



NTCA 2014 WIRELESS SURVEY REPORT

December 2014

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

To get more information on this report please contact Rick Schadelbauer at NTCA (703-351-2019, rschadelbauer@ntca.org) or Jill Canfield at NTCA (703-351-2020, jcanfield@ntca.org).

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EXECUTIVE SUMMARY

In the fall of 2014 NTCA–The Rural Broadband Association 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; 113 members (18%) responded.¹

Fifty-one percent of survey respondents indicated that they hold at least one wireless license below 2.3 GHz; 20% hold at least one license above 2.3 GHz. Sixty-six percent are providing wireless service to their customers.² Eighty percent of those providing wireless service offer fixed broadband, 48% mobile voice, 41% mobile broadband, and 23% fixed voice. Thirty-five percent of survey respondents not currently offering wireless service are considering doing so.

The median total (cumulative) investment in wireless facilities, excluding spectrum, is \$1.7 million; median total (cumulative) investment in spectrum totaled \$433 thousand.

Sixty-two percent of survey respondents characterized the process of obtaining financing for wireless projects as ”somewhat difficult” or “very difficult;” 30% characterized the process as ”relatively easy.”

Forty-nine percent of respondents are utilizing unlicensed spectrum to provide some wireless services, despite interference and line of sight problems.

Seventy-three percent of all respondents indicated that competition from nationwide carriers was their greatest concern, 54% selected the ability to make necessary investments to be able to offer the latest services, 54% handset/equipment availability, 45% the ability to obtain spectrum at auction, 45% the ability to negotiate roaming agreements with national carriers, and 31% backhaul capacity/cost.³

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

Sixty-five 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 35% pay more and 6% pay less.⁴

¹ Many NTCA member companies also have operating companies that are included in the Association’s total member count. This survey was sent to the parent companies only.

² Includes respondents utilizing unlicensed spectrum to provide wireless service.

³ Totals exceed 100% as respondents were allowed to select more than one concern.

⁴ Totals exceed 100% as respondents may have roaming agreements with more than one other carrier.

Seven percent of those survey respondents offering wireless resell another carrier's service under their own brand, and 13% do so under a national brand. Fifty-four percent sell service for which they own spectrum under their own brand, and 12% do so under a national brand. Seventy-four percent find it difficult to compete with promotions offered by the national carriers.

One hundred percent of those respondents providing wireless service offer their customers wireless customers voice mail, caller ID, and unlimited local calling. Ninety-five percent of those providing wireless offer text messaging and family plans, 90% email and Internet access, 85% three-way calling, and 80% free long distance. Fifty-six percent of survey respondents experience annual customer churn of less than 10%, while 32% reported annual churn of between 10% and 25%. These figures are well below the FCC's reported industry annual average of between 20% and 30%.

INTRODUCTION

In the fall of 2014, NTCA–The Rural Broadband Association surveyed its members on their activities in the areas of providing wireless services to their members/customers. NTCA is a national association of nearly 900 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”). Despite their small size, NTCA members deliver high-quality communications services in the most sparsely-populated, highest-cost rural areas of the country, in the face of substantial economic challenges. NTCA’s membership includes both cooperatives and small commercial companies.

This latest wireless survey is a follow-up to a similar survey last conducted by NTCA in 2013, and seeks to build upon the results of that survey.⁵

OVERVIEW OF SURVEY

The 2014 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

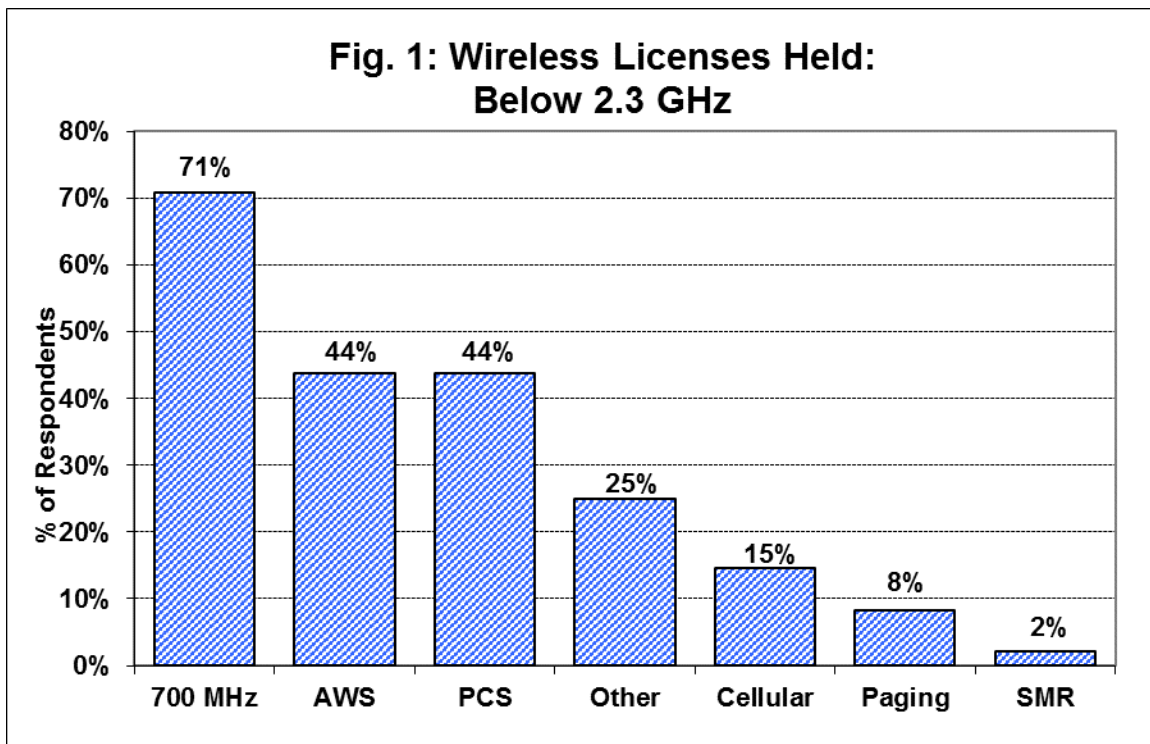
The survey URL was distributed via email to all of the NTCA member companies in NTCA’s database. The messages contained instructions for online access to the survey. Responses were received from 113 member companies, an 18% response rate.⁶

