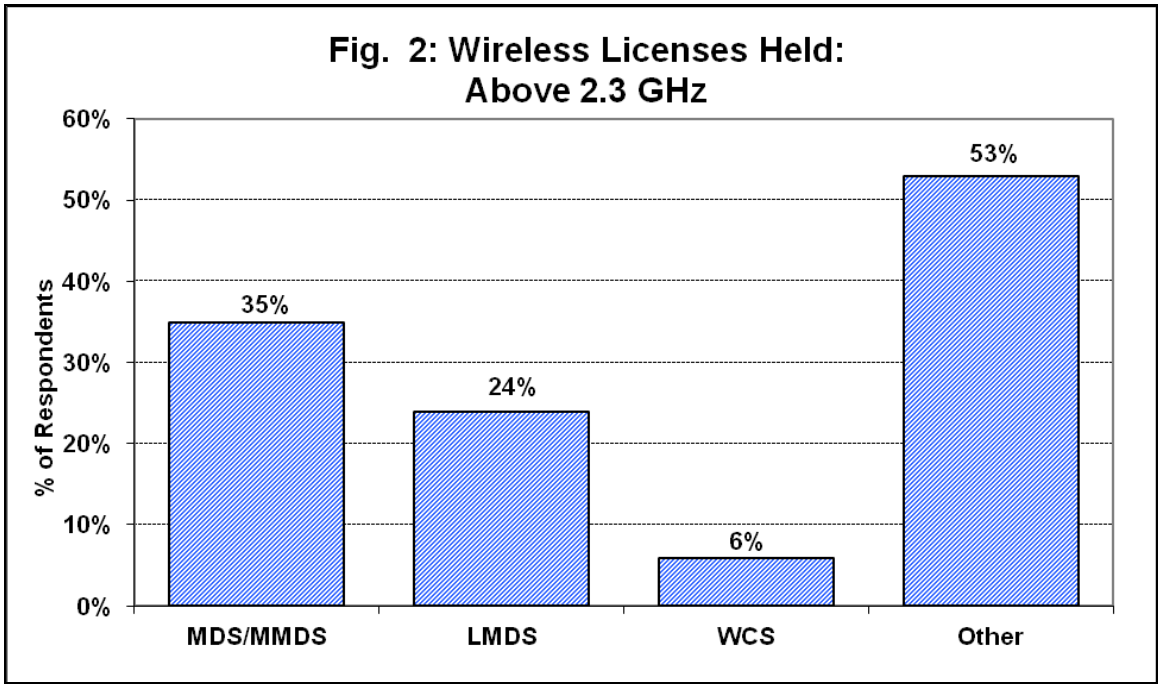
Survey responses were received from companies in 34 states. While those respondents providing wireless services range in size from approximately 5 wireless customers to almost 100,000, the average respondent served just over 9,000 wireless customers. This heterogeneity in size and geographic location mirrors that of NTCA's membership as a whole.

Fifty-seven percent of survey respondents providing wireless service indicated that they currently hold at least one wireless license below 2.3 GHz. Sixty-nine percent of those who hold a license below 2.3 GHz have a 700 MHz license, 44% an AWS license, 35% PCS, 19% cellular,10% other (such as microwave) and 8% paging. (See Fig. 1.)



Note: Totals exceed 100% as carriers may hold more than one wireless license.

