

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

In the Matter of)
)
Wireless Telecommunications Bureau Seeks) WT Docket No. 16-137
Comment on the State of Mobile Wireless)
Competition)

**COMMENTS OF
NTCA–THE RURAL BROADBAND ASSOCIATION**

I. INTRODUCTION & STATEMENT OF INTEREST

NTCA–The Rural Broadband Association (“NTCA”) hereby submits these comments in the above captioned proceeding.¹ NTCA is an association of nearly 900 rural telecommunications operators that provide a mix of broadband Internet access, video, long distance and/or wireless service in some of the hardest-to-serve regions of the United States.

In its *Public Notice*, the Bureau seeks information about wireless providers and the services offered. NTCA regularly solicits data from its members about wireless services offered, technology(ies) employed, and customers served. NTCA’s latest wireless survey report was published in January 2016.² One hundred-nine member companies responded to NTCA’s request for information. The survey results provide

¹ Wireless Telecommunications Bureau Seeks Comment on the State of Mobile Wireless Competition, *Public Notice*, WT Docket No. 16-137, DA 16-450 (rel. April 29, 2016) (*Public Notice*).

² *NTCA 2015 Wireless Survey Report* (released January 2016). Attached as an Appendix to these comments. Also available online at www.ntca.org/images/stories/Documents/Advocacy/SurveyReports/2015ntcawirelessurvey.pdf.

aggregated information about pricing, features, and technology. Sixty percent of survey respondents offer some type of wireless services to their customers. Forty-two percent of those survey respondents who provide wireless service offer mobile voice and 40% mobile broadband. However, more members who offer wireless to their subscribers--87%--use their spectrum as a cost-effective means of offering a fixed broadband product in specific circumstances.³ A copy of NTCA's most recent survey report is attached.

II. MOBILE WIRELESS SERVICES

The Bureau asks for detailed information on the current deployment of specific mobile broadband network technologies.⁴ NTCA asked its members to provide information on both current technology and future plans. Asked which wireless CMRS technologies their company has deployed, 73% of survey respondents indicated LTE service, 55% CDMA EVDO, 46% CDMA 1X, 46% GSM, 32% HSPA+, 18% WiMax, 14% UMTS/WCDMA, and 5% TDMA.⁵ Sixty-four percent of those survey respondents currently offering wireless indicated that they had plans to deploy next generation technology, and 75% of those plan to do so within the next 1-2 years.⁶ Ninety-three percent said they would be deploying LTE.⁷

NTCA's members offer mobile service in a variety of configurations suited to their needs and subscribers' expectations. The majority of NTCA's members have wireless licenses and sell service under their own brand name (53%). Seven percent with

³ NTCA 2015 Wireless Survey Report, p. 8.

⁴ *Public Notice*, p. 4.

⁵ NTCA 2015 Wireless Survey Report, p. 11.

⁶ *Ibid.*

⁷ *Id.*, p. 12.

spectrum offer service to subscribers under a national brand. Seventeen percent of survey respondents resell another carrier's service under their own brand, while 10% do so under a national brand.⁸

III. NTCA MEMBERS' CONCERNS

The Bureau seeks information about “the factors affecting consumers’ choices...in the mobile wireless industry today, and on the usage of mobile wireless services.”⁹ NTCA questioned its members who do not offer wireless services about their future wireless plans. Sixteen percent indicated that they are considering entering the wireless arena, while 69% say that they previously considered offering wireless service and deemed it not feasible.¹⁰

A number of concerns threaten NTCA's members' wireless plans. Seventy-six percent of survey respondents indicated that “competition from national carriers” is a concern.¹¹ Consumers in rural areas see the advertisements of national carriers and expect their local providers to offer the same prices, the same handsets, and the same nationwide service as the large carriers. Despite some lessening of exclusive agreements between handset manufacturers and the largest providers, small carriers still report having difficulty obtaining the newest handsets and are thus at a severe competitive disadvantage. This is reflected in the fact that 42% of survey respondents indicated that

⁸ NTCA 2015 Wireless Survey Report, p. 14.

⁹ *Public Notice*, p. 7.

¹⁰ NTCA 2015 Wireless Survey Report, p. 9.

¹¹ *Id.*, p. 13.

handset availability remained a major barrier to their ability to provide wireless service to their customers.¹²

The inability to negotiate favorable roaming agreements is another competitive impediment for small providers. Though the Commission has adopted data roaming requirements,¹³ more than a third of the survey respondents (39%) complained that “negotiating roaming agreements” remains a major area of concern.¹⁴ Bi-lateral roaming agreements ensure the best user experience. Consumers have service wherever a compatible network is available. However, even when the rural provider offers the only service in an area, larger providers often restrict their customers’ ability to roam on the rural network. This practice has serious competitive and public safety ramifications.¹⁵ There should be a thorough, Commission-led examination of whether the rules in place are enabling an effective roaming marketplace in which consumers do not lose access to service.

IV. SPECTRUM

The *Public Notice* requests data on the utilization of spectrum.¹⁶ NTCA’s Wireless Survey Report provides information about the spectrum members currently hold

¹² *Ibid.*

¹³ *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services*, Second Report and Order, WT Docket No. 05-265 (rel. Apr. 7, 2011).

¹⁴ NTCA 2015 Wireless Survey Report, p. 13.

¹⁵ *See*, Joint Comments of the Rural Wireless Association and NTCA – The Rural Broadband Association, *Improving Resiliency, Reliability and Continuity of Mobile Wireless Communications Networks*, PS Docket Nos. 13-239, 11-60 (filed May 31, 2016).