⁵ Copies of this and previous NTCA survey reports may be downloaded from the NTCA website, www.ntca.org.

⁶ Many NTCA member companies also have operating companies that are included in the Association’s total member count. This survey was sent to the parent companies only. 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 $\pm 8\%$ at the 95% confidence level.

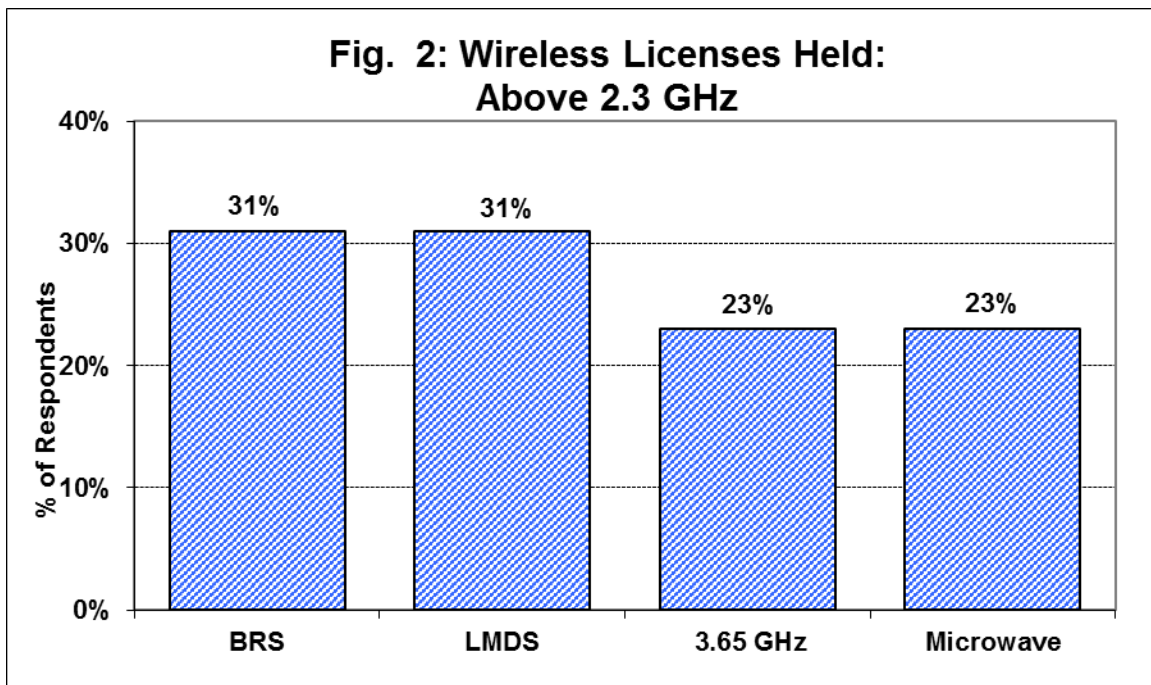
Survey responses were received from companies in 34 states. While those respondents providing wireless services range in size from approximately 54 wireless customers to almost 275,000, the median respondent served just over 3,000 wireless customers. This heterogeneity in size and geographic location mirrors that of NTCA’s membership as a whole.

Fifty-one percent of survey respondents indicated that they currently hold at least one spectrum license below 2.3 GHz. Seventy-one percent of those who hold a license below 2.3 GHz have a 700 MHz license, 44% an AWS license, 44% PCS, 25% other (such as microwave, 800 MHz, or 900 MHz), 15% cellular, 8% paging, and 2% SMR. (See Fig. 1.)