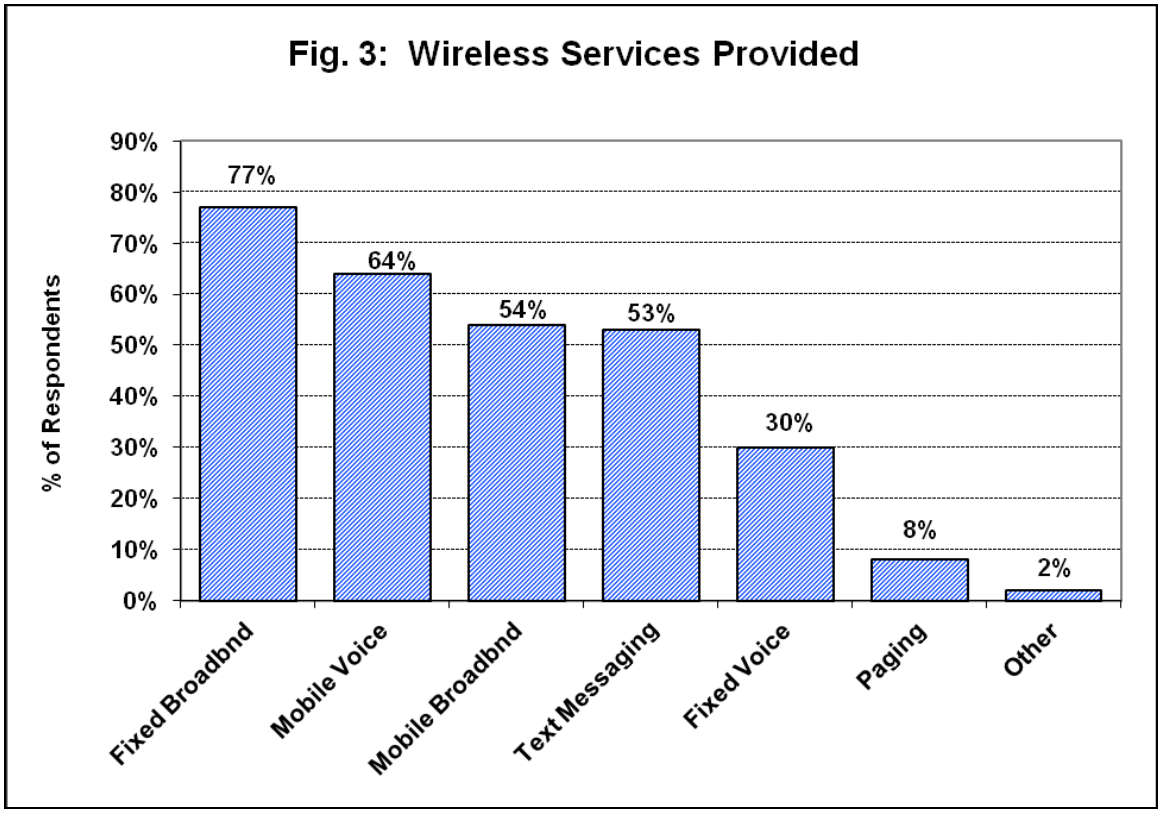
Twenty-nine percent of survey respondents providing wireless service indicated that they currently hold at least one wireless license above 2.3 GHz. Thirty-five percent of those who hold a license above 2.3 GHz have an MDS/MMDS license, 24% an LMDS license, and 6% WCS. Fifty-three percent of survey respondents hold another license above 2.3 GHz, including 3.65 GHz, 6 GHz or 11 GHz. (See Fig. 2.)



Note: Totals exceed 100% as carriers may hold more than one wireless license.

Sixty-three percent of survey respondents indicated that they use wireless spectrum for backhaul. Of those, 49% utilize licensed spectrum, while 51% use unlicensed spectrum. Forty-six percent of survey respondents indicated that 100% of their existing sites deployed today are currently IP backhaul ready.

Sixty-two percent of survey respondents are offering some type of wireless services to their customers[5]. Of those providing wireless service, seventy-seven percent offer fixed broadband,[6] 64% mobile voice, 54% mobile broadband, 53% text messaging, 30% fixed voice and 8% paging. (See Fig. 3.)

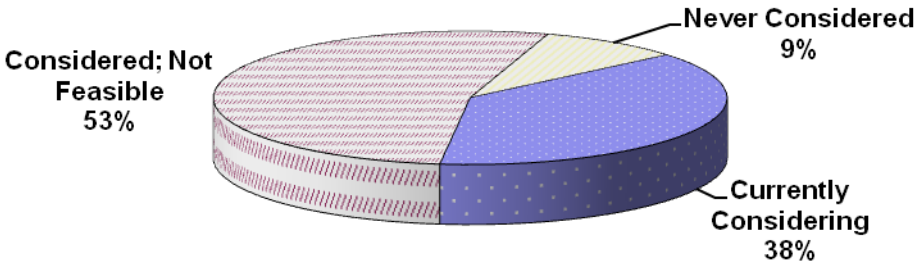


Note: Totals exceed 100% as carriers may provide more than one wireless service.