¹⁶ *Public Notice*, p. 5.

and use,¹⁷ but the continued availability of licensed spectrum for small companies is a large concern. Since 2001, more than a dozen wireless mergers or acquisitions have occurred. Large carriers are getting larger.¹⁸ Despite an increase in spectrum availability, just over half of NTCA's members currently hold wireless spectrum licenses – about the same as in 2001.¹⁹

Forty-two percent of NTCA's 2015 survey respondents cited the inability to obtain spectrum at auction as a concern.²⁰ Small carriers cannot compete with large carriers interested in the same spectrum asset. Increasing spectrum needs of consumers, but decreasing capabilities to obtain and then use spectrum in a competitive marketplace, are making it difficult for small wireless carriers to remain viable. The Commission should employ proven methods that ensure that small providers have a realistic opportunity to obtain spectrum. Bid credits, small geographic licensing areas and strict build out periods would help provide a more level playing field for small, rural providers who compete in spectrum auctions.

¹⁷ See, NTCA 2015 Wireless Survey Report, pp. 6-7.

¹⁸ *Policies Regarding Mobile Spectrum Holdings*, Report and Order, WT Docket No. 12-269, GN Docket No. 12-268, at ¶ 24 (rel. June 2, 2014) (stating the number of nationwide facilities-based wireless service providers has decreased by a third from six to four – Verizon Wireless, AT&T, Sprint and T-Mobile).

¹⁹ Survey results indicate that NTCA member companies face challenges in utilizing unlicensed spectrum, as well. While 39% of respondents use unlicensed spectrum for backhaul, and 47% are using unlicensed spectrum to provide wireless services to customers (including fixed broadband and backhaul), 65% of those using unlicensed spectrum indicated they had difficulties doing so, mainly interference and line-of-site problems. See, NTCA 2015 Wireless Survey Report, pp. 7, 11.

²⁰ *Id.*, p. 13.

V. CONCLUSION

NTCA's annual wireless survey shows its member companies are doing a commendable job of providing service to their rural customers despite the often formidable challenges they face. The Commission—through actions such as: 1) investigating the current state of roaming between large providers and small; 2) prohibiting exclusive handset agreements between wireless providers and manufacturers; and 3) ensuring that small providers have a reasonable opportunity to obtain spectrum at auction—can play an important role in ensuring that rural Americans are able to receive the same high-quality wireless service as their non-rural counterparts.

Respectfully submitted,



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May 31, 2016



NTCA 2015 WIRELESS SURVEY REPORT

January 2016

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 2015 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; 109 members (18%) responded.¹

Forty-eight percent of survey respondents indicated that they hold at least one wireless license below 2.3 GHz; 10% hold at least one license above 2.3 GHz. Sixty percent are providing wireless service to their customers.² Eighty-seven percent of those use spectrum to offer fixed broadband, 42% mobile voice, 40% mobile broadband, 37% text messaging and 28% fixed voice. Fifteen percent of survey respondents not currently offering wireless service are considering doing so.

The median total (cumulative) investment in wireless facilities, excluding spectrum, is \$1.3 million; median total (cumulative) investment in spectrum totaled \$75 thousand.

Seventy percent of survey respondents characterized the process of obtaining financing for wireless projects as ”somewhat difficult” or ”very difficult;” 20% characterized the process as ”relatively easy.”

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

Seventy-six percent of all respondents indicated that competition from nationwide carriers was their greatest concern, 55% selected the ability to make necessary investments to be able to offer the latest services, 42% handset/equipment availability, 42% the ability to obtain spectrum at auction, 39% the ability to negotiate roaming agreements with national carriers, and 34% backhaul capacity/cost.³

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

Thirty-nine 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 50% pay more and 11% 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.



Seventeen percent of those survey respondents offering wireless resell another carrier's service under their own brand, and 10% do so under a national brand. Fifty-three percent sell service for which they own spectrum under their own brand, and 7% do so under a national brand. Eighty-nine percent find it difficult to compete with promotions offered by the national carriers.

Ninety-one percent of those respondents providing wireless service offer their wireless customers voice mail, and 91% offer handset promotions. Eighty-six percent offer Internet access, 86% unlimited local calling, 82% caller ID, 82% text messaging, 77% free long distance, 77% family plans, and 77% three-way calling. Fifty-four percent of survey respondents experience annual customer churn of less than 10%, while 42% reported annual churn of between 10% and 25%. These figures are well below the FCC's reported industry annual average of between 14% and 29%.

INTRODUCTION

In the fall of 2015, 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 2014, and seeks to build upon the results of that survey.⁵

