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March 27, 2007

Ex Parte

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: **REDACTED – FOR PUBLIC INSPECTION IN WC DOCKET
NO. 02-112 before the Federal Communications Commission**
*Section 272(f)(1) Sunset of the BOC Separate Affiliate and Related
Requirements*

Dear Ms. Dortch:

In response to a letter dated March 13, 2007, from Donald K. Stockdale, Associate Chief, Wireline Competition Bureau, and the Information Request attached thereto, AT&T Inc. (AT&T) hereby provides narrative answers, the requested data, and the supporting documentation for the following responses: 1.e., 1.h. and 1.j. AT&T will provide the remaining responses as quickly as possible and on a rolling basis.

Much of the information contains material that is extremely sensitive from a commercial, competitive, and financial perspective, and that AT&T would not, in the normal course of its business, reveal to the public or to its competitors. Where appropriate, therefore, such material is being submitted on a confidential basis pursuant to the *First Protective Order*¹ and the *Second Protective Order*² in this proceeding and is appropriately marked. AT&T is filing the following responses subject to the *Second Protective Order*: 1.e., 1.h. and 1.j. All of these responses fall within the following category of “Highly Confidential Information”: “revenues or numbers of customers disaggregated by customer type and a market area smaller than the nation . . . including carrier-specific E911 line count listings.”³ Accompanying AT&T’s highly confidential information is a request for confidential treatment.

The confidential, non-redacted version of AT&T’s response will be made available for inspection, pursuant to the terms of the two *Protective Orders*, as applicable,

¹ *Section 272(f)(1) Sunset of the BOC Separate Affiliate and Related Requirements*, WC Docket No. 02-112, First Protective Order, DA 07-1387 (rel. March 23, 2007) (*First Protective Order*).

² *Section 272(f)(1) Sunset of the BOC Separate Affiliate and Related Requirements*, WC Docket No. 02-112, Second Protective Order, DA 07-1389 (rel. March 23, 2007) (*Second Protective Order*).

³ *Second Protective Order* at para. 4. As discussed with FCC staff, AT&T has taken the additional step of masking the identity of unaffiliated providers in all of its responses.



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at the law offices of Sidley Austin LLP. Counsel for parties to this proceeding should contact Brendan McMurrer of that firm at (202)736-8135 to coordinate access after they comply with the terms of the FCC's *Protective Orders*. Parties seeking access to AT&T's confidential documents should first serve the Acknowledgement of Confidentiality on Mr. McMurrer at Sidley Austin LLP, 1501 K Street, N.W., Washington, D.C. 20005.

AT&T is separately filing a redacted version of this submission through the Commission's Electronic Comment Filing System.

Please do not hesitate to contact me if you require additional information.

Sincerely,

/s/ Frank S. Simone

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1.e. For each AT&T franchise area, provide: The number of AT&T's retail residential DSL lines and the proportion of these customers for which AT&T does not also provide wireline local exchange service.

Response: See attached.

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Attachment 1.e.

Table(s) Redacted in Full

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1.h. For each AT&T franchise area, provide: An estimate of the total number of residential consumers that subscribe to mobile wireless service instead of wireline local exchange service and long distance service.

Response: See attached. AT&T has not prepared for its internal purposes an estimate of the number of residential consumers in its franchise areas who subscribe to mobile wireless service instead of wireline local exchange service and long distance service (*i.e.*, the number of residential consumers in AT&T's franchise areas who have "cut the cord"). AT&T relied on several sources to create the state-wide estimates contained in the attached table, including a FCC-compiled document available at:

http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/lcom1205_tables.xls, as well as the attached third-party reports.

REDACTED – FOR PUBLIC INSPECTION

Attachment 1.h.

Table(s) Redacted in Full

MARKET ANALYSIS

U.S. Wireless Consumer 2006–2010 Forecast: Ways Around the Walls Ahead

Scott Ellison
Julien Blin

Lewis Ward

IDC OPINION

Although the U.S. wireless service provider industry rocketed ahead in 2005 and added approximately 21.8 million subscribers and passed the 200 million subscriber mark, 2006 opens with the industry rapidly approaching key turning points or potential "walls" that will challenge the service provider industry as a whole. First is the impact that fewer annual net new subscribers will play, which will force the service provider industry to focus on total average revenue per user (ARPU) and operational metrics like cash cost per user. Second is the role that mobile virtual network operators (MVNOs) will play as they enter the market and focus primarily on underserved but data-friendly market segments and generally increase the overall level of competition and place further downward pressure on ARPU. Third is the role that continued voice ARPU erosion continues to play, which poises the industry to experience a forecast decline in total voice revenue beginning in the 2008–2009 time frame, when net subscriber adds are unlikely to be able to offset continued voice ARPU erosion. Fourth is data services pricing erosion that emerged in 2005 — specifically in SMS and laptop AirCard access — and that will likely extend into more advanced forms of data services over the forecast period. And fifth — and perhaps most controversial — IDC believes that wireless service providers *must* embrace mobile advertising to their customers to better control end-user experiences with such advertising and to generate additional nonvoice revenue. On the positive side, IDC sees clear paths forward or "ways around" these potential "walls" for the wireless service provider industry. First and foremost, creating better end-user experiences with data drives additional data adoption and usage — therefore IDC believes that improving data experiences will drive further data adoption and revenue higher at the end of the forecast period. Successful MVNOs will be bought by more established players, creating a potentially more stable pricing environment. And mobile advertising is a completely untapped market opportunity with substantial revenue opportunities. IDC highlights the following guidance to its clients:

- Slowing subscriber growth and continued voice ARPU erosion mean total voice revenue should begin to decline in the 2008–2009 time frame.
- Overall competition levels will increase with the operational entry of MVNOs, placing additional downward pressure on voice and data ARPU.
- Total average ARPU should remain generally steady over the forecast period as strong data services growth just barely offsets continued voice pricing declines.
- Wireless providers will need to play an active role in mobile advertising to better influence customer experiences and develop new revenue streams.

IN THIS STUDY

This IDC study examines the U.S. wireless consumer market, which is expected to continue steady but declining growth in both subscriber and total revenue services growth over the course of the forecast period. Key market dynamics like the role of MVNOs and slowing subscriber growth are examined, as are competitive strategies for U.S. service providers as part of the broader wireless ecosystem.

Methodology

The forecasts and analysis in this study are based on analysis of carrier financial statements, quarterly and annual results reported by the wireless carrier community, and IDC's analyst conversations with wireless carriers, solutions providers, and device manufacturers throughout every quarter.

While this study focuses on the U.S. wireless consumer subscriber market in parallel with *U.S. Wireless Business 2006–2010 Forecast* (IDC #34980, forthcoming), it is important for IDC clients to note that IDC changed its definition of a business subscriber from a usage-based definition (using 50% or more of a subscriber's wireless service) to a generally contract-based definition (as being on a corporate service contract). In response to client requests, the new definition of business subscriber also includes small office/home office (SOHO) users as their wireless usage characteristics tend to generally mirror larger business users and because wireless service providers see SOHO as part of their overall business market strategies.

The sum effect of this definitional change was to increase the total size of the consumer subscriber market and decrease the total size of the business subscriber market. However, this change also resulted in sharply higher voice and data ARPU numbers for the business market and consequent lower numbers for the consumer market.