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

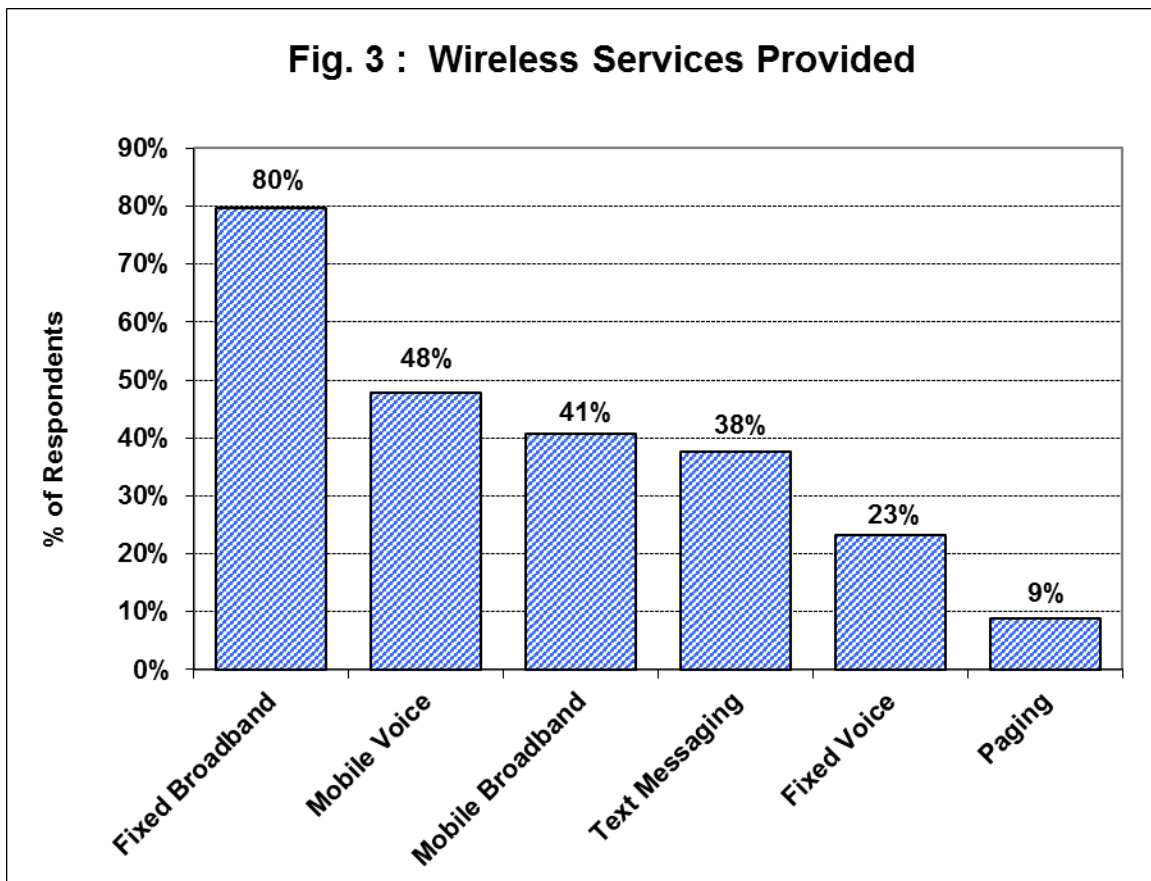
Twenty percent of survey respondents providing wireless service indicated that they currently hold at least one wireless license above 2.3 GHz. Thirty-one percent of those who hold a license above 2.3 GHz have a BRS license, 31% an LMDS license, 23% 3.65 GHz, and 23% microwave. (See Fig. 2.)



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

Forty percent of survey respondents indicated that they use wireless spectrum for backhaul. Of those, 48% utilize licensed spectrum, while 52% use unlicensed spectrum. Forty-nine percent said that their currently wireless spectrum used for backhaul will not be adequate to meet their forecasted future needs. Sixty percent of survey respondents indicated that 100% of their existing sites deployed today is currently IP backhaul ready.

Sixty-six percent of survey respondents are offering some type of wireless services to their customers⁷. Of those providing wireless service, eighty percent offer fixed broadband,⁸ 48% mobile voice, 41% mobile broadband, 38% text messaging, and 23% fixed voice. (See Fig. 3.)