OVERVIEW OF SURVEY

The 2015 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

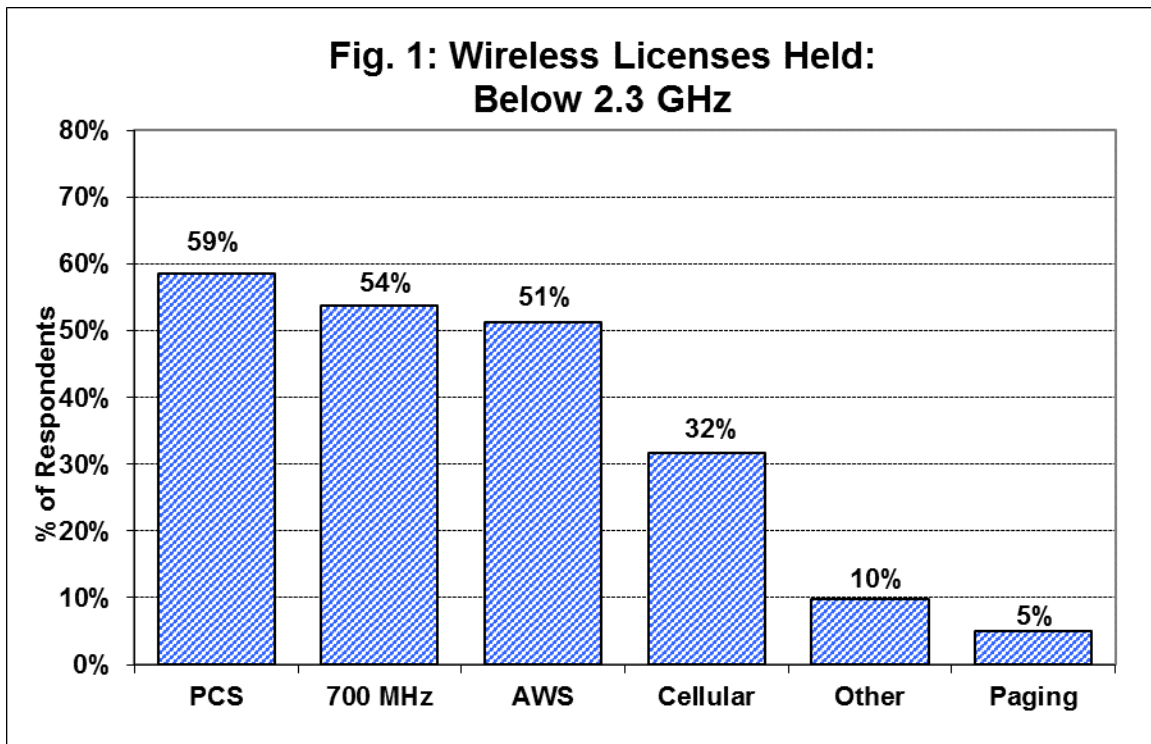
The survey URL was distributed via email to all of the NTCA member companies in NTCA’s database. The messages contained instructions for online access to the survey. Responses were received from 109 member companies, an 18% response rate.⁶

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.

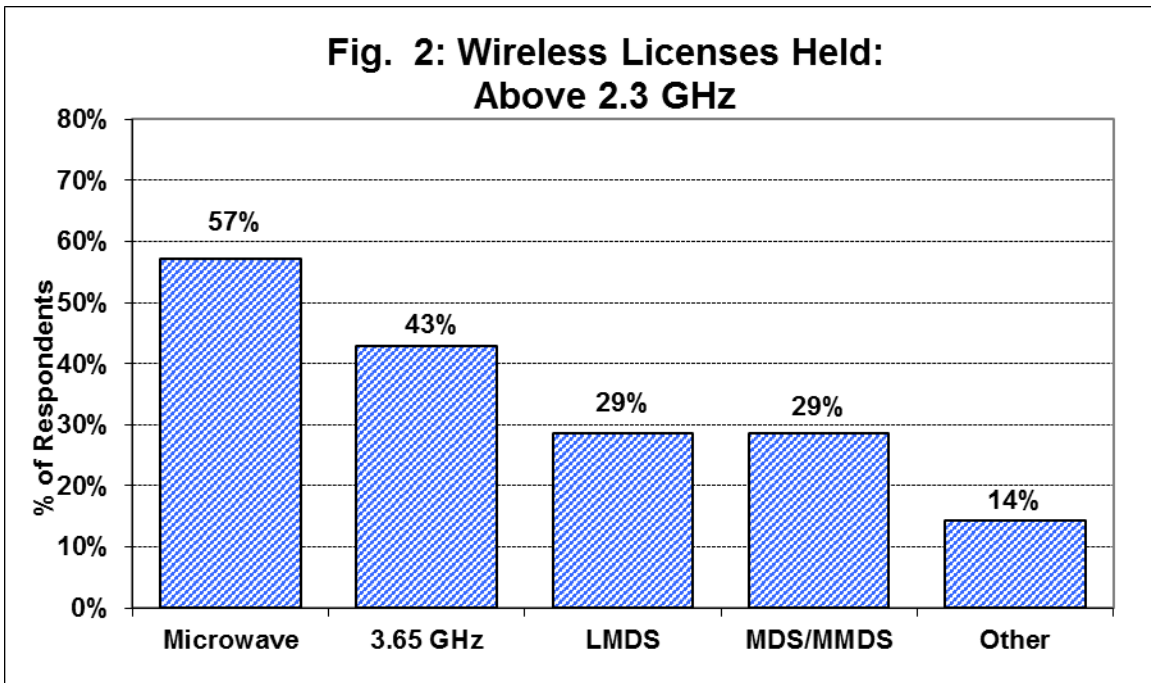
Survey responses were received from companies in 32 states. While those respondents providing wireless services range in size from approximately 36 wireless customers to almost 121,000, the median respondent served just over 2,500 wireless customers. This heterogeneity in size and geographic location mirrors that of NTCA’s membership as a whole.

Forty-eight percent of survey respondents indicated that they currently hold at least one spectrum license below 2.3 GHz. Fifty-nine percent of those who hold a license below 2.3 GHz have a PCS license, 54% a 700 MHz license, 51% an AWS license, 32% cellular, 10% other (such as microwave, 800 MHz, or 900 MHz), and 5% paging.