Data ARPU figures are estimated from previously published IDC forecasts and make an allowance for data services that exist but are not separately forecast as well as for future data applications and revenue sources that have yet to be forecast but that IDC has factored into these forecasts, like advertising revenue. IDC also assumes data services pricing erosion as a function of competition across a range of data services, especially later in the forecast period.

Finally, consistent with industry practice, IDC does not currently distinguish between subscribers and subscriptions. For instance, a subscriber of service provider A who uses wireless service over both a handset and over a laptop AirCard of service provider A (technically one subscriber with two subscriptions) is counted by IDC and the industry as two subscribers. Therefore, the overall wireless penetration levels in the total U.S. population in this forecast are technically lower than forecast and help contribute to additional subscriber growth over the forecast period.

Note: All numbers in this document may not be exact due to rounding.

SITUATION OVERVIEW

The U.S. wireless service provider industry had another stellar year, with 2005 ending with approximately 21.8 million net new subscriber adds, the industry crossing the 200 million subscriber and 70% market penetration thresholds, positive market reaction to the first handset-based 3G applications like Verizon Wireless' VCAST, and providers reporting they had crossed the 10% data ARPU level. Wireless' rapid evolution into the "third screen" in users' lives after the PC and TV is now firmly established, and the business market has showed renewed interest in wireless as ubiquitous 3G wireless broadband connectivity in major metropolitan areas became a reality.

Another key dynamic in 2005 was that mobile virtual network operators moved into the market entry phase, with the year closing with the market launches of ESPN Mobile and Amp'd Mobile. As IDC has previously noted, MVNOs operate on a retail market model by targeting only certain market segments with customer experiences designed expressly for those market segments, and choose to forgo the vast majority of the broader subscriber market. By contrast, the major national service providers operate on a utilities market model and aim to get as many financially viable subscribers as possible with a service experience that does not substantially distinguish among market segments. The two key roles that MVNOs will play over the forecast period are to force the broader wireless service provider market to adopt a retail market model approach and to increase the overall level of service provider competition.

Key dynamics that form the backdrop to IDC's forecasts and analysis include the following:

- ☒ **Slowing subscriber growth.** With the market passing the 70% penetration threshold and the 200 million subscriber mark, there are simply fewer potential subscribers left. IDC believes that competition will generally drive service providers to do what they must to maintain subscriber growth for as long as possible, resulting in relatively robust subscriber growth through 2008, and then sharply slower growth thereafter when market saturation levels are approached.
- ☒ **Increasing competition.** The announcement of 20+ MVNOs and their subsequent market entry will result in increased competition among service providers. This increased level of competition will manifest itself in voice and data pricing erosion (as discussed in additional bullet points in this section), service and marketing innovations, and the evolution of basic service provider market models.
- ☒ **Market model evolution.** As discussed previously by IDC and previously in this study, MVNOs operating on a retail market model will force the established national service providers to evolve away from their traditional utilities market model and toward the retail market model to compete more effectively. The one-size-fits-all service offerings of the national service providers will need to evolve toward more customized and personalized experiences to better address key market segments, such as younger children, youth and young adults, working

women, young adult males, mobile executives, and key ethnic groups, among others.

- ☒ **Voice ARPU erosion.** Voice ARPU erosion was noticeable in 2005 and is forecast to continue throughout the forecast period at a rate that accelerates toward the end of the forecast period due to increased competition among service providers as subscriber growth slows to a relative trickle. The potential for wireless VoIP to increase voice ARPU erosion is noted by IDC; however, given the uncertain service provider approach to wireless VoIP as of the writing of this study, substantial voice ARPU erosion due to VoIP is not directly accounted for in these forecasts.
- ☒ **Data services growth.** One of the brightest stories of the U.S. wireless industry is the rapid growth of data services, which will have zoomed from less than \$1 billion in 2001 to a forecast \$25 billion in 2010. IDC's data ARPU forecasts assume that data services — especially content and entertainment applications — will experience rapid growth over the forecast period and that new forms of data revenue such as location-based services and advertising revenue will contribute to data ARPU numbers.
- ☒ **Growth of content and entertainment services.** The growth of content and entertainment services — both in types of services and their overall adoption and usage — is a key contribution to data services growth over the forecast period. With wireless video clips already approaching the 22-minute programming length of traditional 30-minute broadcast TV programs, compelling location-based services being introduced, wireless distribution of music and the availability of wireless handsets with built-in music players, and the proliferation of new content types like "babysitter" entertainment designed for the toddler children of adult wireless users, the wireless entertainment and content market is expanding rapidly in many directions simultaneously and contributes substantially to data services ARPU growth over the forecast period.
- ☒ **Data services pricing erosion.** In 2005, data services pricing erosion emerged in certain forms of data, like SMS and laptop AirCard access. IDC believes that data pricing erosion will generally increase over the forecast period, especially at the end of the period, largely as a function of an increasingly competitive marketplace. IDC also believes the data services pricing erosion will emerge first and most strongly in services that are largely undifferentiated among service providers and therefore most easily commoditized, like SMS, MMS, AirCard access, email access, and perhaps eventually basic wireless TV service packages. Nevertheless, the total growth of the data services market is forecast to strongly outweigh pricing erosion, resulting in very healthy data services revenue growth through 2010 and beyond.
- ☒ **Wireless marketing and advertising.** Wireless service providers will need to embrace mobile marketing and advertising to their customers over wireless devices to both better influence its evolution and impact on customers and to monetize untapped revenue sources given voice and data pricing erosion. The data revenue and resultant data ARPU forecasts in this study assume substantial service provider revenue from wireless marketing and advertising. Indeed, it is difficult for IDC to foresee relatively steady total ARPU over the forecast period

absent substantial wireless advertising revenue, and using wireless as an advertising medium is an absolutely natural development of the wireless ecosystem.

☒ **Service provider consolidations.** Notwithstanding increasing levels of service provider competition over the forecast period due to the entrance of MVNOs, IDC believes that successful MVNOs will simply be bought by larger providers, or their business models copied by the larger providers once success has been demonstrated. Indeed, many MVNOs' business plans are designed for buyouts as a (smart) market exit strategy. Such consolidation is consistent with the history of the U.S. wireless service provider industry, with the awarding of 1G licenses in the 1980s and subsequent consolidation to fewer providers through the mid-1990s, the expansion of competition with the licensing of PCS in the mid-1990s and subsequent consolidation of the industry through the 2005 merger of Sprint and Nextel, and now the increasing number of MVNOs in the latter half of this decade with the inevitable consolidation that will occur probably beginning in the 2008–2009 time frame just as overall subscriber growth slows markedly. This final consolidation should result in some pricing stability relative to the immediately preceding period.

☒ **Business market growth.** The U.S. wireless business market is forecast to experience strong growth throughout the forecast period. This is resultant of a combination of factors including the availability of ubiquitous 3G wireless broadband connectivity, the evolution of wireless devices that are designed to better serve the needs of key business market segments, a stronger focus on serving key business market segments by U.S. wireless carriers, new data services applications that meet business connectivity needs, and the general efficiency of wireless communications. Although the U.S. wireless business market is separately forecast and analyzed by IDC, its impact is easily discernible in the total subscriber and total revenue forecasts in this study.

