ELI offers other carriers its "Metro Private Line Access" product line that includes DS1 through OC192 private line services and Ethernet Private Line services as well.[134] In February 2007 Integra announced the completion of the first phase of a $28 million network upgrade project, and CEO Slater remarked that the project "[marked] the first of several investments we plan to make to our network as part of our commitment to better serve our customers" who are "thousands of business and carrier customers in eight Western states, including: Arizona [and seven others]."[135] With its separate Electric Lightwave division, Integra is a major provider of wholesale carrier services in the Phoenix MSA, and provides a clear alternative to Qwest wholesale services.

56. As stated earlier in my declaration, AT&T provides retail and wholesale services in the Phoenix MSA, and owns a significant fiber network. According to GeoTel, AT&T has approximately ***begin confidential *** *** end confidential*** route miles of fiber within the Phoenix MSA.[136] AT&T exhorts wholesale customers to "Team up with one of the leading wholesale transport and communications service providers in the world."[137] AT&T currently offers a full range of wholesale services, including: local and long distance voice services; VoIP; SS7 services; data services, including metro data and access services and long haul data transport and access; internet protocol (IP) services; applications services; and wireless services.[138] Its wholesale customers include wireless providers, cable operators, content providers, international carriers, Internet service providers, and systems integrators.[139]

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[134] See: http://www.electriclightwave.com/products/metro_private_line.asp, visited 1-29-09.

[135] See: http://www.integratelecom.com/about/news/news_releases/2007/2007-02-14_news_release.asp, visited 1-29-09

[136] Source: GeoTel, August 2008..

[137] See: http://www.business.att.com/content/productbrochures/WSadv_16003.pdf, visited 1-29-09.

[138] *Id.*

[139] See: http://www.business.att.com/wholesale/solutions_by_industry/; visited 1-29-09.

> Metro Area Networks (MANs) allow XO to control customer traffic and ensure an efficient data transfer to the intercity network. XO® metro-area networks are composed of enough metro fiber-optic cable to circle the globe more than 45 times – 1.16 million metro fiber miles throughout 40 major cities, including the largest 30 cities in the United States. Unlike non-facilities based providers or long-haul providers, XO, with its MANs, has access to the end customer.[145]

58. In addition, it is important to note that XO's wholesale business is not limited to services provided via its extensive landline fiber facilities. As noted earlier in this declaration, XO's broadband wireless subsidiary, Nextlink, provides wholesale telecommunications services including "last mile" connectivity. XO/Nextlink announced the launch of broadband wireless services in Phoenix in March 2007:

> Businesses in the Phoenix metropolitan area now have a new option for high-speed Internet access and private data networking services thanks to the roll out of broadband wireless technology from XO Communications and Nextlink Wireless, Inc. . . . With broadband wireless technology, businesses at locations that lack fiber connection or are only serviced by one local incumbent service provider can receive high-speed network services directly to businesses over wireless lines at speeds ranging from 10 Mbps to 155 Mbps (OC-3) to support a wide range of communications services . . . Broadband wireless technology allows XO Communications to expand its network coverage in the Phoenix [sic] beyond its metro fiber network and fill a critical gap for businesses that require higher-speed network speeds but are constrained by the bandwidth limitations of current "last-mile" copper-based access connections or due to a lack of direct access to fiber.[146]

XO/Nextlink explained that its broadband wireless coverage "initially includes the downtown Phoenix area", but noted that in the future it had "the ability to deploy additional wireless hubs to reach qualified locations across the Phoenix metropolitan area

[145] See: http://www.xo.com/about/network/Pages/details.aspx, visited 1-30-09..

[146] See: http://www.xo.com/about/news/Pages/335.aspx, visited 1-30-09.

including Paradise Valley, Scottsdale and Tempe."[147] Nextlink's wholesale broadband wireless services can be offered in any Qwest wire center in the Phoenix MSA that is within reach of a Nextlink broadband wireless transmitter/receiver, since such wireless services are not constrained by physical wire center boundaries.

59. Level 3 is a major provider of wholesale telecom services to other carriers in the Phoenix MSA. Level 3 reports that its Wholesale Markets division serves "national and global service providers with integrated data, voice, and video services" and counts among its customers "19 of the world's top telecom companies; 9 of the top 10 U.S. Internet Service Providers (ISPs); 9 of the top 10 U.S. cable companies; and the top 5 U.S. Wireless Service Providers."[148] In its August 2008 Informational Investor Presentation, Level 3 advised investors that its wholesale business had accounted for 56 percent of its core communications services revenue for the second quarter of 2008, and it listed Cox, Verizon and Sprint as being among its wholesale customers.[149] In its investor presentation, Level 3 also noted that its services were "primarily offered over its [own] combined long distance and metro network."[150] According to Level 3, it serves 125 metro fiber markets and owns 26,000 metro miles of fiber, with over 100,000 enterprise buildings within 500 feet of its U.S. network.[151] Level 3's network map identifies Phoenix as an "On-Net Market with Metro Fiber Network."[152] As noted earlier in this declaration, the combined Level 3/Broadwing entity has significant facilities in the Phoenix MSA, with over ***begin confidential** ***end confidential*** fiber miles

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[147] *Id.*

[148] See: http://www.level3.com/index.cfm?pageID=241, visited 2-24-09.

[149] See: http://files.shareholder.com/downloads/LVLT/317149461x0x222986/1852a35c-1e10-493c-8c77-b800233ba2cd/Investor%20Presentation_Aug_2008.pdf. *See* Slide 13, visited 2-24-09.

[150] *Id.*, Slide 5.

[151] *Id.*, Slide 9.

[152] See http://www.level3.com/index.cfm?pageID=130 to download map.

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in Qwest's serving territory in the Phoenix MSA.[153] These facilities may be used to offer carrier access to customers without reliance on Qwest's network.

60. tw telecom (fka Time Warner Telecom[154]) offers "managed networking solutions to a wide array of businesses and organizations in 75 markets spanning 30 states and D.C."[155] tw telecom provides a wide range of wholesale services, including voice services, Internet and data services, dedicated high capacity services, switched and transport services and collocation.[156] For example, tw telecom has a long-term agreement in place with AT&T/SBC, which extends through 2010, that provides AT&T with Special Access and **"last mile" connectivity to customers** via tw telecom's network. This provides AT&T with a clear alternative to Qwest Special Access services in the Phoenix MSA.[157] (emphasis added) In its September 2008 Investor Presentation, tw telecom told investors it currently has: "nearly 26,000 metro and regional fiber route miles across [its 75] markets; approximately ***8,800 buildings lit with fiber based services***; and [a] national footprint interconnected with fiber and multipurpose IP backbone up to 10 Gig."[158] (emphasis added) tw telecom offers other carriers a clear alternative to Qwest facilities for reaching end-user business customers and according to GeoTel, now owns over ***begin confidential** ***end confidential*** miles of fiber in Qwest's wire centers in the Phoenix MSA, as discussed earlier in this declaration.[159]

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[153] Source: GeoTel, August 2008.