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

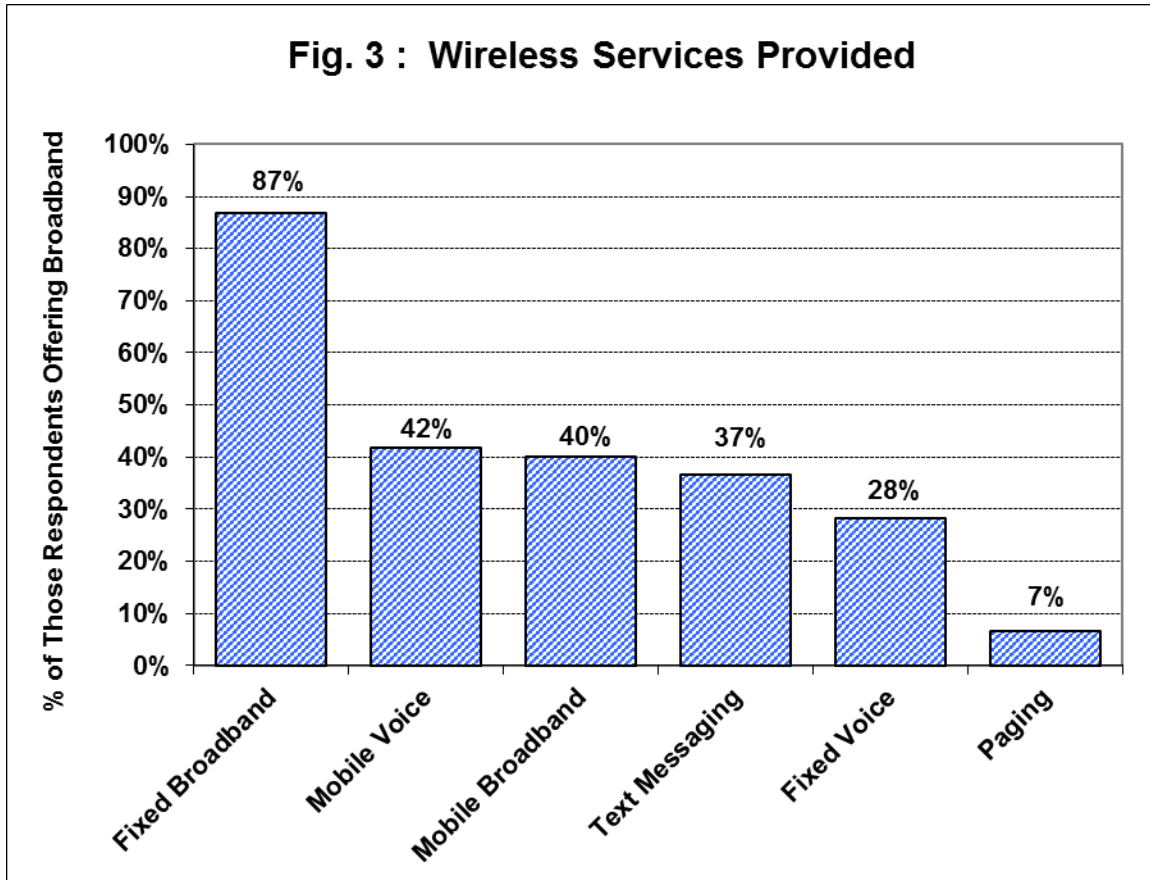
Ten percent of survey respondents providing wireless service indicated that they currently hold at least one wireless license above 2.3 GHz. Fifty-seven percent of those who hold a license above 2.3 GHz have a microwave license, 43% a 3.65 GHz license, 29% an LMDS license, and 29% MDS/MMDS. (See Fig. 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, 61% utilize licensed spectrum, while 39% use unlicensed spectrum. Fifty-six percent said that their wireless spectrum currently used for backhaul will not be adequate to meet their forecasted future needs. Sixty-two percent of survey respondents indicated that 100% of their existing sites deployed today are currently IP backhaul ready.

Sixty percent of survey respondents are offering some type of wireless services to their customers⁷. Of those using spectrum to provide wireless services, eighty-seven percent offer fixed broadband (up from 80% a year ago), 42% mobile voice (down from 48%), 40% mobile broadband (41% last year), 37% text messaging (38%), and 28% fixed voice (up from 23%). (See Fig. 3.)

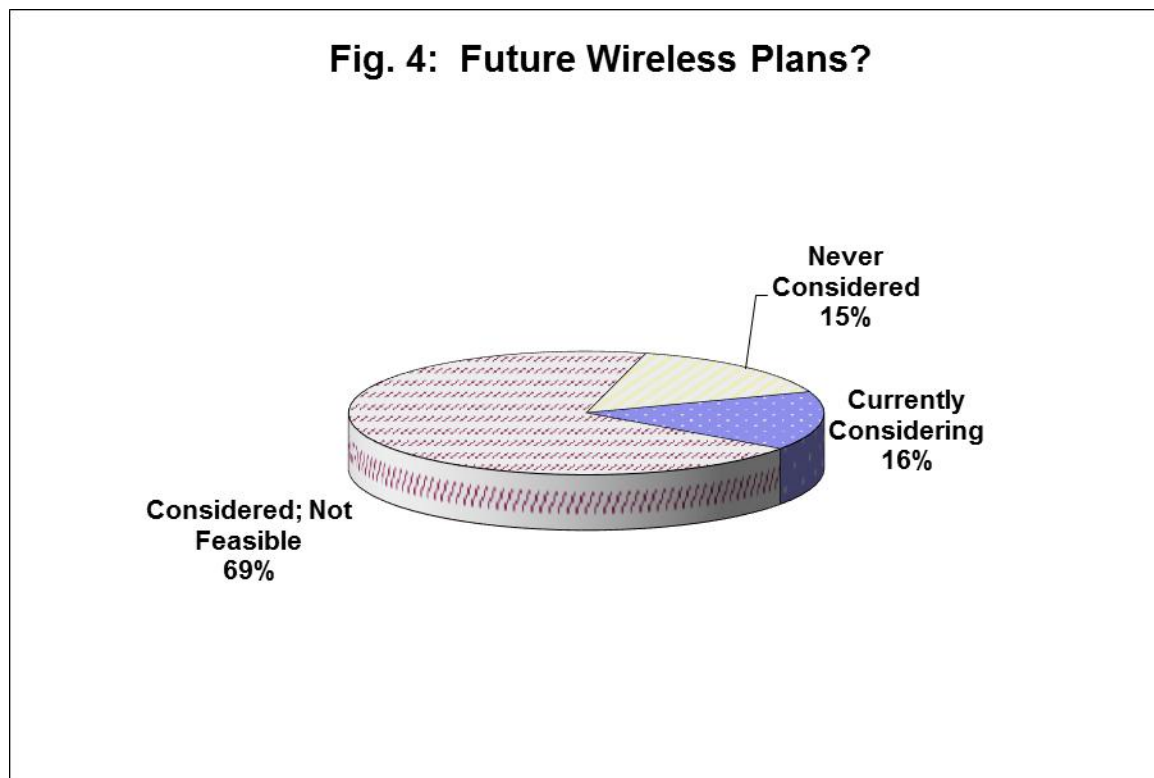


Note: Totals exceed 100% as carriers may provide more than one wireless service.