[5] Includes respondents utilizing unlicensed spectrum to provide wireless service.
[6] For the purposes of this survey, broadband is defined to be data transmission speeds of at least 756 kilobits per second in one direction.

Thirty-eight percent of the respondents not currently offering wireless service indicated they are considering doing so. Fifty-three percent have previously considered offering wireless service and deemed it not feasible, while 9% have never considered wireless. (See Fig. 4.)

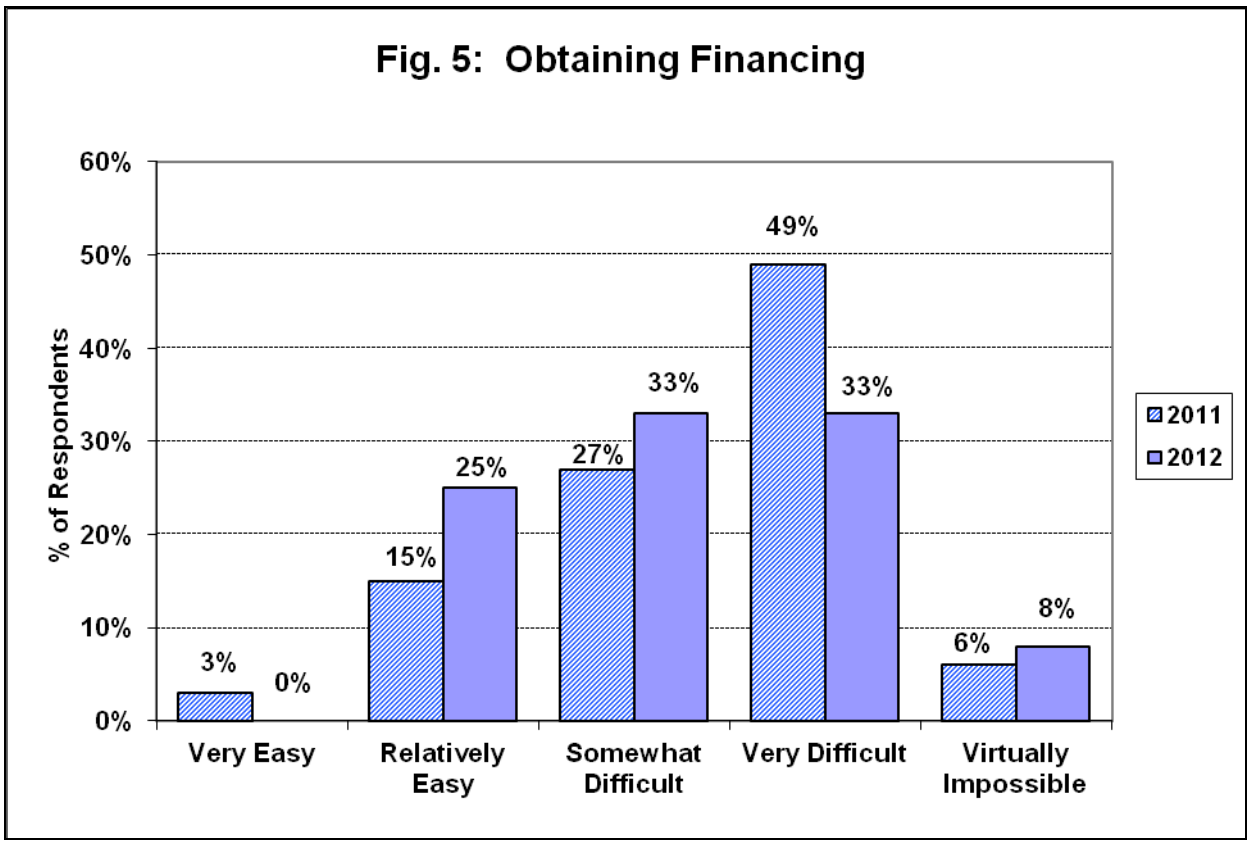
Fig. 4: Future Wireless Plans?



Survey respondents indicated that they have invested considerable resources in wireless. For those companies investing in wireless, the average total (cumulative) investment in wireless facilities, excluding spectrum, was $11.7 million, ranging from a high of $119 million to a low of $25,000. Average total (cumulative) investment in spectrum totaled $1.4 million. Average annual wireless revenues were $12.3 million.