[154] Time Warner Telecom operated under a name licensing agreement with its former parent company, Time Warner, Inc. That agreement expired on June 30, 2008, and effective July 1, 2008 Time Warner Telecom became tw telecom. (*See* http://www.twtelecom.com/Documents/Announcements/News/2008/newname.pdf.)

[155] See: http://www.twtelecom.com/about_us/about_us.html, visited 1-20-09.

[156] See: http://www.twtelecom.com/cust_solutions/carrier.html, visited 1-20-09.

[157] Time Warner Telecom press release, 6-1-05, see: http://www.twtelecom.com/Documents/Announcements/News/2005/TWTC_ATT_SBC_Renewal2005.pdf.

[158] See: http://www.twtelecom.com/Documents/Announcements/Earnings/2008/TWTC_September_2008_IR_presentation_(A).pdf, Slide 6.

[159] Source: GeoTel, August 2008.

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61. AboveNet is yet another provider of fiber solutions to businesses and carriers in the "14 top U.S. metro markets", including Phoenix.[160] AboveNet's services include Metro Access Networks (MANs), Wide Area Networks (WANs), and Managed Services, including WDM Wavelength Services, Metro Ethernet, WAN Ethernet and IP Transit.[161] Its network reach includes over 1,300 lit buildings and over 1.5 million fiber miles worldwide.[162] On its website, AboveNet provides a map of its extensive Phoenix fiber network, which I have included as Exhibit 13.

62. 360 Networks Corporation ("360networks") is a privately-held, debt-free company that owns a 17,200 route mile broadband fiber optic network in the U.S., with 10,400 miles of that total in the 15 western U.S. states (including Arizona).[163] 360 Networks provides wholesale services, structured as network building blocks, to other carriers to facilitate delivery of VoIP-based residential and business services.[164] In mid-2007, 360 Networks significantly expanded its presence in Arizona as a provider of wholesale telecommunications services. In a May 15, 2007 press release, 360networks stated:

> 360networks, the premier provider of wholesale communications services in the western United States, today announced it is continuing with its aggressive expansion of its *VoIP360*^{sm} service offerings by adding 28 new Qwest® (NYSE: Q) rate centers in the state of Arizona. This brings the total number of rate centers offered to 565. 360networks plans on adding more than 600 new rate centers to its network over the next year, bringing the total number of available rate centers to over 1,000. The company's

[160] See: http://www.abovenet.com/about/., visited 2-24-09.

[161] *Id.*

[162] *Id.*

[163] See: http://www.360networks.com/default.asp?ID=19, visited 2-24-09.

[164] See: http://www.360networks.com/news.asp?PRID=10, visited 2-24-09.

> *VoIP360*[sm] service offerings allow local service providers to offer over 90% of the Arizona population (5,397,989*) VoIP services.[165]

360networks does not publicly divulge the specific Qwest Arizona rate centers in which its wholesale services are now offered. However, since the Phoenix MSA contains a disproportionate share of the state's population, 360networks' assertion that its services are now available to 90% of the Arizona population clearly means that its wholesale services are available in the Phoenix MSA.

63. As described in the preceding paragraphs, there are numerous wholesale providers serving carriers in the Phoenix MSA. Most of these providers own their own fiber networks, and as demonstrated above, the overall fiber coverage of the Phoenix MSA is extensive. Many buildings are already connected to these fiber networks, and many other buildings are in close proximity and could be easily connected—providing last mile connectivity to buildings where customers are located. CLEC Parties that oppose Qwest's petition are likely to argue that it is difficult to build "lateral" facilities from a fiber ring into a building, and that they are dependent on Qwest facilities for "last mile" connectivity. However, this is simply not the case, as confirmed by the fact that CLECs often advise the investment community how their fiber networks can be easily connected to the buildings where customers are located. For example, in a September 17, 2007 call with Investment Analysts regarding the merger of McLeod and PAETEC Holdings Corp, Royce Holland, CEO of McLeod stated:

> One thing we haven't done is put lot of that fiber in office buildings, because our business [has] been the small and medium enterprise business. That doesn't mean we couldn't light a lot of buildings throughout the Midwest. That's one of the potential upside advantages of getting together with Paetec.

[165] *Id.*

Our fiber can be useful for that. It's easy enough to get into a manhole and get the fiber into a building.[166]

In the Phoenix MSA, there are numerous options for carriers to purchase "last mile" wholesale services that allow them to bypass Qwest's network entirely.

V. RESIDENTIAL "APPENDIX B" MARKET SHARE CALCULATION

64. In the *Verizon 6 MSA Forbearance Order,* the Commission defined a market share calculation methodology that it used to determine the level of competition in the MSAs for which Verizon sought forbearance.[167] The Commission adopted a similar market share calculation methodology in Appendix B of its order in WC Docket No. 07-97.[168] Since the Commission indicated that this methodology should be used to calculate market shares in future forbearance proceedings, Confidential Exhibit 14 provides Qwest's estimate of the share of the residential market in the Phoenix MSA using the methodology defined by the Commission in Appendix B of the *Qwest 4 MSA Order.* As delineated in this exhibit, the "Appendix B" calculation estimates that Qwest's residential market share in the Phoenix MSA is ***begin confidential*** ***end confidential***.

65. In the Commission's order in WC Docket No. 07-97, in which it denied Qwest's request for forbearance in four MSAs, the Commission further clarified its position with

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[166] *PAETEC Acquires McLeodUSA*, Telephony Online, September 17, 2007; See: http://telephonyonline.com/access/news/paetec_acquires_mcleodusa_091707/ Also see McLeod/PAETEC Financial Analyst Call, September 17, 2007; http://www.secinfo.com/d14D5a.u66q2.htm.

[167] *Verizon 6 MSA Order*, 22 FCC Rcd at 21323, App. B

[168] *In the Matter of Petitions of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Denver, Minneapolis-St. Paul, Phoenix, and Seattle Metropolitan Statistical Areas, WC Docket No. 07-97, Memorandum Opinion and Order*, Released July 25, 2008 ("*Qwest 4 MSA Order*"). The Commission stated: "The formulas used to calculate market shares for purposes of this order are set forth in Appendix B." See footnote 64.

respect to the use of wireless substitution in a proper analysis of telecommunications competition:

> In calculating market shares, we believe it is appropriate to include wireless-only households (i.e., residential telephone customers who have "cut the cord"). In particular, we find that mobile wireless service should be included in the local services product market to the extent that it is used as a complete substitute for all of a consumer's voice communications needs. Over the past several years, as wireless substitution rates have continued to rise, the Commission has begun including such intermodal substitution in its competitive analyses of the local services market.[169]

Consistent with this determination, the calculation methodology developed by the Commission in Appendix B of the *Qwest 4 MSA Order* includes an input that represents "The percentage of wireless-only households expressed in decimal notation."[170]

66. In WC Docket No. 07-97, Qwest provided a market share analysis containing a "wireless only" percentage derived from a study of national wireless-only household data published by the Center for Disease Control ("CDC"), since the Commission had utilized that data source in the *Verizon 6 MSA Order*. Qwest also provided "wireless only" household data from Nielsen Mobile that was specific to the Phoenix MSA.[171] However, in the *Qwest 4 MSA Order*, the Commission rejected these data. First, the Commission rejected the CDC wireless substitution data because it provided only national and regional data, rather than MSA-specific data, and thus did not provide the necessary level of geographical granularity. The Commission stated:

> . . . . . with respect to the CDC data, we believe it is most consistent with our geographically-specific analysis in the *Qwest Omaha* line of precedent to rely

[169] *Id.*, para. 19.