☒ **New user segments.** A key underpinning of these forecasts is the already-underway evolution of wireless to serve new market segments. For instance, service providers like Cingular and Verizon Wireless now offer devices designed specifically for children 12 years old and younger, the content industry is developing wireless content for children as young as *12 months* old, pet collar tags that serve as pet trackers will likely be introduced, and using 3G wireless broadband for wireless business and office connectivity is already a reality. These new and evolving user segments and service scenarios contribute to subscriber and revenue growth over the forecast period.

☒ **Multiple devices and subscriptions per person.** The scenario of one individual having multiple wireless devices and service subscriptions is already firmly established, and IDC believes this trend will continue, further contributing to subscriber and revenue growth. A key contributing factor will be the more active management of corporate wireless services by businesses. For instance, a company may provide an employee with a no-charge wireless phone strictly for business use, and the same employee may have a wireless phone for personal use. Users may also want to separate their business and personal lives — especially with the growth of wireless entertainment and of content users may

want to treat as private, and additional uses for wireless such as providing laptop connectivity while mobile.

FUTURE OUTLOOK

Taken together, the key market dynamics over the forecast period include the slowing of total subscriber growth, increasing levels of competition from MVNOs followed by further service provider consolidation, market model evolution among established national wireless service providers from a utilities-type market model to a retail market model, continued voice ARPU erosion, strong data revenue growth offsetting emerging data pricing erosion, the critical role of content and entertainment in driving data service revenue, strong business market growth, new and emerging user segments, new uses of wireless contributing to continued subscriber and total revenue growth over the forecast period, and total average ARPU remaining relatively stable across the forecast period.

Forecast and Assumptions

Major dynamics are impacting and accelerating the tremendous transformation that the wireless service provider industry began to experience in 2003; this transformation increased in 2004–2005 and will continue to do so throughout the forecast period. IDC has therefore developed a number of key assumptions related to economic conditions, technology trends, consumer and business wireless subscriber behavior, and regulatory policy. These assumptions are central to the qualitative and quantitative sections of this forecast. Although this list is not exhaustive, it includes many of the key factors IDC believes will be core to wireless market evolution over the forecast period (see Table 1).

TABLE 1

Key Forecast Assumptions for the U.S. Wireless Consumer Market, 2006–2010

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Macroeconomics				
Economy	U.S. economic growth will remain positive in 2006.	Moderate. The economy's health has a moderate impact on the U.S. wireless consumer market.	↑	★★★★☆
Policy	Federal policy will likely not inhibit further service provider consolidation among non-network based MVNOs or mergers between MVNOs and major facilities-based service providers.	Moderate. Consolidation among MVNOs over the forecast period may provide some pricing stability.	↑	★★★★☆

TABLE 1

Key Forecast Assumptions for the U.S. Wireless Consumer Market, 2006–2010

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Technology/service developments				
Network upgrades	3G wireless broadband network buildouts will continue to be on schedule and will be deployed by all major U.S. wireless carriers.	High. Faster data networks will offer a more compelling user experience and encourage the adoption of wireless data services.	↑	★★★★★
Device development	Handset manufacturers will continue to invest in developing devices that encourage the use of data services, particularly messaging and content applications.	High. Ease of use will encourage further adoption and use of wireless data, content, and entertainment services.	↑	★★★★★
Content and services development	New wireless content and new wireless services will be developed over the course of the forecast period.	High. New and compelling wireless content and services will encourage additional data usage and help drive additional subscriber growth.	↑	★★★★★
Capitalization				
Strong capital markets	The financial community will remain open to wireless industry investment, especially in MVNOs, content, and entertainment applications.	High. Wireless services tend to be capital intensive; developing market traction will require sustained investment.	↑	★★★★★
Market characteristics				
Consumer market landscape	Wireless devices will continue to evolve as the "third screen" in users' lives after TVs and PCs, and wireless users will remain receptive to compelling data applications such as location-based services, content, and entertainment.	High. Wireless consumer revenue growth over the forecast period is driven largely by consumer adoption of data services, offsetting continued voice services pricing erosion.	↑	★★★★★

TABLE 1

Key Forecast Assumptions for the U.S. Wireless Consumer Market, 2006–2010

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Business market landscape	U.S. businesses are looking to wireless to improve efficiencies and productivity while also improving management of wireless spending through increased use of corporate-liable plans.	High. As business relies more on wireless, wireless capabilities like email and ubiquitous wireless broadband connectivity will drive data revenue. Total subscriber growth will be driven in part by corporate policies that discourage personal use of corporate-provided cell phones, thereby driving additional users to have a personal cell phone in addition to their employer-provided cell phone.	↑	★★★★☆
Voice services pricing	Voice services pricing will continue to experience sustained and increasing erosion over the forecast period as a function of competition.	High. Voice pricing erosion makes wireless more attractive to remaining non-wireless subscribers and to businesses that may offer service to employees over corporate-liable plans, while forcing service providers to concentrate on data services for revenue.	↔	★★★★☆
Data service pricing	Pricing will decline steadily over the forecast period for many data services, such as SMS, MMS, and laptop AirCard access.	Moderate. Declining prices will help drive additional data services adoption, which in aggregate will outweigh data pricing erosion.	↑	★★★★☆
Market ecosystem				
MVNOs	MVNOs will continue to enter the market, focusing on particular market segments by operating on a retail market model.	High. MVNO market entry will increase competition and services pricing erosion but highlight new market opportunities for the broader wireless industry — especially in data and content.	↑	★★★★☆

TABLE 1

Key Forecast Assumptions for the U.S. Wireless Consumer Market, 2006–2010

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Wireless carrier market strategy	Major national service providers will likely remain focused on serving as many consumer subscribers as possible and will increasingly focus on the business market for additional growth.	Moderate. National service providers' focusing on traditional and largely undifferentiated market strategies will provide market opportunities to smaller providers like MVNOs, especially in the consumer space.	↔	★★★★☆

Legend: ★☆☆☆☆ very low, ★★☆☆☆ low, ★★★☆☆ moderate, ★★★★☆ high, ★★★★★ very high

Source: IDC, 2006

Subscriber Forecast

IDC forecasts strong total subscriber growth through 2007 as the service provider industry focuses on signing up every easily available potential subscriber, reinforced by financial analysts that measure market success in part by net subscriber add figures. However, 2007 is also the year in which the industry is forecast to cross the key 80% market penetration threshold, which IDC believes represents a market that is approaching natural saturation levels. In 2008, subscriber growth is forecast to slow sharply, and by 2010, total subscriber growth is forecast to slow to just over 2% annually, which nevertheless represents over 5 million annual net adds. Whereas annual consumer subscriber growth will have slowed by 2010 to about 1% (approaching annual population growth), the business subscriber market is forecast to continue to experience solid subscriber growth of 6% as late as 2010. Continued business subscriber growth results from businesses finding new ways to use wireless to meet their communications and connectivity needs, business usage policies such as wireless devices on master corporate contracts to better manage wireless costs and for which non-business usage is explicitly forbidden or implicitly discouraged (such as no free night and weekend calling), and the growth of data services such as email and laptop AirCard subscriptions (see Table 2 and Figure 1).