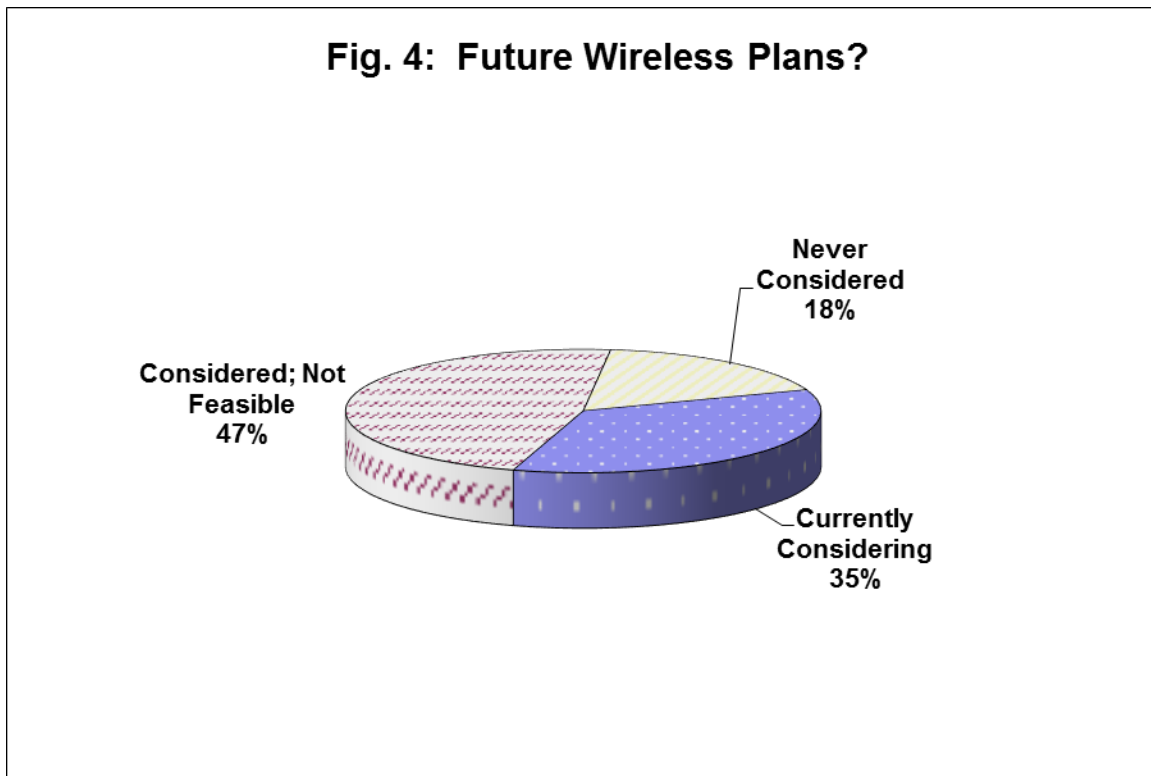
Note: Totals exceed 100% as carriers may provide more than one wireless service.

Ten percent of survey respondents currently offer their customers text-to-911 service.

⁷ Includes respondents utilizing unlicensed spectrum to provide wireless service.

⁸ For the purposes of this survey, broadband is defined to be data transmission speeds of at least 756 kilobits per second in one direction.

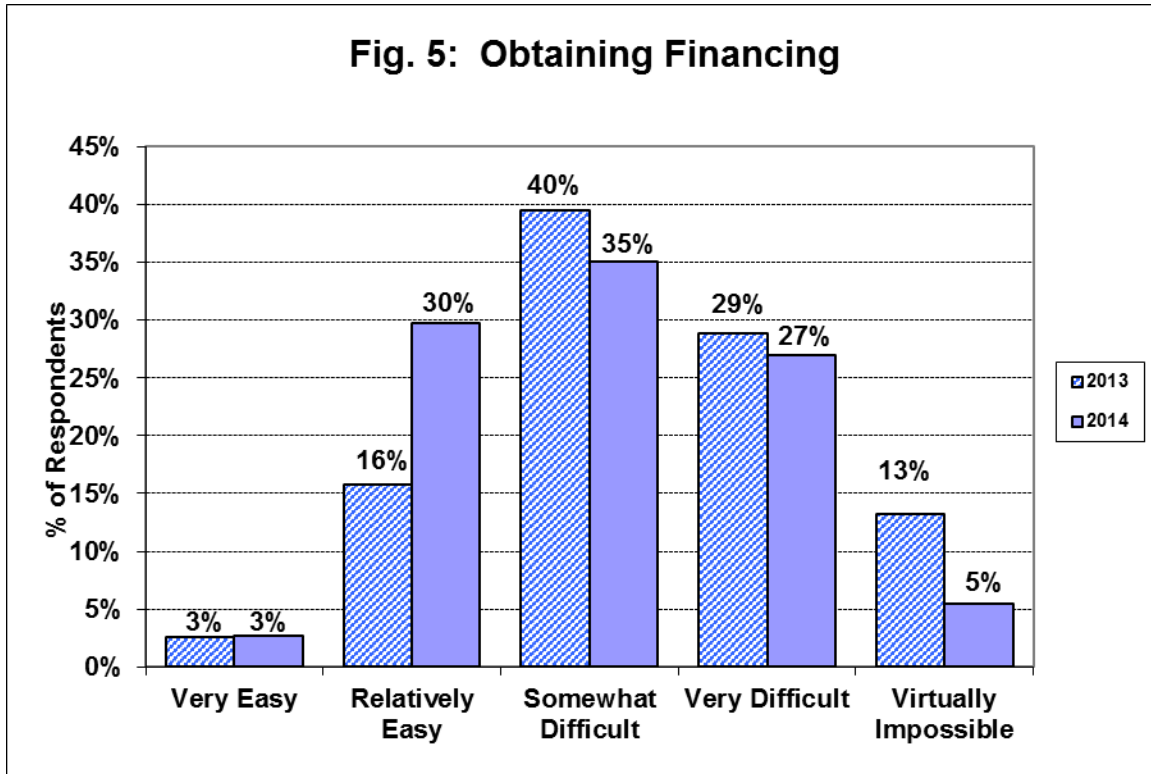
Thirty-five percent of the respondents not currently offering wireless service indicated they are considering doing so. Forty-seven percent have previously considered offering wireless service and deemed it not feasible, while 18% have never considered wireless. (See Fig. 4.)