[170] *Id.*, Appendix B.

[171] Nielsen Mobile purchased the consumer research firm Telephia.

> on a similarly geographically-specific measure of wireless substitution. In the present context, Qwest seeks regulatory relief for particular MSAs based on the specific competitive conditions in those markets, but the CDC estimates and the record generally do not contain reliable data of this type.[172] (footnotes omitted)

Second, the Commission rejected the Nielsen (Telephia) data because it did not believe that the level of documentation was sufficient:

> The only substantive information in the record regarding the Telephia survey is a press release that does not describe Telephia's methodology or provide any other information to support the data.[173]

67. While it rejected the specific data, the Commission reiterated in the *Qwest 4 MSA Order* that its Appendix B *methodology* was appropriate, and invited Qwest to refile its petition with reliable Phoenix MSA-specific wireless substitution data. The Commission stated:

> For these reasons, Qwest has not sufficiently supported its case for forbearance on the basis of reliable, geographically-specific data regarding the measure of wireless substitution in the four MSAs. We understand the importance of our decision to insist upon reliable data and recognize that Qwest might have qualified for some forbearance upon a better evidentiary showing. Qwest may, of course, refile its petitions and our decision in this instance does not prejudge the outcome in any future proceeding. We emphasize that petitioners relying on mobile wireless substitution to support forbearance relief should submit complete and reliable data that is geographically specific to the areas for which forbearance is sought.[174] (footnotes omitted)

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[172] *Qwest 4 MSA Order*, para. 21.

[173] *Id.*

[174] *Id.*, para. 22.

68. To satisfy the wireless substitution data requirements outlined by the Commission, Qwest commissioned an outside consulting firm, Market Strategies, Inc, to conduct a statistically valid study of wireless substitution in the Phoenix MSA. The study results and documentation are provided as Exhibit 5. In conducting its study, Market Strategies interviewed a statistically significant number of households in the Phoenix MSA, and the resulting wireless substitution percentages are within the desired +/- 5% confidence interval. As I noted earlier in my declaration, the study found that 25% of Phoenix MSA households have "cut the cord" and rely solely on wireless service to meet their telecommunications needs. Qwest utilized the 25% result in the "Appendix B" calculations in Confidential Exhibit 14.

69. The "Appendix B" methodology includes a measurement of "Qwest residential resold lines" and "Qwest residential platform service lines (QPP + QLSP lines)."[175] Qwest utilized its internal wholesale billing records for December 31, 2008, as presented in Confidential Exhibit 7, to determine the number of Qwest residential resold lines and QPP/QLSP lines.

70. The "Appendix B" methodology also includes an input for CLEC "facilities-based residential access lines."[176] In the *Qwest 4 MSA Order*, the Commission used the actual number of Cox Communications residential phone lines as provided by Cox for this input. However, in the *Qwest 4 MSA Order*, the Commission also found that "Qwest's white page listings data, although providing an inexact estimate, are a reasonable proxy for the number of total residential access lines in service."[177]. Since Qwest does not have

[175] *Id.*, Appendix B.

[176] *Id.*

[177] *Id.*, page 13.

access to Cox's confidential access line data, the "Appendix B" calculation in Confidential Exhibit 14 estimates CLEC facilities-based access lines using these directory listings data. Consistent with the Commission's guidance in the *Qwest 4 MSA Order*,[178] Qwest has made no adjustments to the residential listings data.[179]. Instead, it is assumed the number of CLEC facilities-based residential listings equals the number of CLEC facilities-based access lines.[180] As noted in its Petition, Qwest believes that in order to assure accuracy in the facilities-based access line data, the Commission should request updated telephone line counts from Cox, as it did in the *Qwest 4 MSA proceeding*. The updated number may be substituted into the "Appendix B" calculations in Confidential Exhibit 14.

[178] *Id.*, page 13, footnote 68.

[179] In its filing in WC Docket 07-97, Qwest adjusted the listings data to account for the fact that some lines do not have listings. Thus, Qwest divided the residential listings count by 75%, which increased the estimated lines. In this filing, Qwest has not performed this adjustment.

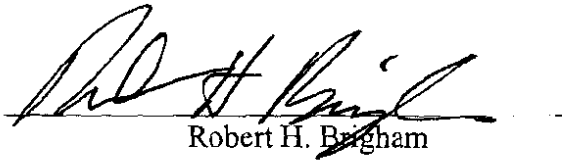
[180] The directory listings include listings for all residential facilities-based lines and may include some listings for residential lines served via UNE-L. However, the number of residential listings associated with UNE-L lines is likely to be very small, since CLECs that purchase UNE-L generally focus on serving only business customers. Thus, the listings data may slightly over-estimate the full facilities-based lines. As noted in Qwest's Petition, the Commission may derive a more accurate count by requesting access line data from Cox and other facilities-based providers.

VI. CONCLUSION.

71. The Phoenix MSA is one of the most robustly competitive markets in the United States, with a wide array of intermodal and intramodal carriers now actively competing in the residential, retail business and wholesale markets. In every Qwest wire center in the Phoenix MSA, customers now have the choice of at least one, and often many more, alternatives to Qwest's retail telecommunications services. This collection of competitors ranges from traditional wireline CLECs, to cable-based telecom service providers, to wireless (narrowband and broadband) providers to VoIP providers. Numerous alternative providers have built their own fiber networks in the Phoenix MSA, and these providers are offering wholesale services and "last-mile access" that allow other carrier to entirely bypass the Qwest network. Qwest's service territory in the Phoenix MSA is now fully competitive, and it is clear that Qwest cannot exercise market power in view of the scope and composition of competition that now exists in the MSA. Qwest clearly passes the "Appendix B" test defined by the Commission in the *Qwest 4 MSA Order*.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct

Executed on March 24, 2009



Robert H. Brigham

CONFIDENTIAL EXHIBIT 1

REDACTED IN ITS ENTIRETY

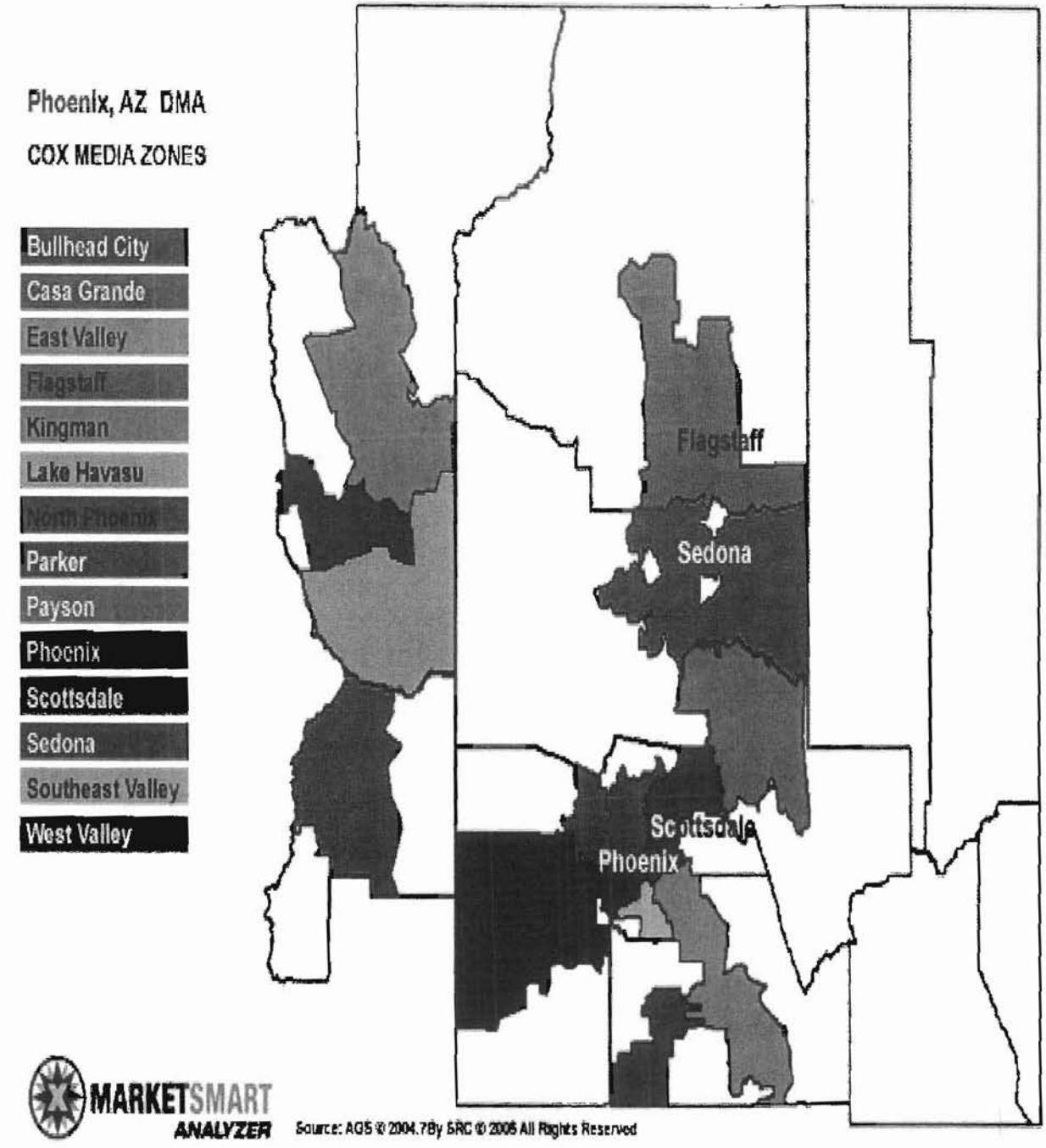
Phoenix MSA
Qwest Retail Access Lines in Service as of December 2008

Wire Center	CLLI8		Residence Lines	Business Lines	Public Lines	Total Retail Access Lines
			A	B	C	A + B + C
BEARDSLEY	BRDSAZMA					
BUCKEYE	BCKYAZMA					
CASA GRANDE	CSGRAZMA					
CAVE CREEK	CVCKAZMA					
CHANDLER MAIN	CHNDAZMA					
CHANDLER SOUTH	CHNDAZSO					
CHANDLER WEST	CHNDAZWE					
CIRCLE CITY	CRCYAZNM					
COLDWATER	GDYRAZCW					
COOLIDGE	CLDGAZMA					
DEER VALLEY NORTH	DRVYAZNO					
DUDLEYVILLE	DDVLAZNM					
ELOY	ELOYAZ01					
FLORENCE	FLRNAZMA					
FORT MCDOWELL	FTMDAZMA					
GILA BEND	GLBNAZMA					
GLENDALE	GLDLAZMA					
HIGLEY	HGLYAZMA					
HIGLEY QUEEN CREEK	HGLYAZQC					
KEARNY	KRNYAZMA					
LITCHFIELD PARK	LTPKAZMA					
MAMMOTH	MMTHAZMA					
MARICOPA	MRCPAZMA					
MESA	MESAAZMA					
MESA GILBERT	MESAAZGI					
NEW RIVER	NWRVAZMA					
ORACLE	ORCLAZMA					
PHOENIX BETHANY WEST	PHNXAZBW					
PHOENIX CACTUS	PHNXAZCA					
PHOENIX EAST	PHNXAZEA					
PHOENIX FOOTHILLS	PHNXAZ81					
PHOENIX GREENWAY	PHNXAZGR					
PHOENIX LAVEEN	PHNXAZLV					
PHOENIX MAIN	PHNXAZMA					
PHOENIX MARYVALE	PHNXAZMY					
PHOENIX MID RIVERS	PHNXAZMR					
PHOENIX NORTH	PHNXAZNO					
PHOENIX NORTHEAST	PHNXAZNE					
PHOENIX NORTHWEST	PHNXAZNW					
PHOENIX PECOS	PHNXAZPP					
PHOENIX PEORIA	PHNXAZPR					
PHOENIX SOUTH	PHNXAZSO					
PHOENIX SOUTHEAST	PHNXAZSE					
PHOENIX SUNNYSLOPE	PHNXAZSY					
PHOENIX WEST	PHNXAZWE					
PINNACLE PEAK	PRVYAZPP					
RIO VERDE	FTMDAZNO					
SAN MANUEL	SNMNAZMA					
SCOTTSDALE MAIN	SCDLAZMA					
SCOTTSDALE SHEA	SCDLAZSH					

Phoenix MSA
Qwest Retail Access Lines in Service as of December 2008

Wire Center	CLLI8		Residence Lines	Business Lines	Public Lines	Total Retail Access Lines
			A	B	C	A + B + C
SCOTTSDALE THUNDERBIRD	SCDLAZTH					
STANFIELD	STFDAZMA					
SUNRISE	AGFIAZSR					
SUPERIOR	SPRRAZMA					
SUPERSTITION EAST	SPRSAZEA					
SUPERSTITION MAIN	SPRSAZMA					
SUPERSTITION WEST	SPRSAZWE					
TEMPE	TEMPAZMA					
TEMPE MCCLINTOCK	TEMPAZMC					
TOLLESON	TLSNAZMA					
WHITE TANKS	WHTKAZMA					
WHITLOW	WHTLAZMA					
WICKENBURG	WCBGAZMA					
WINTERSBURG	WNBGAZ01					
Phoenix MSA Totals						