TABLE 2**U.S. Consumer and Business Wireless Subscribers, 2005-2010 (M)**

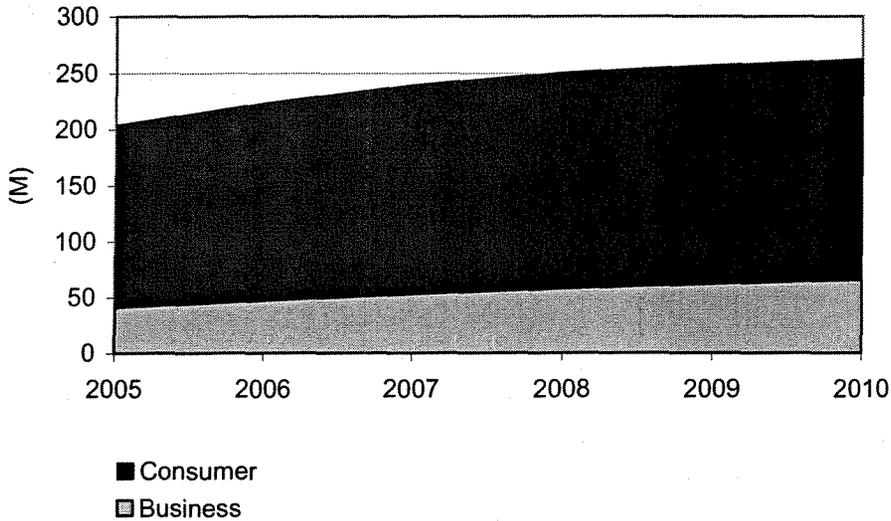
	2005	2006	2007	2008	2009	2010	2005-2010 CAGR (%)
U.S. population	288.9	291.4	293.8	296.2	298.6	301.0	0.8
Total							
Wireless subscribers	203.9	223.4	239.5	250.5	257.2	262.5	5.2
Growth (%)	12.0	9.6	7.2	4.6	2.7	2.1	
Net annual subscriber adds	21.8	19.5	16.1	11.0	6.7	5.3	-24.6
Wireless penetration (%)	70.6	76.7	81.5	84.6	86.1	87.2	
Consumer							
Wireless subscribers	163.1	176.5	186.8	192.9	195.5	196.9	3.8
Growth (%)	10.6	8.2	5.8	3.3	1.3	0.7	
Net annual subscriber adds	15.6	13.4	10.3	6.1	2.6	1.4	-38.2
Business							
Wireless subscribers	40.8	46.9	52.7	57.6	61.7	65.6	10.0
Growth (%)	17.9	15.0	12.3	9.3	7.1	6.3	
Net annual subscriber adds	6.2	6.1	5.8	4.9	4.1	3.9	-8.8

Note: See Table 1 for key forecast assumptions.

Source: IDC, 2006

FIGURE 1

U.S. Wireless Subscribers by Segment, 2005–2010



Source: IDC, 2006

Revenue Forecast

IDC forecasts strong total wireless revenue growth through 2008, when sharply slower total subscriber growth, continued voice ARPU erosion, and data services pricing erosion pull total wireless revenue growth down to approximately 7% annually in 2008, and then down to approximately 1.6% in 2010 (see Table 3 and Figures 2 and 3).

Even more importantly, IDC believes that slowing subscriber growth set against continued voice ARPU erosion and heightened competition from MVNOs poises the industry to begin experiencing declining total voice service revenue in the 2008–2009 time frame. Nevertheless, strong data services growth will more than offset voice pricing erosion, resulting in continued albeit sharply lower total revenue growth — and especially consumer revenue growth — over the forecast period.

IDC reiterates earlier guidance to clients that service providers must embrace wireless advertising to their customers over their wireless devices to drive additional nonvoice revenue, which for the purposes of this forecast IDC counts as data revenue. Not only is wireless advertising over wireless devices simply inevitable, but by embracing the medium early, service providers decrease the chance of being cut of the revenue stream, increase their influence and control over the advertising experience of their customers, and fully realize the revenue potential of wireless devices as the "third" screen in customers' lives after the TV and PC. Simply put, wireless carriers must embrace the medium and revenue opportunity — or someone else will do it for them.

TABLE 3**U.S. Total and Consumer Wireless Service Revenue, 2005–2010 (\$B)**

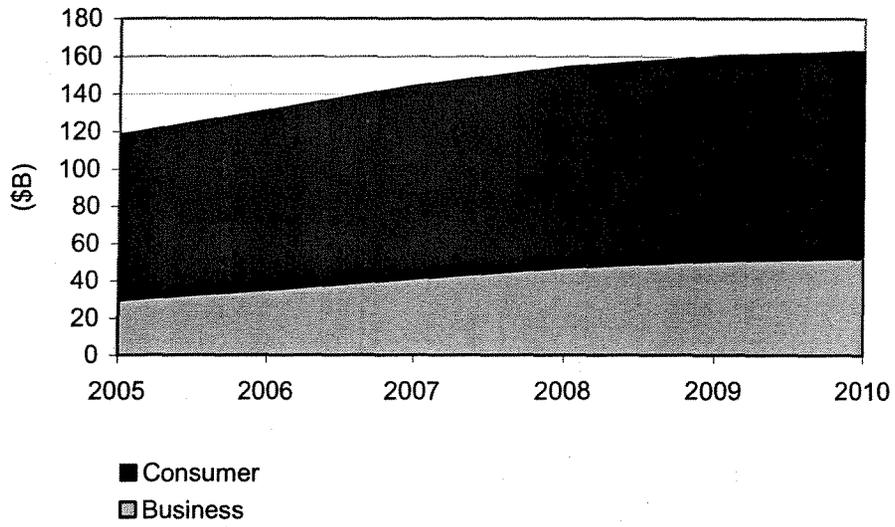
	2005	2006	2007	2008	2009	2010	2005–2010 CAGR (%)
Total							
Voice	108.97	117.19	123.51	125.49	123.63	120.06	2.0
Growth (%)	NA	7.5	5.4	1.6	-1.5	-2.9	
Data	9.46	14.25	21.00	29.21	36.55	42.73	35.2
Growth (%)	NA	50.6	47.4	39.0	25.1	16.9	
Total	118.43	131.44	144.52	154.70	160.18	162.79	6.6
Growth (%)	NA	11.0	9.9	7.0	3.5	1.6	
Consumer							
Voice	84.91	90.00	93.60	93.79	90.98	87.34	0.6
Growth (%)	NA	6.0	4.0	0.2	-3.0	-4.0	
Data	4.11	6.45	9.84	14.01	18.61	23.27	41.5
Growth (%)	NA	57.1	52.6	42.4	32.8	25.0	
Total	89.01	96.45	103.45	107.80	109.59	110.60	4.4
Growth (%)	NA	8.4	7.3	4.2	1.7	0.9	

Note: See Table 1 for key forecast assumptions.