Survey respondents indicated that they have invested considerable resources in wireless. For those companies investing in wireless, the median total (cumulative) investment in wireless facilities, excluding spectrum, was \$1.7 million, ranging from a high of \$270 million to a low of \$20,000. The average investment was \$23.8 million. Median total (cumulative) investment in spectrum totaled \$433 thousand, and the average was \$1.3 million. Median annual wireless revenues were \$3.4 million, and the average was \$28.2 million. Revenues have increased over the past five years for 63% of respondents.

Survey respondents serve an average of 28,327 wireless subscribers with an average of 90 cell sites. (A few larger respondents skew these numbers upwards, however: the median number of wireless subscribers is 3,260 and the median number of cell sites is 31.) The average customer’s monthly wireless bill is between \$50 and \$60, and the typical customer uses just over 600 minutes monthly. Seventy-four percent of responding companies find it difficult to compete with promotions—such as free long-distance—being offered by the national carriers.

Survey respondents continue to find obtaining financing for wireless projects to be challenging. While approximately the same percentage of respondents classified the process as “very difficult” as in the 2013 survey (27% in 2014 vs. 29% in 2013) many more found the process “relatively easy” (30% vs. 16%) in 2014 than in 2013. Fewer respondents classified the process as “somewhat difficult” in 2014 as in 2013, 35% vs. 40%. (See Fig. 5.)



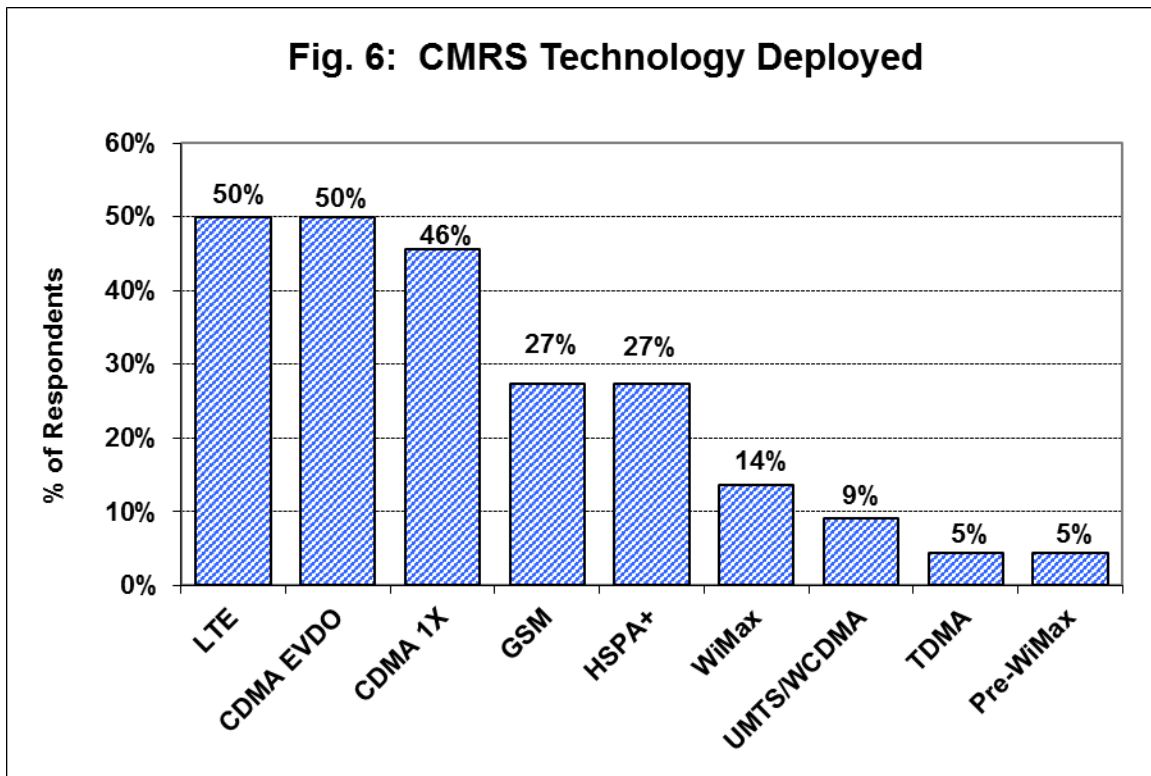
Survey respondents utilize a variety of finance sources to fund their wireless operations. Eighty percent reinvest company earnings, 42% utilize grants or loans, 24% receive high-cost USF support, and 5% use individual investors or general funds.