V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COX MEDIA ZONES
Bullhead City
Casa Grande
East Valley
Flagstaff
Kingman
Lake Havasu
North Phoenix
Parker
Payson
Phoenix
Scottsdale
Sedona
Southeast Valley
West Valley
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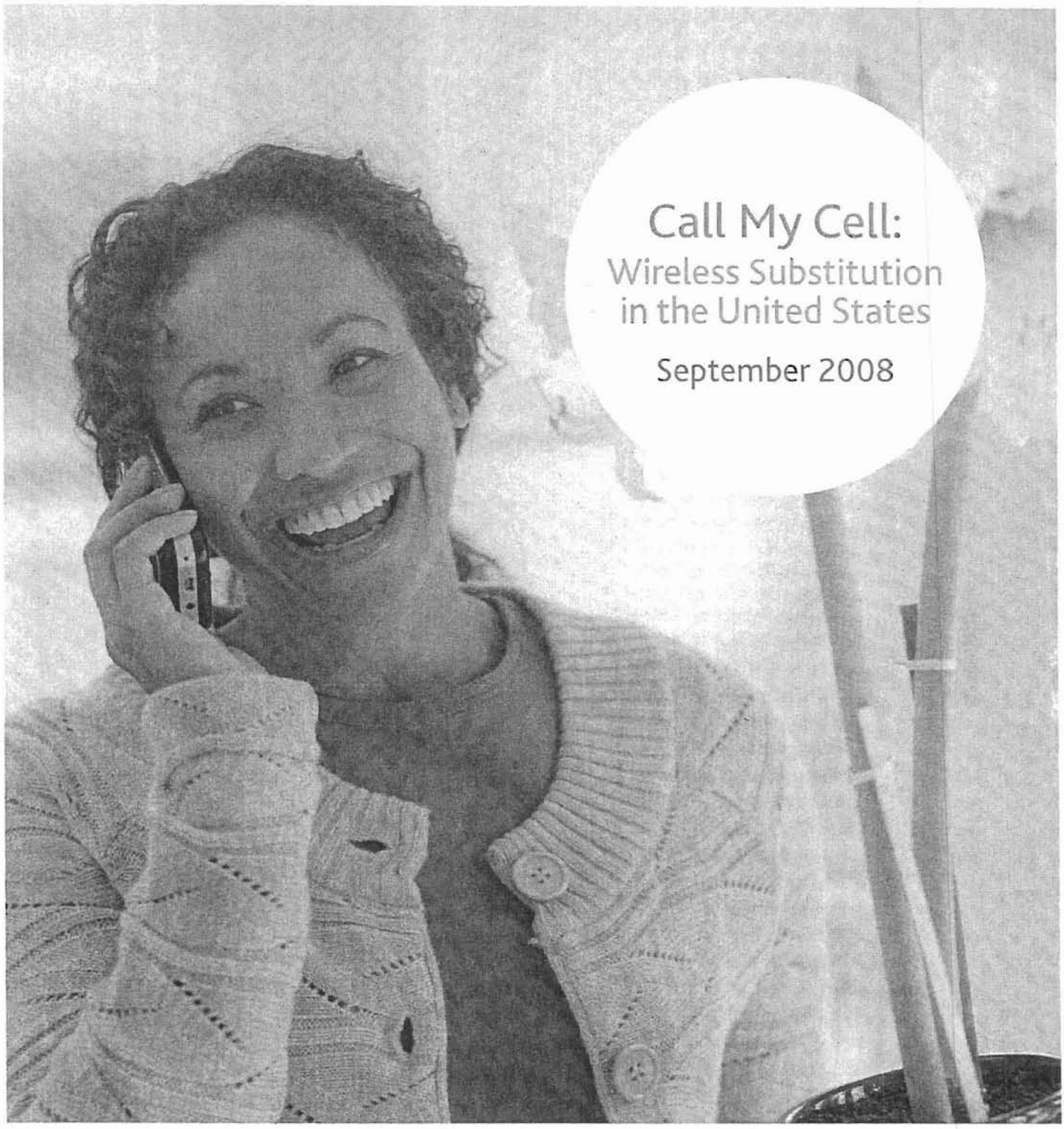
MARKETSMART
ANALYZER
Source: AGS © 2004,7By SRC © 2006 All Rights Reserved

EXHIBIT 4



Call My Cell:
Wireless Substitution in the United States

September 2008

nielsen

As the prices of gas and food increase and the United States hovers around what some are calling a recession, many households are looking for ways to decrease expenses. They consider eating out less, cutting coupons more, removing premium television channels and, more than ever, getting rid of their landline telephone.

The average landline phone household spends $40 per month for that connection, or $480 a year. Increasingly, U.S. households opt not to pay this charge and to use their wireless phone instead—we call this "wireless substitution," and it's bigger than ever today.

At the end of 2007, 16.4 percent of U.S. households had abandoned their landline phone for their wireless phone,[1] but by the end of June 2008, just 6 months later, that number had increased to 17.1 percent.[2] Overall, this percentage has grown by 3-4 percentage points per year, and the trend doesn't seem to be slowing. In fact, a Q4 2007 study by Nielsen Mobile showed that an additional 5 percent of households indicated that they were "likely" to disconnect their landline service in the next 12 months, potentially increasing the overall percentage of wireless-only households to nearly 1 in 5 by year's end.[3]

To understand the business and social implications of this growing trend, this paper provides an overview of the cord-cutting consumer and outlines where the trend could go from here.