Source: IDC, 2006

FIGURE 2

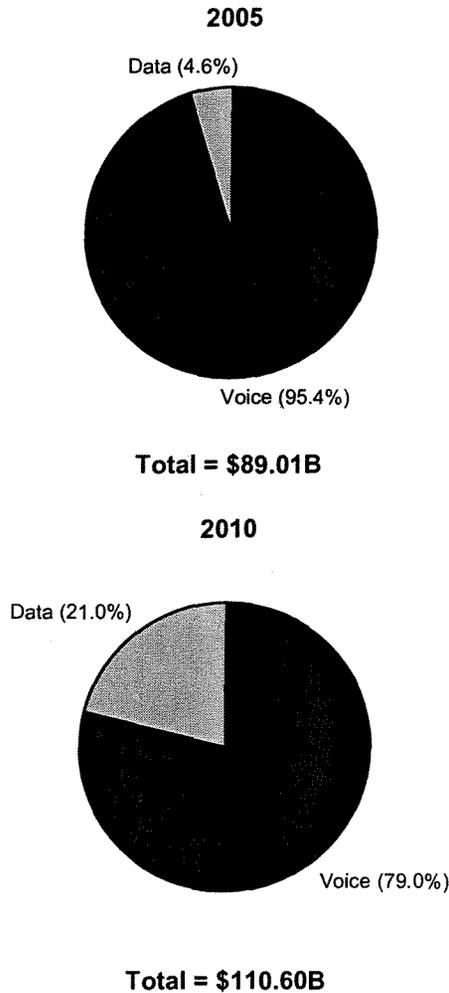
U.S. Wireless Service Revenue by Segment, 2005-2010



Source: IDC, 2006

FIGURE 3

U.S. Consumer Voice and Data Wireless Revenue Share,
2005 and 2010



Source: IDC, 2006

ARPU Forecast

IDC forecasts that both consumer ARPU and total ARPU when blended with business ARPU will stay relatively steady over the forecast period as strong growth in data services revenue just barely offsets accelerating voice ARPU erosion. Total annual subscriber ARPU is forecast to increase from \$51.13 in 2005 to \$52.58 in 2009 before settling back slightly to \$52.21 in 2010 as data services erosion — especially in certain business data services like laptop AirCard access — have a discernible effect. Total average consumer subscriber ARPU is forecast to increase from \$45.47 in 2005 to \$46.82 in 2010 as total data services revenue growth exceeds total voice revenue declines (see Table 4).

Underlying ARPU trends will be an increasing divergence between wireless subscribers who are heavy data users and spend substantially more on wireless data and content over time, which helps sustain total average ARPU levels, set against a substantial number of subscribers who remain voice-only or only occasional data users. It is therefore key for the wireless industry to focus on increasing data adoption and substantial data usage among the broadest possible subscriber base as data revenue is what largely sustains total ARPU figures and total revenue growth over the forecast period, especially toward the end of the forecast period.

TABLE 4

U.S. Total and Consumer Wireless Subscriber ARPU, 2005–2010 (\$)

	2005	2006	2007	2008	2009	2010	2005–2010 CAGR (%)
Total							
Voice	47.05	45.71	44.47	42.68	40.59	38.50	-3.9
Growth (%)	NA	-2.8	-2.7	-4.0	-4.9	-5.1	
Data	4.08	5.56	7.56	9.93	12.00	13.70	27.4
Growth (%)	NA	36.1	36.1	31.4	20.8	14.2	
Data share of total (%)	7.99	10.84	14.53	18.88	22.82	26.25	26.9
Growth (%)	NA	35.7	34.1	29.9	20.9	15.1	
Overall ARPU/subscriber	51.13	51.27	52.03	52.62	52.58	52.21	0.4
Growth (%)	NA	0.3	1.5	1.1	-0.1	-0.7	
Consumer							
Voice ARPU (\$)	43.38	42.50	41.75	40.52	38.78	36.97	-3.1
Growth (%)	NA	-2.0	-1.7	-3.0	-4.3	-4.7	
Data ARPU (\$)	2.10	3.05	4.39	6.05	7.94	9.85	36.2
Growth (%)	NA	45.2	44.2	37.9	31.1	24.1	
Data share of consumer (%)	4.61	6.69	9.52	13.00	16.98	21.04	35.5
Growth (%)	NA	45.0	42.3	36.6	30.7	23.9	
Overall consumer ARPU (\$)	45.47	45.54	46.15	46.57	46.72	46.82	0.6
Growth (%)	NA	0.2	1.3	0.9	0.3	0.2	

Note: See Table 1 for key forecast assumptions.

Source: IDC, 2006

Market Context

IDC has revised its total U.S. wireless subscriber forecast upward compared with the forecasts published in 2005 as the service provider industry has maintained remarkable levels of subscriber growth notwithstanding approaching market saturation levels. Indeed, the introduction of new wireless devices designed for very young children and corporations moving toward more restrictive use policies for company-issued wireless devices and thereby resulting in individuals carrying multiple devices, will contribute to additional wireless subscriber growth over the forecast period. Therefore IDC has revised the total U.S. wireless subscriber forecast upward for 2006 by 5.6% and by 10.2% in 2009 (see Table 5 and Figure 4).

The biggest change in IDC's 2006 forecasts is the change in the consumer subscriber forecast due to the change in definition of business subscribers as noted in this study's Methodology section. By comportsing the IDC definition of wireless business subscribers to the narrower definition that has been adopted by U.S. wireless service providers, the total number of wireless business subscribers was substantially decreased, and the consumer subscriber numbers consequently increased by 16.5% in 2006 and by 17.5% in 2009.

TABLE 5

U.S. Consumer Wireless Subscribers, 2005–2009: Comparison of 2005 and 2006 Forecasts (M)

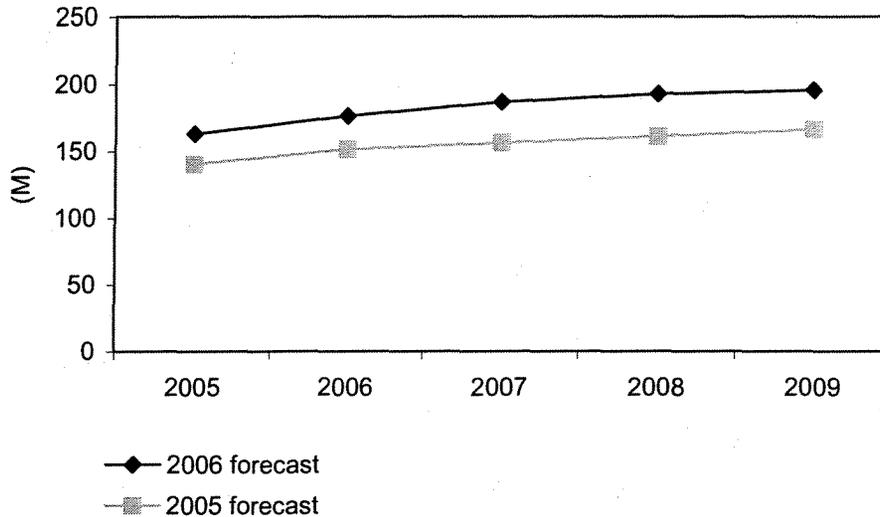
	2005	2006	2007	2008	2009
Total					
2006 forecast	203.9	223.4	239.5	250.5	257.2
2005 forecast	197.8	211.5	221.0	226.6	233.4
2005–2006 change (%)	3.1	5.6	8.4	10.5	10.2
Consumer					
2006 forecast	163.1	176.5	186.8	192.9	195.5
2005 forecast	140.7	151.5	156.5	161.3	166.4
2005–2006 change (%)	15.9	16.5	19.4	19.6	17.5

Note: See Table 1 for key forecast assumptions.