Twelve percent of survey respondents currently offer their customers text-to-911 service, up from 10% last year.

⁷ Includes respondents utilizing unlicensed spectrum to provide wireless service.

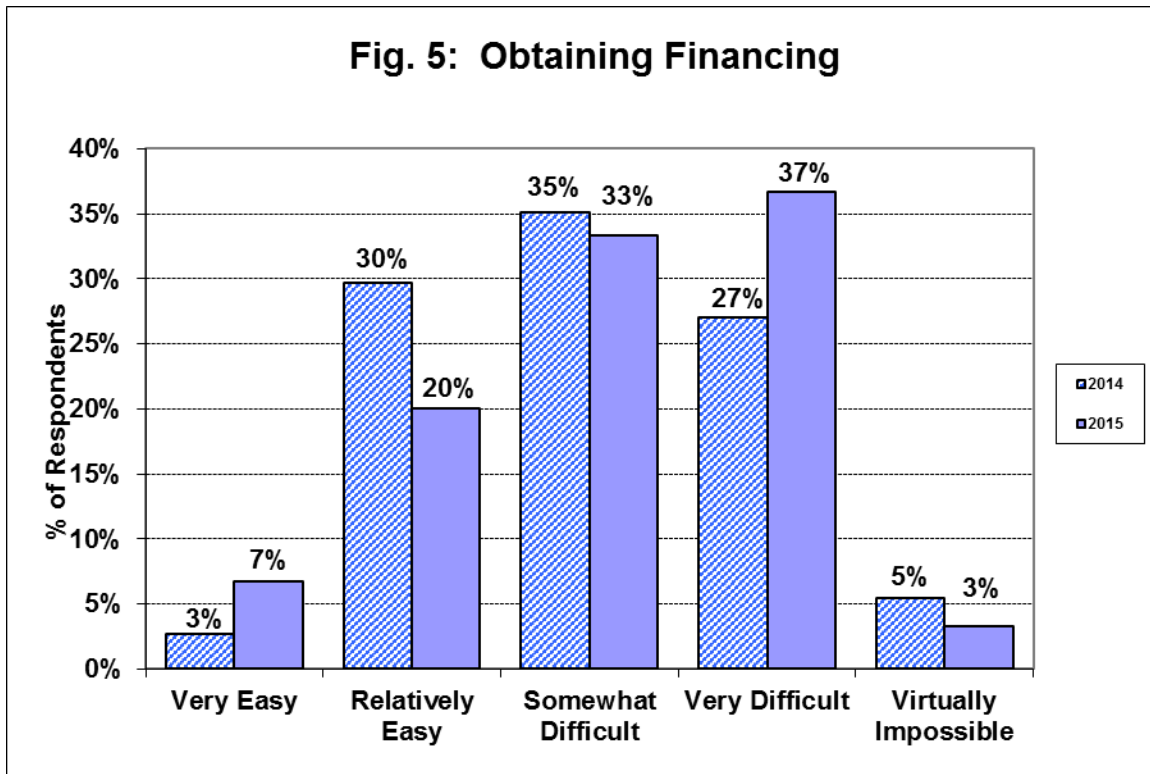
Sixteen percent of the respondents not currently offering wireless service indicated they are considering doing so (down from 35% in 2014.) Sixty-nine percent have previously considered offering wireless service and deemed it not feasible (up from 47%), while 15% have never considered wireless (down slightly from 18%.) (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 \$1.3 million, ranging from a high of \$180 million to a low of \$5,000. The average investment was \$12.5 million. Median total (cumulative) investment in spectrum totaled \$75 thousand, and the average was \$1.1 million. Median annual wireless revenues were \$4.1 million, and the average was \$16.2 million. Revenues have increased over the past five years for 50% of respondents.

Survey respondents serve an average of 11,495 wireless subscribers with an average of 53 cell sites. (A few larger respondents skew these numbers upwards, however: the median number of wireless subscribers is 2,555 and the median number of cell sites is 22.) The average customer’s monthly wireless bill is between \$50 and \$60, and the typical customer uses just over 600 minutes monthly. Eighty-nine percent of responding companies find it difficult to compete with promotions—such as free long-distance or free/reduced price handsets—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 “somewhat difficult” as in the 2014 survey (33% in 2015 vs. 35% in 2014) many more found the process “very difficult” (37% vs. 27%) in 2015 than in 2014. Fewer respondents classified the process as “relatively easy” in 2015 as in 2014, 20% vs. 30%. (See Fig. 5.)