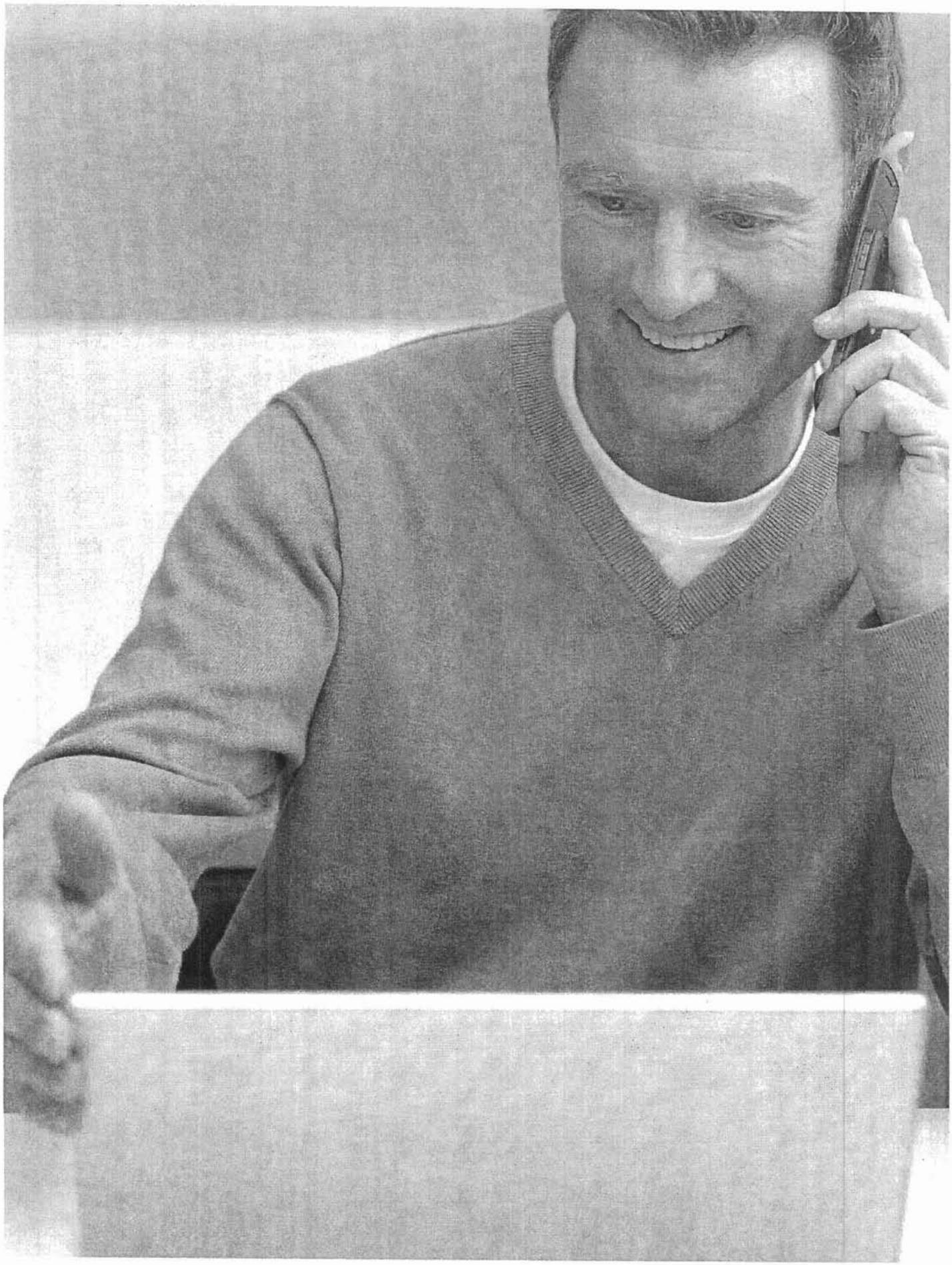
By taking a detailed look at the existing wireless substitution population and how not having a landline can affect other behaviors, we consider the impact that landline cord cutting, indeed cord cutting in general, may have on the communications industry.

Key findings include:

- Wireless substitution continues to increase in the U.S., reaching 20.2 million households, or 17.1 percent of all U.S. households, by the end of June 2008.
- Wireless substitutors use 45 percent more minutes on their wireless phone when compared to non-wireless substitutors but only pay 10 percent more for their mobile phone service (netting a $33 savings per month in a single-person household, less $6.69 for each additional wireless subscriber).
- 10 percent of U.S. households with a landline phone in Q2 2008 indicated that they were previous cord cutters who have come back to landline service.
- Wireless substitutors are less likely than the average wireless subscriber to have satellite TV and more likely to use over-the-air or broadcast TV.
- Wireless substitutors are less likely than the average wireless subscriber to have DSL internet and more likely to use a cable modem to access the internet.
- Some markets are more likely than others to host cord cutters, based on demographic and network satisfaction reasons and also on the penetration of other communications technologies.

1 Blumberg SJ, Luke JV. Wireless substitution: Early release of estimates from the National Health Interview Survey (NHIS), July–December 2007. National Center for Health Statistics. Available from: http://www.cdc.gov/nchs/nhis.htm. May 13, 2008.
2 Nielsen Mobile Wireless Substitution Model, Q2 2008
3 Nielsen Wireless Substitution Report, Q2 2008

EXHIBIT 4

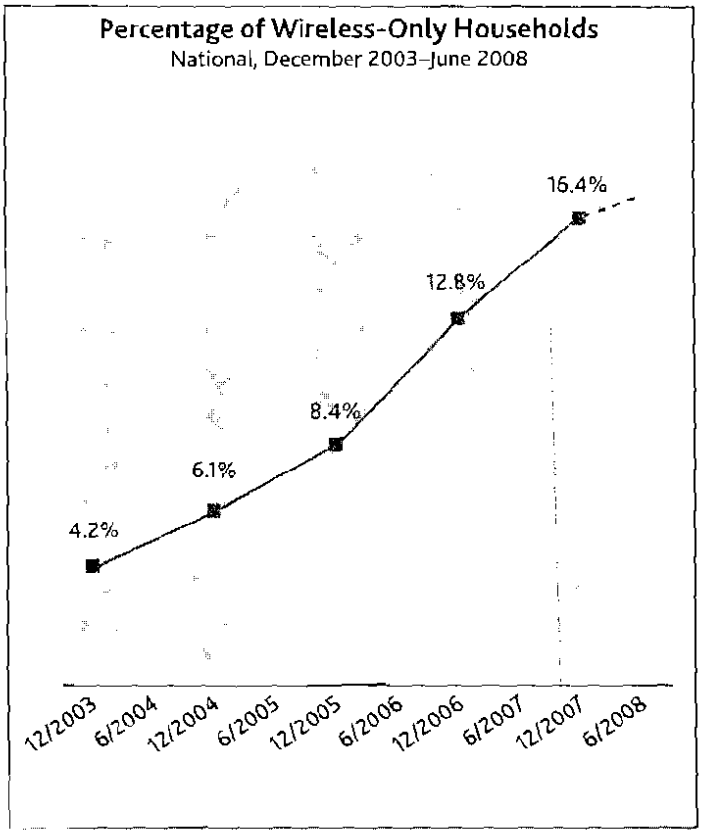


Methodology

The research contained in this paper comes from a suite of research assets that allow us to study wireless substitution in great detail.

- **Nielsen Mobile's Wireless Substitution Report** accesses information from two comprehensive Nielsen Mobile surveys in order to understand attitudes and behaviors of wireless substitutors. It combines insights from our quarterly Total Communications survey of more than 22,000 households with our Mobile Insights survey of more than 50,000 wireless users per quarter. These surveys provide insights on several different audiences: Current Wireless Substitutors, Likely Wireless Substitutors and Unlikely Wireless Substitutors.
- **Additionally, Nielsen Mobile's Wireless Substitution Model** provides an estimate of the percentage of wireless-only households within a specific geographic footprint. The model uses several Nielsen data sources: Nielsen's Total Communications survey (above), Nielsen Media Research's National People Meter sample, Nielsen's overall wireless penetration data and national door-to-door NHIS survey data. The Wireless Substitution model can be applied at the ZIP code level to determine the percentage of wireless-only households.
- **The Nielsen Mobile Wireless Bill Panel** is an opt-in online bill panel reporting on the billing activity for more than 25,000 households. Nielsen monitors telecommunications bills in order to aggregate and analyze the actual details of wireless usage and wireless spending habits.

Figure 1



Source: NHIS 2003-2006; Nielsen Mobile Mid-Year Estimate for 2008

Who doesn't have a landline?

The majority of people who have dropped their landline are in lower income-brackets (46 percent have a household income of $50,000 or less), are younger (64 percent of decision makers in wireless substitution homes are in the 18- to 34-year-old age range, compared to 30 percent of the U.S.) and have smaller household sizes of 1-2 people.[4] Decision makers in wireless substitution households are of approximately the same race/ethnicity as all households, though Hispanic households make up a slightly higher proportion of the wireless substitution universe (10 percent of substitutors, compared to 7 percent of all households).