Survey respondents serve an average of 9,968 wireless subscribers with an average of 38 cell sites. (A few larger respondents skew these numbers upwards, however: the median number of wireless subscribers is 1,601 and the median number of cell sites is 9.) The average customer's monthly wireless bill is between $50 and $60, and the typical customer uses just over 600 minutes monthly. Fifty-one percent of responding companies find it difficult to compete with promotions—such as buckets of long-distance minutes—being offered by the national carriers.

Survey respondents found obtaining financing for wireless projects to be considerably more challenging than reported in the last survey. While relatively fewer respondents classified the process as "very difficult" (33% in 2012 versus 49% in 2011) more found the process "somewhat difficult" (33% vs. 27%) in 2012 than in 2011. More respondents classified the process as "relatively easy" in 2012 than in 2011, 25% vs. 15%. (See Fig. 5.)



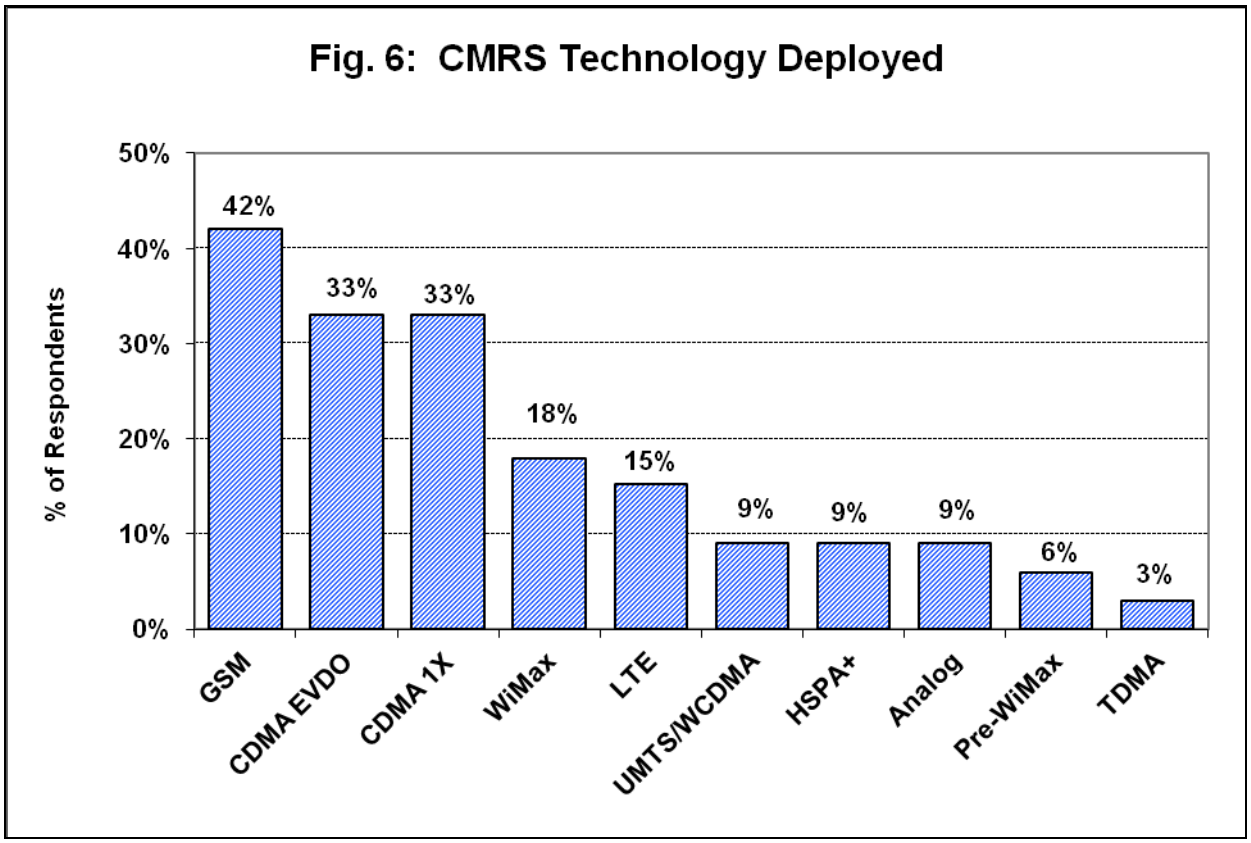
Survey respondents utilize a variety of finance sources to fund their wireless operations. Seventy-nine percent reinvest company earnings, 48% utilize grants or loans, 42% use high-cost USF support, and 10% use individual investors or general funds.