Survey respondents utilize a variety of means of funding their wireless operations. Seventy-five percent reinvest company earnings, 41% utilize grants or loans, 34% receive high-cost USF support, and 10% use individual investors or general funds.⁸

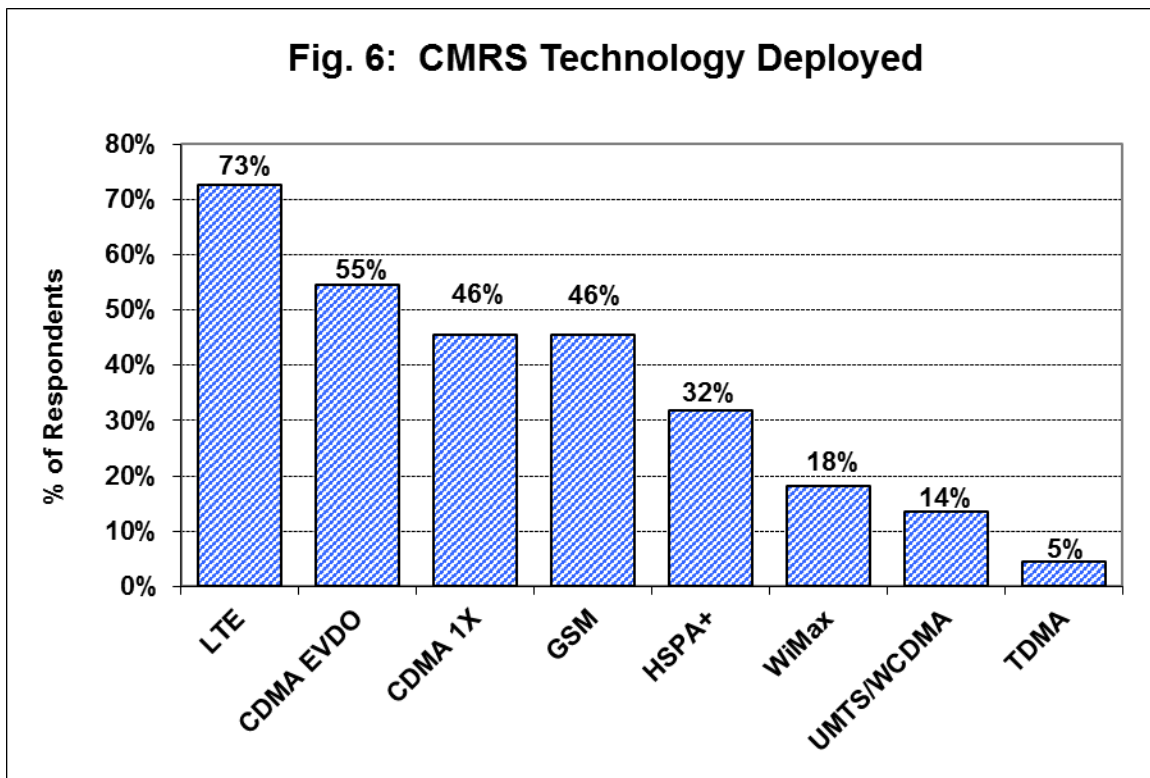
Forty percent of survey respondents indicated that they had acquired spectrum in the preceding twelve-month period, while 24% made arrangements for the utilization of previously acquired spectrum. Twenty-eight percent entered into negotiations for the acquisition of spectrum, and thirty-six percent relinquished spectrum.

Fifty-one percent of survey respondents are looking to provide wireless service to both their wireline service area and neighboring territories; 30% seek to serve neighboring territories only; and 19% their own wireline service territory only.

⁸ Totals exceed 100% as respondents may utilize more than one source of financing.

Forty-seven 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-five percent of those respondents using unlicensed wireless spectrum indicated that they had experienced difficulties doing so, mainly interference and line-of-sight problems.

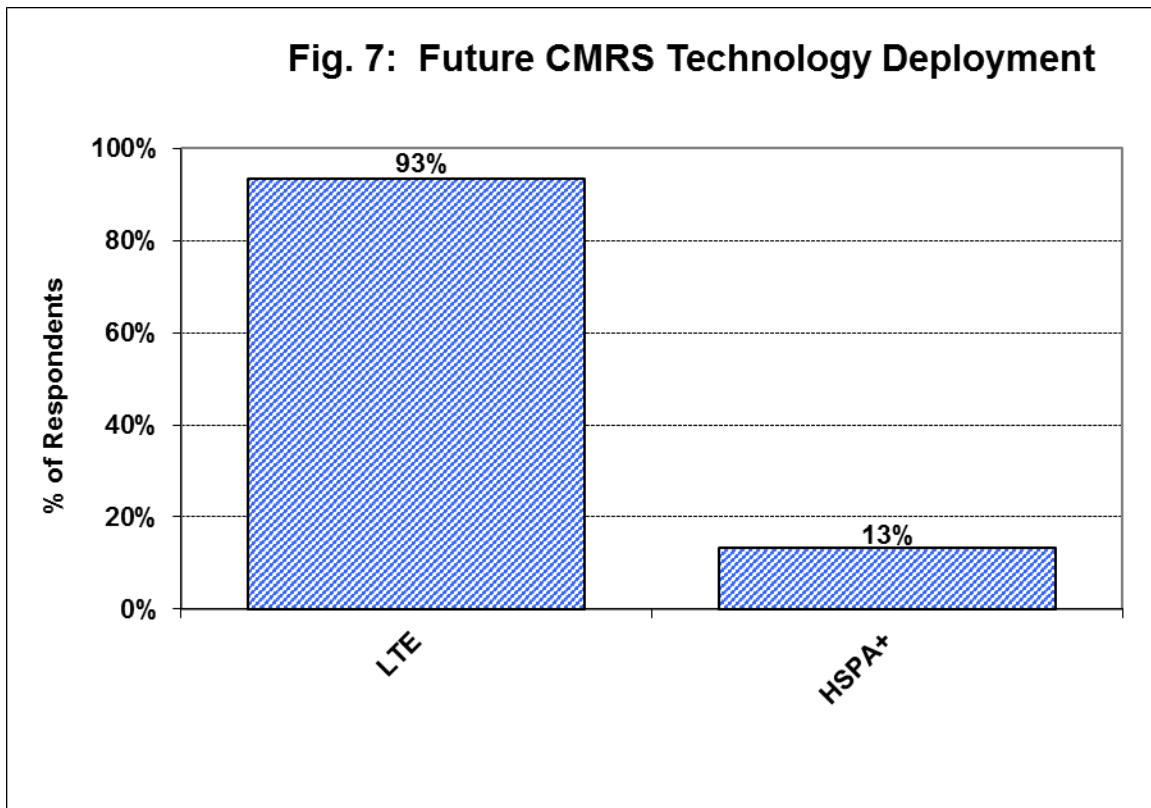
Asked which wireless CMRS technologies their company has deployed, 73% percent of survey respondents indicated LTE service (up from 50% in 2014), 55% CDMA EVDO, 46% CDMA 1X, 46% GSM, 32% HSPA+, and 18% WiMax. (See Fig. 6.)