Considering that wireless substitutors are generally younger and in smaller, lower-income households, it follows that they are more likely to be renters than the average household. As of Q2 2008, 55 percent of cord cutters were renters, compared with 29 percent of total households.

Importantly, not all wireless substitution households have had a landline previously. Some younger wireless substitutors never had a landline at all. Out of their parents' home for the first time, some younger households report that they don't need a landline; moreover, it's too expensive.

There are clear life events that drive people to drop their phone service, including moving, changing jobs and becoming a student. These life events afford people the opportunity to reconsider their household communications and often drive change.

Figure 2

Demographics of Household Decision Makers, Q2 2008					
		Total Households	Wireless Substitutor	Likely Wireless Substitutor	Not Likely Wireless Substitutor
Head of Household Age	Ages 18-24	6%	16%	9%	3%
	Ages 25-34	24%	48%	30%	17%
	Ages 35-54	41%	28%	44%	43%
	Ages 55 +	30%	9%	17%	37%
Household income	< $15K	9%	13%	6%	8%
	$15K-$35K	23%	27%	21%	23%
	$35K-$50K	17%	19%	18%	16%
	$50K-$75K	22%	20%	24%	22%
	$75K-$100K	13%	10%	14%	13%
	$100K +	17%	11%	18%	18%
Race/Ethnicity	Hispanic	7%	10%	11%	5%
	White	82%	76%	73%	85%
	Black/African-American	6%	6%	7%	6%
	Other	6%	8%	10%	4%
Marriage status	Married	60%	45%	60%	63%
	Single	19%	35%	19%	15%
	Divorced	14%	15%	14%	14%
Residence status	Renter	29%	55%	31%	22%
	Homeowner	69%	41%	66%	75%

Source: Nielsen Mobile Wireless Substitution Report, Q2 2008

4 Nielsen Mobile Wireless Substitution Report, Q2 2008

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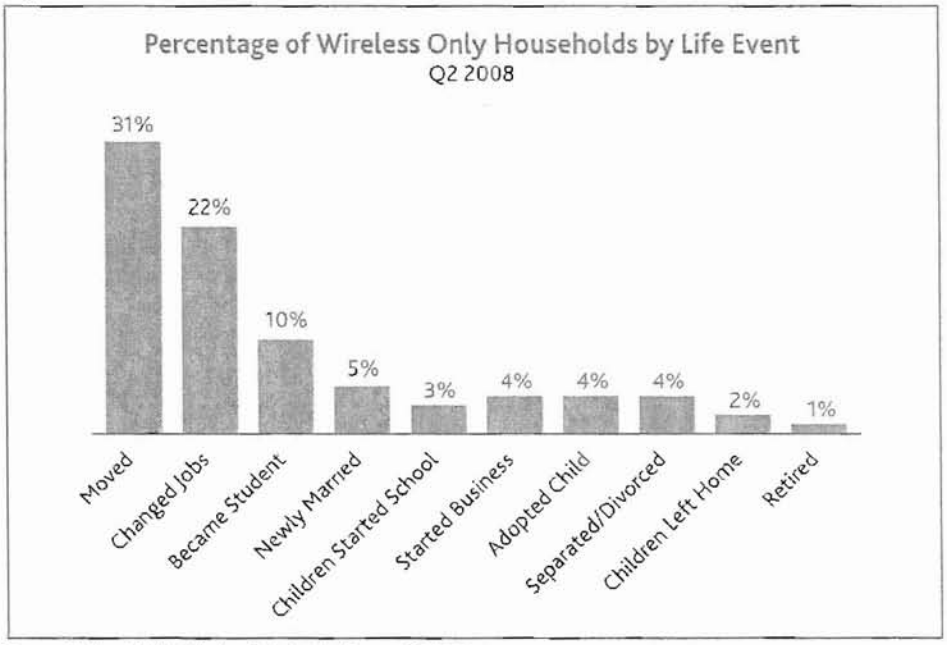
There are geographical differences in wireless substituting, as well. For demographic and network satisfaction reasons, and because of the penetration of other communications technologies, some markets are more likely than others to foster wireless substitutors. Nielsen Mobile has been tracking cord cutting in over 40 U.S. markets since 2005.

The Phoenix, Arizona metro area is one example of a high wireless-substitution market. In Q1 2008, the wireless substitution rate in Phoenix was 17.8 percent—1.3 percentage points higher than the national average. There are several contributing factors that make Phoenix a high wireless-substitution market.

First, Phoenix has a large Hispanic population, with 9.5% of the population living in predominantly Hispanic neighborhoods in Q1 2008.[5] As mentioned above, Hispanic households are slightly more inclined to substitute wireless service for their landline phone. Second, Phoenix wireless substitutors are more inclined to say they just don't need a landline when compared to the national universe of wireless substitutors (60 percent compared to 53 percent). It appears that landline access is less of a necessity to Phoenix residents.[6] Lastly, Phoenix residents tend to have higher satisfaction with their wireless network quality at home when compared to the national average—78.2 percent of Phoenix residents are satisfied, compared to 74.0 percent nationally. Higher satisfaction with wireless network quality offsets the risk of dropped and missed calls, encouraging greater wireless substitution.[7]

We know who makes up the wireless substitution universe today, but which groups will drop their landline phone tomorrow? In the second quarter of 2008, we started to see a very subtle shift in the type of people who indicated they plan to go wireless-only. In Q1 2008, 35 percent of likely wireless substitutor household decision makers were between the ages of 35 and 54, and 18 percent had an annual household income between $50K and $75K. In Q2 2008, these percentages increased to 44 percent and 24 percent, respectively, indicating that more people in the middle age- and middle income-ranges were likely to drop their landline in the next year.

Figure 3



Source: Nielsen Mobile Wireless Substitution Report, Q2 2008

5 Nielsen Mobile Residential Market Metrics, Phoenix Core Based Statistical Area, Q1 2008
6 Nielsen Mobile Wireless Substitution Report, Q1 2008
7 Nielsen Mobile Insights, Q1 2008

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And why cut the cord?

For the expanding penetration and diversity in the wireless substitution universe, there remains fundamentally just one main reason households cut the cord: to save money. And it's working.