Thirty-nine percent of survey respondents indicated that they had acquired spectrum in the preceding twelve-month period, while 36% made arrangements for the utilization of previously acquired spectrum. Nineteen percent entered into negotiations for the acquisition of spectrum, while thirty-six percent relinquished spectrum.

Sixty-three percent of survey respondents are looking to provide wireless service to both their wireline service area and neighboring territories; 22% seek to serve neighboring territories only; and 15% their own wireline service territory only.

Forty-five percent of survey respondents are utilizing unlicensed spectrum to provide wireless services to their customers. Among the services identified are fixed broadband and backhaul. Forty-eight percent of those respondents using unlicensed wireless spectrum indicated that they had experienced difficulties doing so, mainly interference problems.

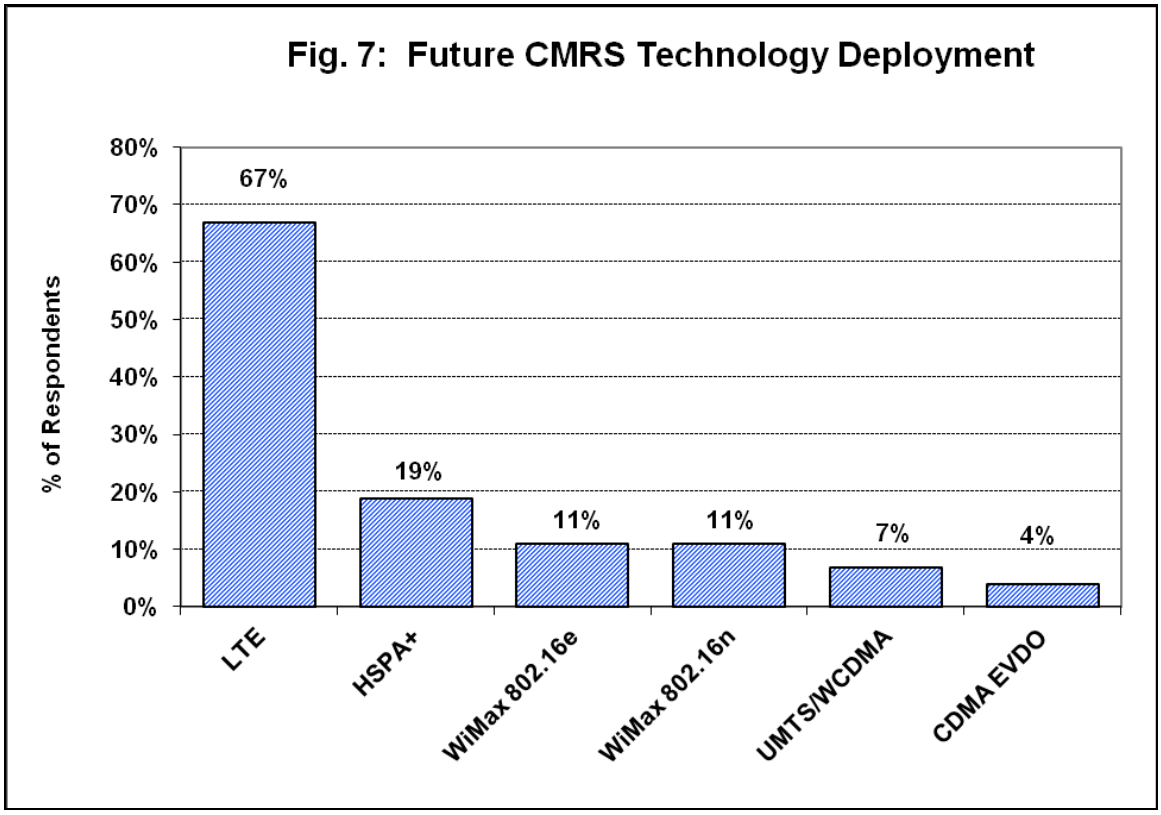
Asked which wireless CMRS technologies their company has deployed with, 42% percent of survey respondents indicated GSM service, 33% CDMA 1X and CDMA EVDO, and 18% WiMax. (See Fig. 6.)