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

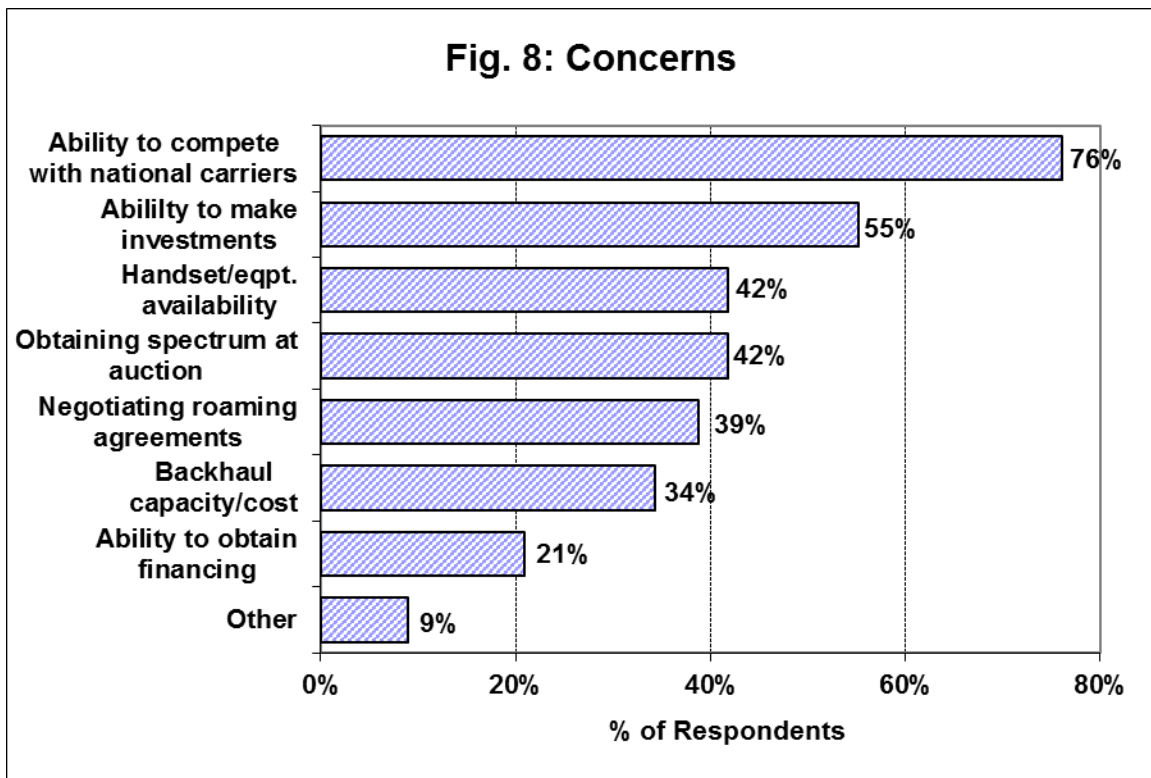
Sixty-four percent of those survey respondents currently offering wireless indicated that they had plans to deploy next generation technology. Of those, 75% plan to deploy in the next 1-2 years.

Ninety-three percent of those survey respondents who have plans to deploy next generation technology said that they would be deploying LTE. Thirteen percent indicated their next deployment would be HSPA+. (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-six percent indicated that they were concerned about their ability to compete with national carriers, about the same as 2014. Fifty-five percent cited their ability to make necessary investments to be able to offer the latest services (versus 54% in 2014), 42% handset/equipment availability (54% in 2014), 42% the ability to obtain spectrum at auction (45% in 2014), 39% their ability to negotiate roaming agreements with national carriers (45% in 2014), 34% backhaul capacity/cost (31% in 2014), and 21% their ability to obtain financing for wireless projects (27% in 2014). (See Fig. 8.)



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

“Other” concerns include overbuilding by WISPs, bandwidth capacity, local competition, and terrain.