Twenty-two percent of survey respondents indicated that they had acquired spectrum in the preceding twelve-month period, while 31% made arrangements for the utilization of previously acquired spectrum. Twenty-five percent entered into negotiations for the acquisition of spectrum, and thirty-one percent relinquished spectrum.

Forty-nine percent of survey respondents are looking to provide wireless service to both their wireline service area and neighboring territories; 38% seek to serve neighboring territories only; and 14% their own wireline service territory only.

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

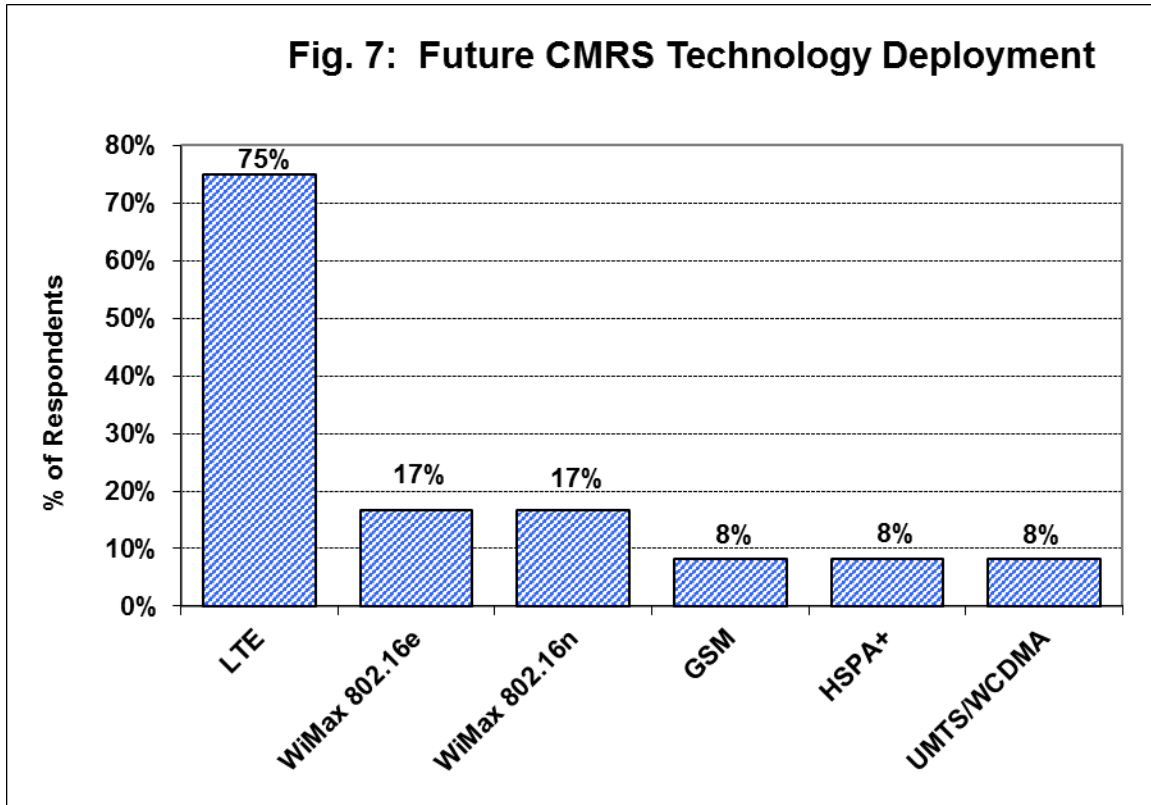
Asked which wireless CMRS technologies their company has deployed, 50% percent of survey respondents indicated LTE service, 50% CDMA EVDO, 46% CDMA 1X, 27% GSM, 27% HSPA+, and 14% WiMax. (See Fig. 6.)