Source: IDC, 2006

FIGURE 4

U.S. Consumer Wireless Subscribers, 2005–2009: Comparison of 2005 and 2006 Forecasts



Source: IDC, 2006

ESSENTIAL GUIDANCE

- ☒ With approaching wireless subscriber market saturation, driving further adoption and usage of data services become key to maintaining total ARPU and service revenue growth in light of continuing voice ARPU erosion.
- ☒ Total voice service revenue declines late in the forecast period will jolt an industry accustomed to 25 years of voice revenue growth and further emphasize the role of data services to the future of the industry.
- ☒ Improving customer experiences with wireless data services — especially content and entertainment services — is a key to driving further data adoption and usage.
- ☒ Sustaining total annual subscriber growth over the forecast period will require focus on developing new subscriber categories, such as very young children and individuals with multiple wireless devices (e.g., users with a personal as well as a business phone).
- ☒ Heightened competition from MVNOs will increase voice services pricing erosion over the forecast period and further contribute to data services pricing erosion.
- ☒ The rapid increase in service provider competition through MVNOs at the beginning of the forecast period will be followed by a new wave of consolidation

in the second part of the forecast period as successful MVNOs are bought by established players and MVNOs merge with one another to achieve scale.

- ☒ MVNOs operating on the retail market model will force the established national providers to adopt the same model through strategies such as subbrands or the acquisition of successful MVNOs addressing key market segments.
- ☒ Notwithstanding the overwhelming present emphasis on the consumer market among the service provider community, it will be the business market that largely sustains subscriber and revenue growth toward the end of the forecast period.
- ☒ Service providers *must* embrace wireless advertising to their customers over their wireless devices to drive additional nonvoice revenue and fully realize the potential of the "third screen" — or someone else will do it for them.

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Related Research

- ☒ *Top 10 U.S. Wireless Services Issues in 2006* (IDC #34726, January 2006)
- ☒ *Cingular Announces Availability of 3G Services* (IDC #34557, December 2005)
- ☒ *U.S. Youth and Young Adult Wireless Subscriber 2005–2009 Forecast: A Last Engine of Subscriber Growth* (IDC #34467, December 2005)
- ☒ *Sprint Nextel, Comcast, Cox, Time Warner, and Advance/Newhouse Team Up For Quadruple Play* (IDC #34361, November 2005)
- ☒ *Sprint Launches Consumer EV-DO Power Vision Network: V CAST Gets Company* (IDC #34354, November 2005)
- ☒ *U.S. Wireless SMS, IM, and MMS Messaging 2005–2009 Forecast: Pricing Erosion Emerges Amid Strong Growth* (IDC #34197, October 2005)
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- ☒ *MVNOs a-Go-Go: Overview of Announced U.S. MVNOs and Strategies for MVNO Market Success* (IDC #33272, April 2005)
- ☒ *U.S. Consumer Wireless 2005–2009 Forecast: Growth Obscures Fundamental Shifts* (IDC #33015, March 2005)
- ☒ *Goodbye to the Industry as We Know It? The Impending Rationalization of the U.S. Wireless Provider Industry* (IDC #32907, February 2005)
- ☒ *Piling into Wireless: SK Telecom and EarthLink to Launch U.S. MVNO* (IDC #32836, January 2005)
- ☒ *Verizon Wireless Launches First U.S. 3G Consumer Services* (IDC #32741, January 2005)

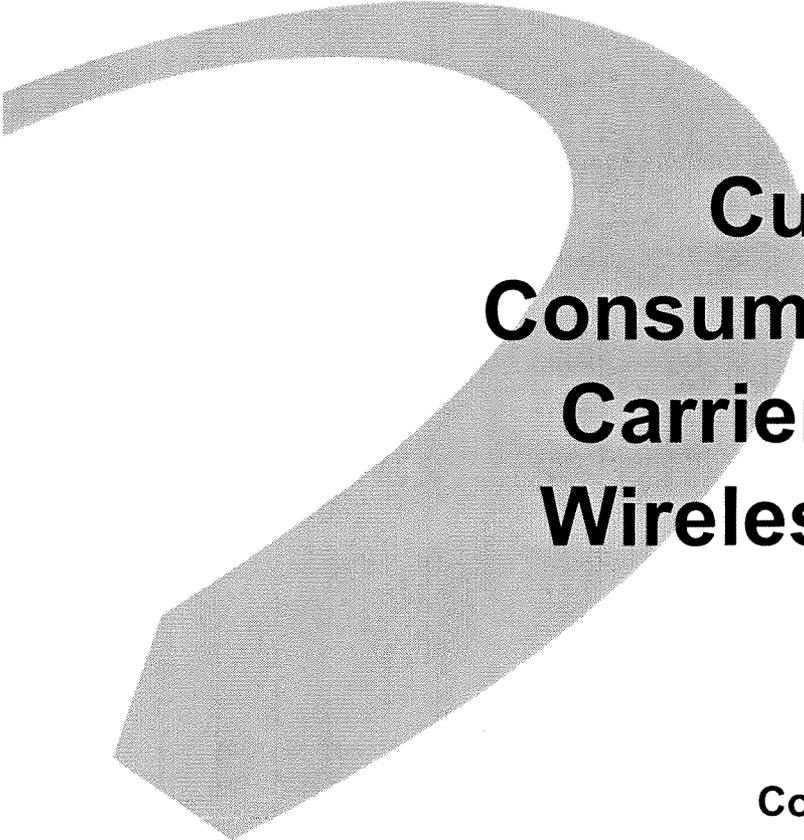
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Cutting the Cord: Consumer Profiles and Carrier Strategies for Wireless Substitution

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Cutting the Cord: Consumer Profiles and Carrier Strategies for Wireless Substitution

Executive Summary

Mobile wireless services have become a viable alternative to traditional landline services for a large number of consumers in the US. With landline-to-wireless number portability introduced as part of the FCC's Wireless Local Number Portability (WLNP) mandate, which was implemented by wireless carriers in November 2003, consumers now have an unprecedented degree of flexibility and convenience in cutting the cord to their landlines.

While some barriers still exist to the widespread displacement of landlines by wireless phones, consumer attitudes clearly illustrate the potential for wireless substitution as the landline subscriber base and value proposition relative to wireless continue to deteriorate.

Current Market

About 9.4% of wireless subscribers already use a wireless phone as their primary telephone. Those who are considering substitution are primarily motivated by the prospect of saving money, as long as they don't have to give up much in terms of quality, reliability, or services.

Opportunities

Wireless subscribers are seeking alternatives to traditional landline calling. At present, 32.9% of our respondents report using their landline only for local calls (substituting wireless for long distance). 8.4% of respondents also use Voice over IP for calling. This suggests that the market is primed for further wireless substitution.

- Among those with a wireless and landline phone, resistance to wireless substitution has dropped dramatically since our previous survey in 2003. **Those answering "No" to the question, "Would you be willing to consider replacing your landline phone with a wireless phone?" declined from 73.6% to 49.0%.** Consumers are beginning to see the advantage and the opportunity.
- Carrier marketing will have a significant role in determining how many wireless subscribers choose to substitute wireless for landline. This is more a battle over perception than it is superior technology. Carriers can stimulate substitution by

continuing to attract customers to advanced wireless features, and educating them as to the availability of number portability.