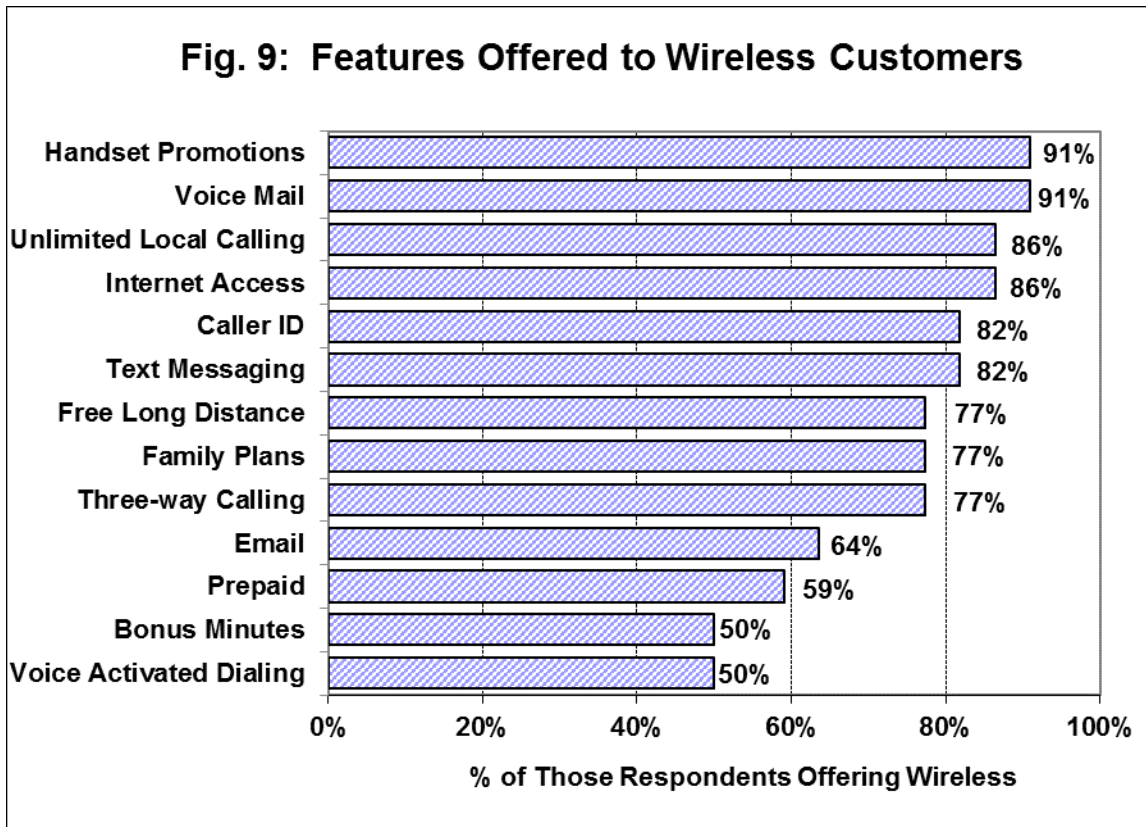
Asked to categorize their experience in negotiating data roaming and in-market roaming agreements with other carriers, 60% categorized it as moderately to extremely difficult (up from 47% in 2014.) Thirty-five percent categorized the experience as moderately to relatively easy, and 5% as extremely easy.

Of those respondents who have a reciprocal roaming agreement with another carrier, 39% indicated that they pay about as much on a per minute basis as they themselves are paid (down from 65% in 2014.) Fifty percent pay more on a per minute basis, while 11% pay less.

One hundred percent of survey respondents indicated they are facing competition from other carriers. However, 14% indicated that these competitors serve only a small portion of the respondent's service area. Fifty-two percent of respondents have at one time been hindered in their ability to provide wireless service by the actions of a national wireless carrier.

Seventeen percent of survey respondents resell another carrier's service under their own brand, while 10% do so under a national brand. Fifty-three percent sell service for which they own spectrum under their own brand, and 7% do so under a national brand. Sixty-eight percent have at one time entered into a joint venture with another wireless carrier.

Survey respondents offer myriad features to their wireless customers. Ninety-one percent offer handset promotions (such as free/reduced price, short/no contract, reduced upgrade cycle, etc.), 91% voice mail, 86% unlimited local calling, 86% Internet access, 82% caller ID, 82% text messaging, 77% free long distance, 77% family plans, and 77% 3-way calling. (See Fig. 9.)



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

Respondents indicated considerable customer loyalty. Fifty-four percent of survey respondents experience annual customer churn of less than 10%, while 42% reported annual churn of between 10% and 25%. Four 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 1.2% to 2.4%, or from 14% to 29% annually.⁹

Twenty-nine percent of survey respondents indicated that wireless customers left due to lower prices from another carrier (up from 26% in 2014), 21% due to handset availability (down from 35%), 21% due to additional services available from another provider (up from 4%), 4% due to the ability to bundle services with another provider, and 4% due to coverage issues.

⁹ Federal Communications Commission, *Seventeenth Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, WT Docket No. 13-135, rel. December 18, 2014, p. 14.

CONCLUSIONS

Survey respondents are noting improved access to licensed spectrum. Forty percent of survey respondents reported that they had acquired spectrum in the past twelve months, up from 22% in 2014. At the same time, the percentage of respondents using unlicensed spectrum for backhaul fell from 52% to 39%. And those respondents identifying the ability to obtain spectrum at auction as a concern dipped slightly, from 45% to 42%. While work remains to be done to ensure that small wireless carriers have access to the vital spectrum they need, the trends identified in this survey are a cause for cautious optimism.

Small wireless providers continue to have a hard time negotiating roaming agreements with larger providers. In 2014, 47% of survey respondents classified the process of negotiating roaming agreements with larger carriers as “moderately difficult” to “extremely difficult,” in this survey, that number had grown to 60%. Smaller carriers possess little negotiating leverage relative to their larger counterparts; at the same time, because of their small size, the ability to offer roaming to their customers is of critical importance.

Those survey respondents who are able to negotiate roaming agreements find themselves paying more for the privilege. Fifty percent of the respondents to this year’s survey reported paying more for roaming on another carrier’s network than the other carrier pays to roam on their network, up from 35% in 2014. Thirty-nine percent report paying about the same amount, down significantly from 65% in 2014. Again, given the vital importance to small carriers of the ability to offer their customers the ability to roam on other networks, this trend can have an extremely harmful impact on small carriers’ ongoing viability.

Survey respondents have increased the variety of handsets available to their customers, with beneficial impacts. In 2014, 54% of survey respondents indicated that handset availability was a concern, this year that percentage fell to 42%. At the same time, the percentage of customers leaving survey respondents’ due to handset availability fell from 35% to 21%. As in most businesses, in wireless the customer is king—and the inability to provide that customer with what they want is a surefire way to lose their business.