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

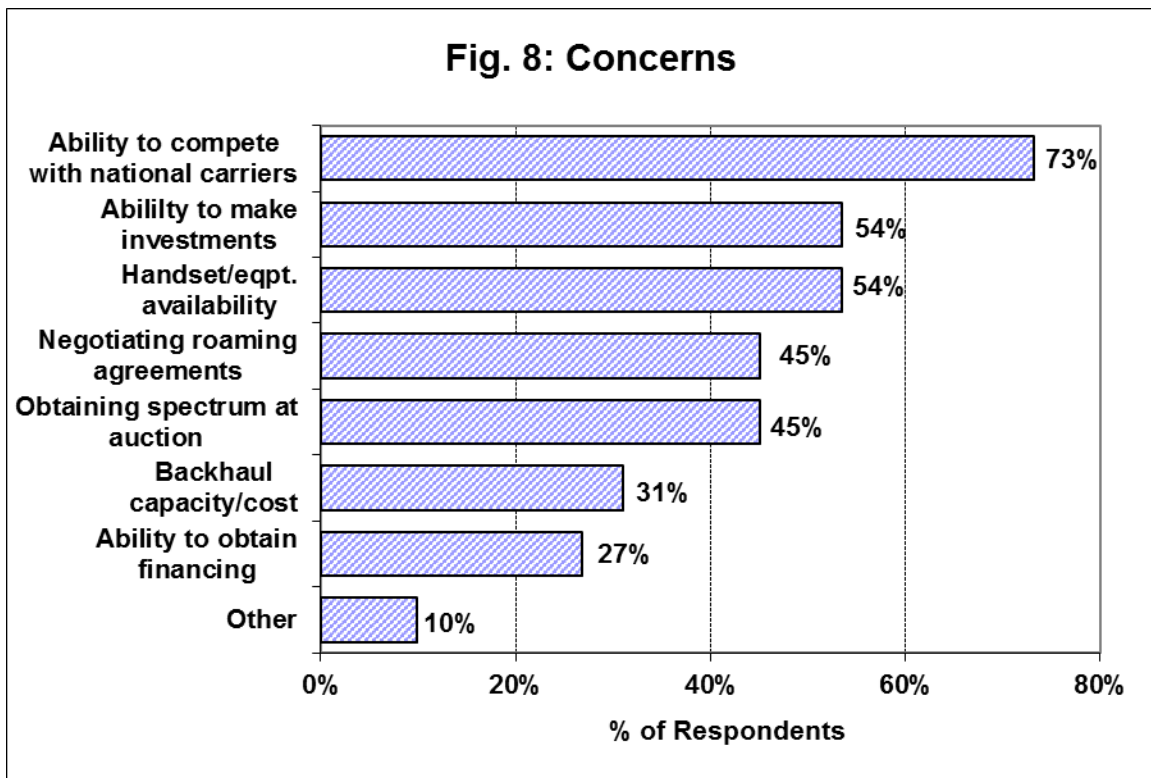
Eighty-one percent of those survey respondents currently offering wireless indicated that they had plans to deploy next generation technology. Of those, 74% plan to deploy in the next 1-2 years.

Seventy-five percent of those survey respondents who have plans to deploy next generation technology said that they would be deploying LTE. Seventeen percent indicated their next deployment would be WiMax 802.16e, 17% WiMax 802.16n, 8% GSM, 8% HSPA+ and 8% 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. Seventy-three percent indicated that they were concerned about their ability to compete with national carriers, virtually unchanged from 2011. Fifty-four percent cited their ability to make necessary investments to be able to offer the latest services (versus 60% in 2011), 54% handset/equipment availability (61% in 2011), 45% the ability to obtain spectrum at auction (53% in 2011), 45% their ability to negotiate roaming agreements with national carriers (55% in 2011), 31% backhaul capacity/cost (24% in 2011), and 27% their ability to obtain financing for wireless projects (33% in 2011). (See Fig. 8.)



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

“Other” concerns include the ability to meet future bandwidth needs, 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, 47% categorized it as moderately to extremely difficult (down from 68% in 2011.) Forty percent categorized the experience as moderately to relatively easy, and 13% as extremely easy.