Motivators

Factors that would influence consumers to drop their landline phone in favor of wireless include better prices, improved network coverage and quality-of-service, and richer mobile phone functionality.

Barriers

Barriers to landline replacement, particularly in-building coverage and perceived inconvenience (such as losing DSL or the having to change the phone number), are resolvable with other technologies, continued network build-out, or consumer education. All of these barriers will become less significant over the forecast period.

In-Stat's Consumer Mobility Survey results suggest two primary areas in which technology solutions could help increase substitution:

- For all consumers, devices that improve in-building coverage. This would primarily include in-building signal boosters and repeaters (not cheap "patch" antennas which do little to nothing).
- For consumers who want total substitution, technology that allows connection of data devices (which formerly required an analog landline phone jack) to the wireless phone, or which replaces the need for analog devices altogether.

User Profiles

Analysis of survey results found that consumer demographics do not offer much insight into the likelihood of a consumer using a wireless phone as their primary phone. Instead, the greatest correlation was with their current use of mobile phones. The most likely to use mobile as the primary phone have the following characteristics:

- Heavy wireless phone users (in terms of Minutes of Use)
- Use wireless for both business and professional purposes
- Spend more than average on wireless monthly service
- Are interested in advanced wireless data services such as email, gaming, music, etc.

Established heavy users of wireless present a ready market, however, youth will be a significant market in the near term as well. Youth, not being as accustomed to having a

landline phone of their own, will find it easier to stay with their first phone than older users who have to wean themselves off a landline service.

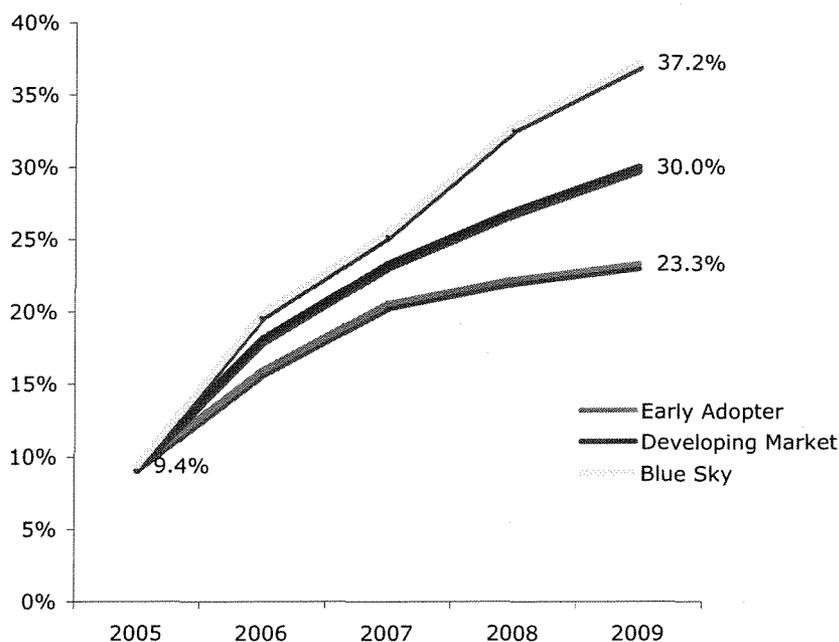
Forecast

Between 23.3% and 37.2% of wireless subscribers will use wireless as their primary phone by 2009. Our mid-range (most likely) estimate is 30.0% by 2009.

In-Stat predicts a significant increase in wireless substitution in the US over the four-year period from 2005 to 2009. In-Stat has prepared three forecast scenarios: (1) Early Adopter; (2) Developing Market; and (3) Blue Sky.

Each scenario assumes varying degrees of influence from key market factors, but In-Stat believes that the Developing Market forecast, which predicts that 30.0% of wireless subscribers will not have a landline by 2009, is the most likely outcome.

Figure 1. Wireless Substitution Forecast, 2005–2009



Source: In-Stat, 9/05

Methodology

Data collection and analysis for this report is derived from primary and secondary research on the US mobile wireless market.

Primary research came from the Consumer Mobility Study conducted by In-Stat in January 2005, as well as information from wireless carriers, landline service providers, and infrastructure and device vendors from January through August 2005. Secondary research came from the Federal Communications Commission (FCC), the Cellular Telephony and Internet Association (CTIA), US Census Bureau, and various third-party articles published on the subjects of wireless substitution and landline displacement trends.

This research forms the foundation of the forecasts in this report.

NOTE: Not all figures may calculate exactly due to rounding. Figures were calculated at a higher degree of precision than shown.

Consumer Mobility Study (CMS) Methodology

- Data for the Consumer Mobility Study (CMS) was collected via professionally administered structured telephone interview and online surveys.
- Each interview took approximately 15 minutes to complete.
- A total of 1,238 interviews were completed during January 2005.
- In order to participate in the study, respondents had to be at least 18 years of age, live in the United States, and currently use a cellular telephone.

Introduction

At the beginning of this research project, In-Stat established four key objectives:

- Determine the potential extent of wireless substitution among US consumers.
- Profile the characteristics of the wireless subscribers most likely to be primary-wireless users and those most likely to replace their landline.
- Discover the key drivers of, and inhibitors to, landline replacement.
- Model a four-year forecast of wireless substitution patterns in the US consumer market.

This report is organized into four main sections:

- **Overall Results**—An overview of Consumer Mobility Survey responses to five key questions:
 - Do you use a landline phone?
 - Would you consider replacing your landline phone with a wireless phone?
 - How likely are you to replace your landline phone with a wireless phone in the next 12 months?
 - What factors would increase your likelihood to replace your landline phone with a wireless phone?
 - Why wouldn't you consider replacing your landline local phone with a wireless phone?
- **Consumer Profiles**—Behavioral and demographic profiles of consumers most likely to consider replacing their landline with wireless. Also, services most likely to be adopted by those consumers.
- **Technology Enablers and Barriers**—A review of technology issues that could either stimulate or mitigate wireless substitution.
- **Wireless Substitution Forecasts**—Contains three different outlooks, Early Adopter, Developing Market, and Blue Sky forecasts, each reflecting variances in key substitution influencers and inhibitors during the four-year period from 2005 to 2010.

Overall Results

What follows, based on the In-Stat Consumer Mobility Survey, is an outline of US mobile consumer preferences and attitudes related to the use of wireless phones as primary phones, as well as the likelihood of replacing landlines altogether with a wireless phone.

The following section of this report, “Consumer Profiles,” will delve more deeply into the behavioral and demographic factors that make wireless subscribers more or less likely to use their wireless phone as their primary phone.

All respondents surveyed are current wireless subscribers over the age of 18.

All survey respondents were asked:

- Do you currently have a landline phone?

Respondents who responded “Yes” were asked:

- Would you consider replacing your landline phone with a wireless phone?

Survey participants who responded “Yes” to the above question were asked:

- How likely are you to replace your landline with a wireless phone in the next 12 months?
- What factors would increase your likelihood to replace your landline phone with a wireless phone?