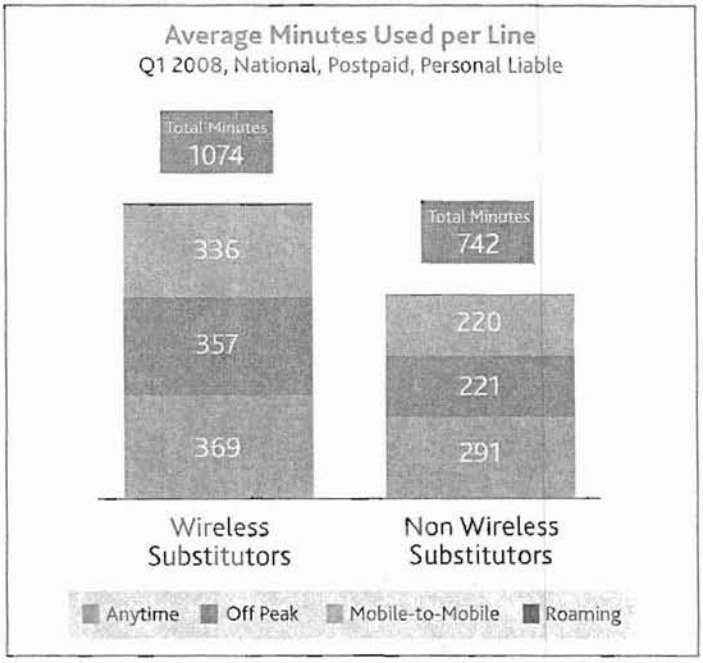
Nielsen reports that, additional wireless expenditures considered, the average wireless substituting household saves $33 per month when moving to wireless only.

Although we started this paper by saying that the average landline service costs a U.S. household $40 per month, the savings are not as straightforward. Nielsen's research shows that wireless substitutors tend to use a greater number of wireless minutes than their landline-enabled counterparts and spend more per month, overall, on their wireless services.

Minutes of use is a key metric for wireless plans and is the best way to compare usage between cord cutters and non-cord cutters. In the first quarter of this year, wireless substitutors used an average of 1,074 total minutes each month, compared to an average of 742 for non-wireless substitutors[8]—an additional 332 minutes, or 45 percent more minutes per month.

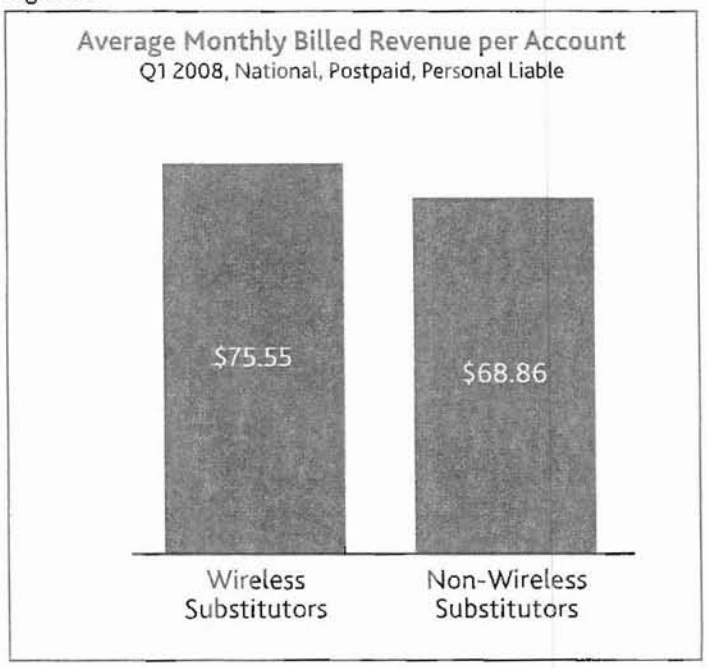
To look at the difference in expenditures between wireless substitutors and their landline peers, we compare billing data for the two groups from Nielsen Mobile's wireless bill panel. In Q1 2008, wireless substitutors (postpaid, personal-liable only) spent an average of only $6.69 more per month when compared to someone with a landline phone ($75.55 for wireless substitutors, compared to $68.86 for non-substitutors). While substitutors saved an average of $40 per month by not having a landline phone, they paid an extra $6.69 a month on their wireless bill, on average, netting a savings of $33 per month per household.

Figure 4



Source: Nielsen Mobile Customer Value Metrics, Q1 2008

Figure 5



Source: Nielsen Mobile Customer Value Metrics, Q1 2008

8 Nielsen Mobile Customer Value Metrics, Q1 2008

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EXHIBIT 4

Methodology

The research contained in this paper comes from a suite of research assets that allow us to study wireless substitution in great detail.

- **Nielsen Mobile's Wireless Substitution Report** accesses information from two comprehensive Nielsen Mobile surveys in order to understand attitudes and behaviors of wireless substitutors. It combines insights from our quarterly Total Communications survey of more than 22,000 households with our Mobile Insights survey of more than 50,000 wireless users per quarter. These surveys provide insights on several different audiences: Current Wireless Substitutors, Likely Wireless Substitutors and Unlikely Wireless Substitutors.
- **Additionally, Nielsen Mobile's Wireless Substitution Model** provides an estimate of the percentage of wireless-only households within a specific geographic footprint. The model uses several Nielsen data sources: Nielsen's Total Communications survey (above), Nielsen Media Research's National People Meter sample, Nielsen's overall wireless penetration data and national door-to-door NHIS survey data. The Wireless Substitution model can be applied at the ZIP code level to determine the percentage of wireless-only households.
- **The Nielsen Mobile Wireless Bill Panel** is an opt-in online bill panel reporting on the billing activity for more than 25,000 households. Nielsen monitors telecommunications bills in order to aggregate and analyze the actual details of wireless usage and wireless spending habits.

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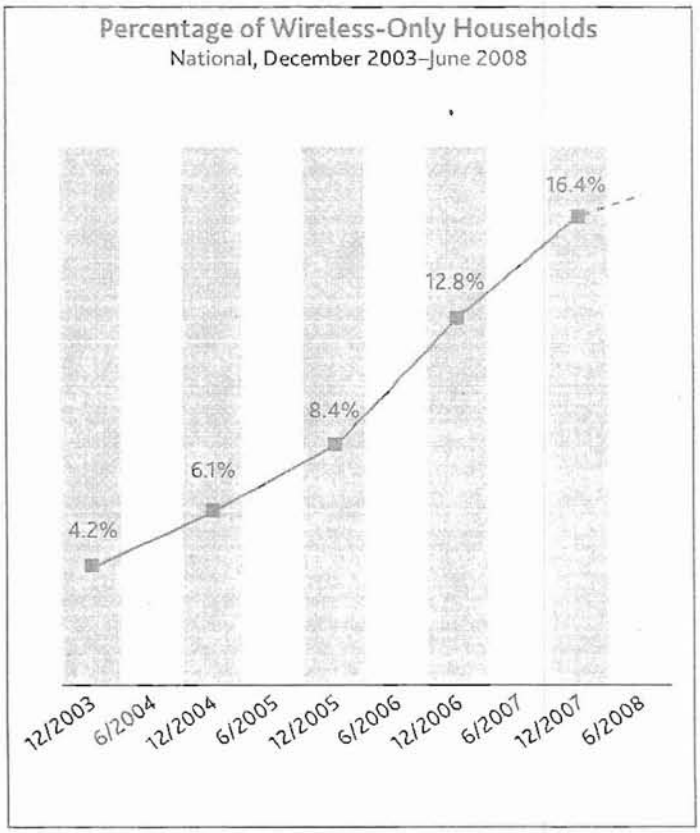

Source: NHIS 2003-2006; Nielsen Mobile Mid-Year Estimate for 2008

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