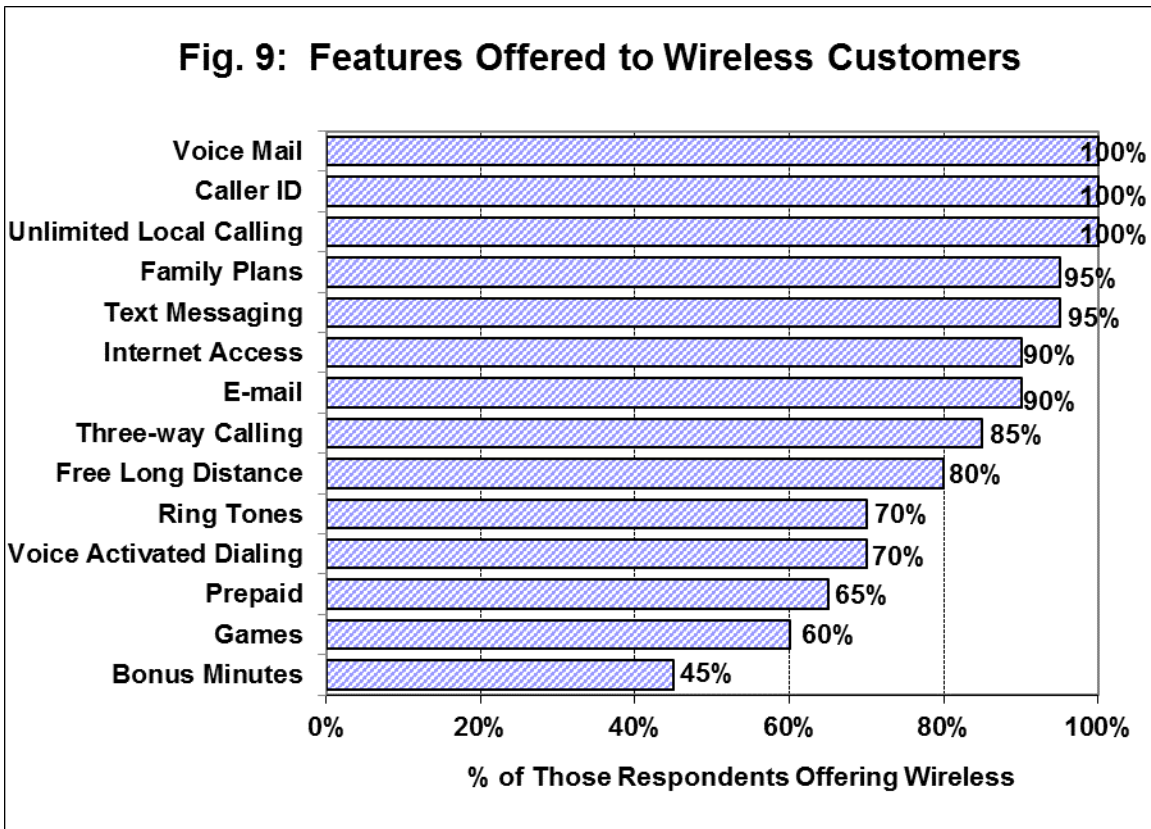
Of those respondents who have a reciprocal roaming agreement with another carrier, 65% indicated that they pay about as much on a per minute basis as they themselves are paid (up from 56% in 2011.) Thirty-five percent pay more on a per minute basis (28% in 2011), while 6% pay less (down from 17% in 2011.)⁹

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. Sixty-four percent of respondents have at one time been hindered in their ability to provide wireless service by the actions of a national wireless carrier.

Seven percent of survey respondents resell another carrier’s service under their own brand, while 13% do so under a national brand. Fifty-four percent sell service for which they own spectrum under their own brand, and 12% do so under a national brand. Thirty-six percent have at one time been hindered in their efforts to provide wireless service due to the actions of a national wireless carrier. Seventy-five percent have at one time entered into a joint venture with another wireless carrier.

Survey respondents offer myriad features to their wireless customers. One hundred percent of survey respondents offer their wireless customers voice mail, 100% caller ID, 100% unlimited local calling, 95% family plans, 95% text messaging, 90% Internet access, 90% e-mail, 85% three way calling, and 80% free long distance. (See Fig. 9.)

⁹ Totals exceed 100% as respondents may have roaming agreements with more than one other carrier.



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

Respondents indicated considerable customer loyalty. Fifty-six percent of survey respondents experience annual customer churn of less than 10%, while 32% reported annual churn of between 10% and 25%. Eight 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 2.0% to 2.5%, or from 24% to 30% annually.¹⁰

Thirty-five percent of survey respondents indicated that wireless customers left due to issues concerning handset availability, down from 52% a year ago. Twenty-six percent said that it was due to lower prices from another provider (up from 19%), and 4% due to additional services available from another provider (down from 14%).

¹⁰ Federal Communications Commission, *Sixteenth Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, WT Docket No. 11-186 (Terminated), rel. March 21, 2013, p. 165.

CONCLUSIONS

Survey respondents’ desire to provide wireless service is evidenced by their substantial investments, despite the difficulty in obtaining financing. NTCA member companies tend to be small entities, with limited capital resources. The fact that they have invested substantial sums in their wireless networks indicates just how important they consider their ability to provide these vital services to be. The fact that one-third of respondents classified the process of obtaining financing as “very difficult” or “nearly impossible” provides further proof.

The ability to obtain spectrum at auction remains a significant concern for survey respondents. NTCA member companies’ difficulties competing at auction with larger carriers and their vast financial resources has long been a significant barrier to these rural providers. Survey results indicated that this is still a concern—nearly one-half of all survey respondents cited it as a significant problem.

More players want to get into the game: nearly a third of those not currently offering wireless service are considering doing so in the near future. Two-thirds of survey respondents are currently offering wireless service. Over one-third of those who are not are considering doing so in the near future. This will require them to successfully overcome the barriers highlighted in this report by those NTCA members currently providing wireless service. Nearly half of those not currently offering wireless have assessed the obstacles and apparently deemed them insurmountable.

Survey respondents continue to face difficulties in negotiating roaming agreements with other carriers. Small wireless providers have little leverage in negotiating roaming agreements with larger carriers. Nearly half of survey respondents indicated that obtaining roaming agreements was an ongoing concern. And many of those who are able to enter into an agreement end up paying the price—approximately one third of survey respondents indicated they pay more for roaming than they themselves are paid.