Note: Totals exceed 100% as respondents were allowed to select more than one technology.

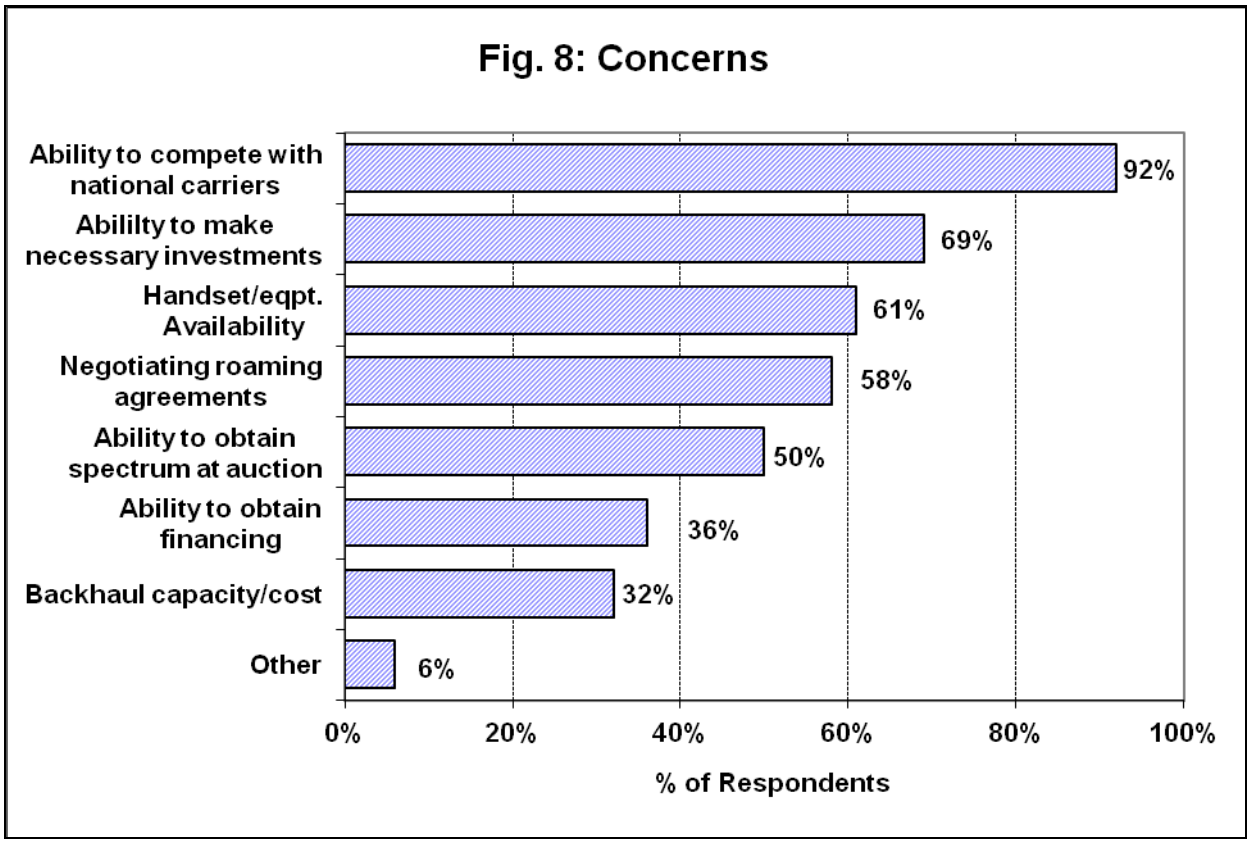
Ninety percent of those survey respondents currently offering wireless indicated that they had plans to deploy next generation technology. Of those, 70% plan to deploy in the next 1-2 years, 22% within three years, and 9% within five years.

Sixty-seven percent of those survey respondents who have plans to deploy next generation technology said that they would be deploying LTE. Nineteen percent indicated their next deployment would be HSPA+, 11% WiMax802.16e and WiMax 802.16n, and 7% UMTS/WCDMA. (See Fig. 7.)



Note: Totals exceed 100% as respondents were allowed to select more than one technology.

Respondents intend to offer their customers a wide variety of new services over the next 12 to 18 month period: fixed and mobile data, VoIP, WiMax, and 700 MHz service were all noted. A number of concerns, however, threaten survey respondents' future plans. Ninety-two percent indicated that they were concerned about their ability to compete with national carriers, up significantly from 75% a year ago. Sixty-nine percent cited their ability to make necessary investments to be able to offer the latest services, 61% handset/equipment availability, 58% their ability to negotiate roaming agreements with national carriers, 50% the ability to obtain spectrum at auction, 36% their ability to obtain financing for wireless projects, and 32% backhaul capacity/cost. (See Fig. 8.)



Note: Totals exceed 100% as respondents were allowed to select more than one concern.

"Other" concerns include the ability to offer higher speeds in the future, rising costs per subscriber, and uncertainty surrounding the future of universal service support.

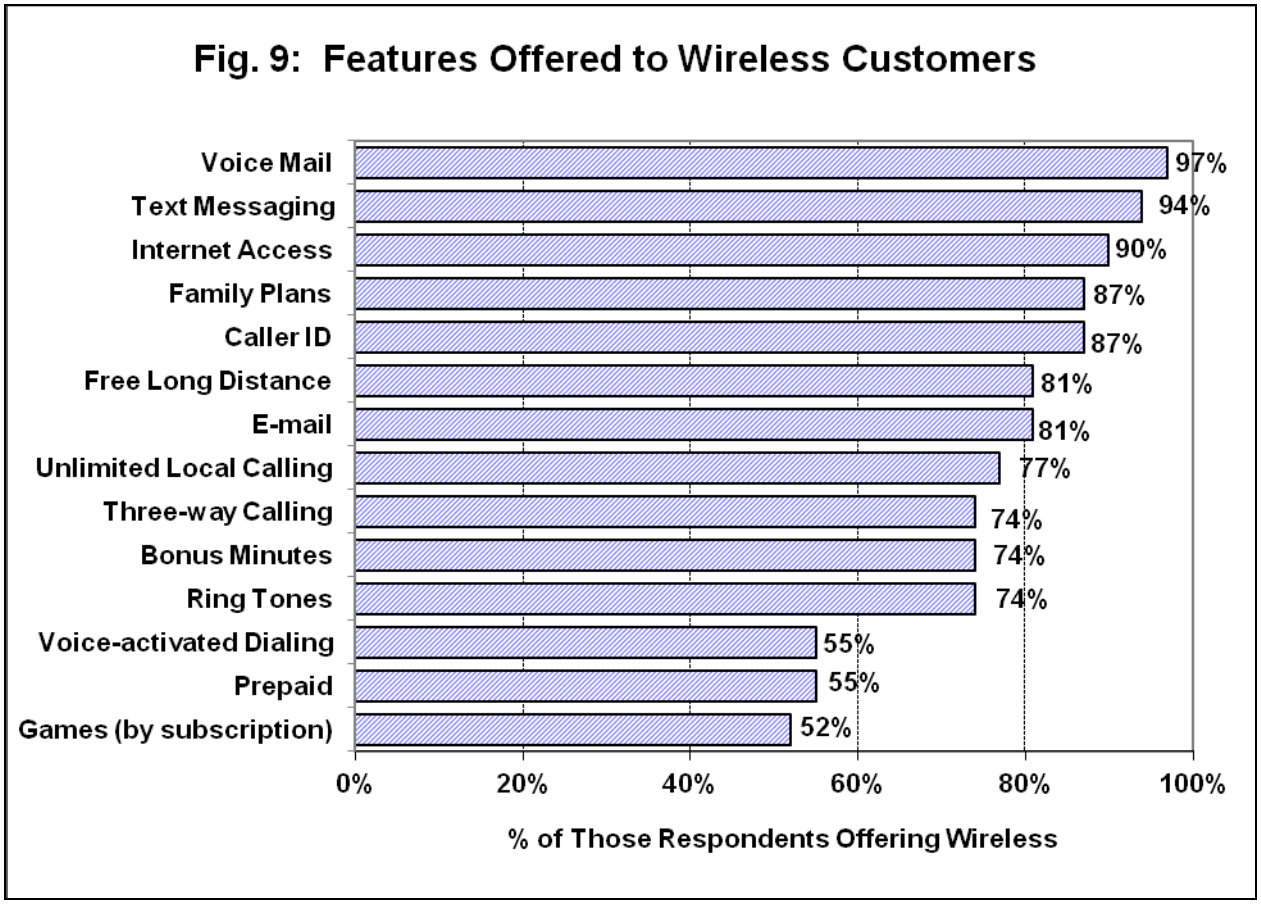
Asked to categorize their experience in negotiating data roaming and in-market roaming agreements with other carriers, 69% categorized it as moderately to extremely difficult. Twenty-seven percent categorized the experience as moderately to relatively easy, and 4% as extremely easy.

Of those respondents who have a reciprocal roaming agreement with another carrier, 52% indicated that they pay about as much on a per minute basis as they themselves are paid. Thirty-three percent pay more on a per minute basis, while 14% pay less.

Survey respondents are facing competition from other carriers—the average respondent indicated that their company competes with between two and four other carriers. However, many of these competitors serve only a small portion of the respondent's service area.

Thirty-one percent resell another carrier's service under their own brand, while 5% do so under a national brand. Fifty-eight percent sell service for which they own spectrum under their own brand, and 5% do so under a national brand. Fifty-one percent have at one time been hindered in their efforts to provide wireless service due to the actions of a national wireless carrier. Forty-seven percent have at one time entered into a joint venture with another wireless carrier.

Survey respondents offer myriad features to their wireless customers. Ninety-seven percent of survey respondents offer their wireless customers voice mail, 94% text messaging, 90% Internet access, 87% family plans and caller ID, and 81% free long distance and e-mail. (See Fig. 9.)



Note: Totals exceed 100% as respondents may provide more than one wireless feature.

Respondents indicated considerable customer loyalty. Sixty-four percent of survey respondents experience annual customer churn of less than 10%, while 27% reported annual churn of between 10% and 25%. Six percent of respondents reported no customer churn. This compares favorably to the FCC's most recent estimate of industry-wide churn rate monthly averages of 1.5% to 3.3%, or from 18% to 40% annually.[7]

Forty-two percent of survey respondents indicated that wireless customers left due to issues concerning handset availability. Eighteen percent said that it was due to non-payment, customers moving out of area or dying, 15% due to lower prices from another provider, 12% due to additional services available from another provider and 6% the ability to bundle services offered by another provider.

[7] Federal Communications Commission, *Fifteenth Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, WT Docket No. 10-133 (Terminated), rel. June 27, 2011, p. 154.

CONCLUSIONS

Survey respondents continue to make significant investment in their wireless service. Survey responses indicate that carriers have cumulatively invested, on average, more than $11 million in wireless facilities, with an additional $1.4 million, on average, invested in spectrum. The scope of these investments provides compelling evidence that wireless services are considered a critical offering, without which these small rural carriers would not be able to successfully compete for customers.

Competition from other wireless providers is a significantly greater concern than it was a year ago. Ninety-two percent of responders to the 2012 survey selected competition from nationwide carriers as a significant concern, compared to 75% a year ago. Given that all other concerns held at about the same level as last year, this would indicate that this truly is a greater challenge for carriers, rather than just the result of other concerns diminishing.

Negotiating roaming agreements remains challenging. Sixty-nine percent of survey respondents categorized their experience in negotiating data roaming and in-market roaming agreements with other carriers as moderately to extremely difficult, approximately the same level as last year. Nearly two-thirds of all respondents selected their ability to negotiate roaming agreements with national carriers as a significant impediment to their ability to do business. If these carriers are to survive, they will need assurances that larger carriers will negotiate roaming agreements with them in a reasonable manner.

Low churn rates would tend to indicate significant levels of customer satisfaction. Particularly in light of the number of competing carriers challenging small rural carriers, churn levels well below the national average are an indication that customers are satisfied with the overall quality of service provided by the small providers. The competitive threat will not diminish, however--rural carriers will need to continue to provide excellent quality service if they wish to retain their customers into the future.