Survey participants who responded “No” when asked if they would consider replacing their landline phone were asked:

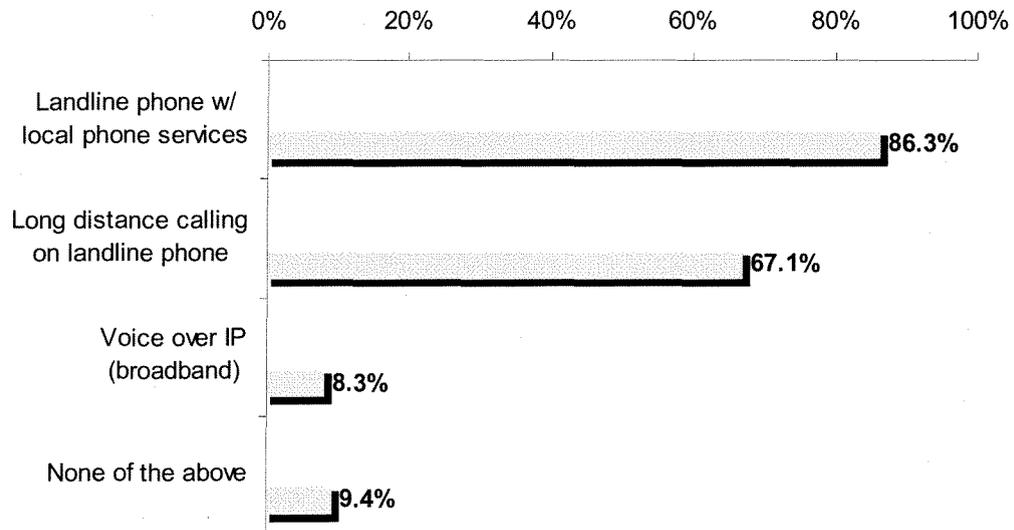
- Why wouldn’t you consider replacing your landline local phone with a wireless phone?

Do You Currently Have a Landline Phone?

- Of the 1,238 survey respondents answering this question, 86.3% said that they currently have a landline phone. 9.4% said they had no phone other than their wireless phone (and hence wireless is their primary phone).
- Interestingly, only 67.1% of respondents used long distance services on their landline phone (about three quarters of landline phone users in the survey), suggesting that wireless is eroding the usage of wireline long distance and local toll services twice as much as the rate of complete wireless substitution.

Figure 2. Overall: Have a Landline Phone

Which of the following types of communications services are used in your home? (Base: Has a wireless phone)



Source: In-Stat, 9/05

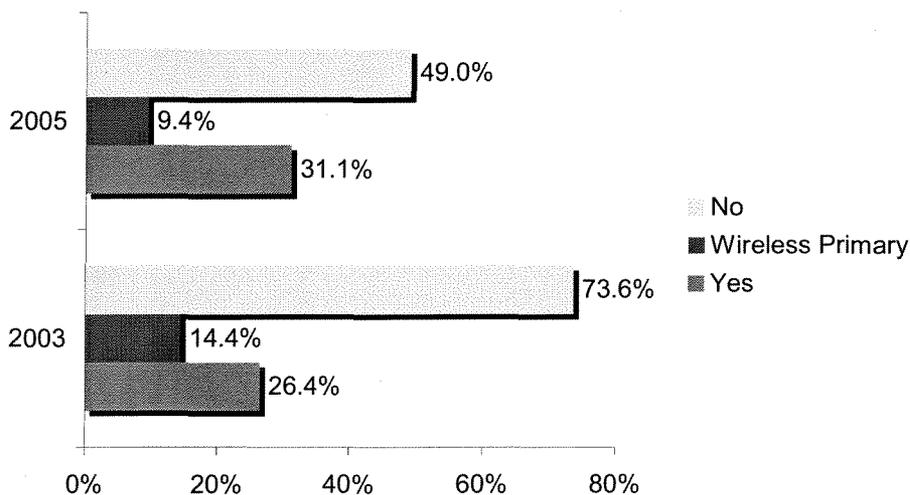
n=1,238

Willingness to Consider Replacing Landline with Wireless

- Of the 1,069 respondents who had both landline and wireless phones, 31.1% said that they would consider replacing their landline with wireless and 49.0% answered that they would not consider substitution. This indicates a moderate rise in willingness to consider wireless substitution. In our previous survey (July 2003), only 26.4% were willing to consider substitution.
- More important, resistance to wireless substitution has dropped dramatically, from 73.6% to 49.0%. Consumers are beginning to see the advantage and the opportunity of replacing their landline with wireless.

Figure 3. Overall: Willingness to Replace Landline with Wireless

Would you consider replacing your landline phone with a wireless phone? (Base: Has both wireless and landline phone)



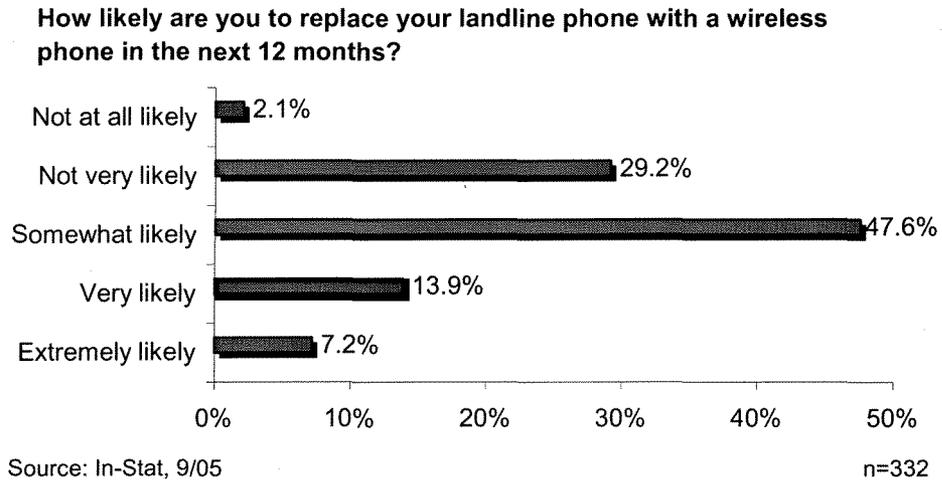
Source: In-Stat, 9/05

n=1,069

Likelihood to Replace Landline Phone with Wireless in Next 12 Months

The 332 respondents who indicated they were willing to replace their landline phone with a wireless phone were asked how likely they were to make the switch in the next 12 months. Slightly more than one in five (21.1%) were very or extremely likely to do so.

Figure 4. Overall: Likelihood to Replace Landline with Wireless in the Next 12 Months



Factors that Would Drive Wireless Substitution

Among respondents who answered that they were likely to consider wireless substitution, the top factors that would influence them to do so are lower wireless prices for monthly service (77.4%), flat-rate calling plans (72.6%), and number portability (61.7%).

Better network coverage, which was considered an important factor by only 25.1% of respondents in the 2003 survey, was named by 54.8% of respondents when the question was asked again in the latest (2005) survey. The question was modified slightly in the 2005 survey to specify “coverage *in your home*.” When asked about the importance of coverage “around town,” the response was 46.1%, still substantially higher than the response in the earlier survey.

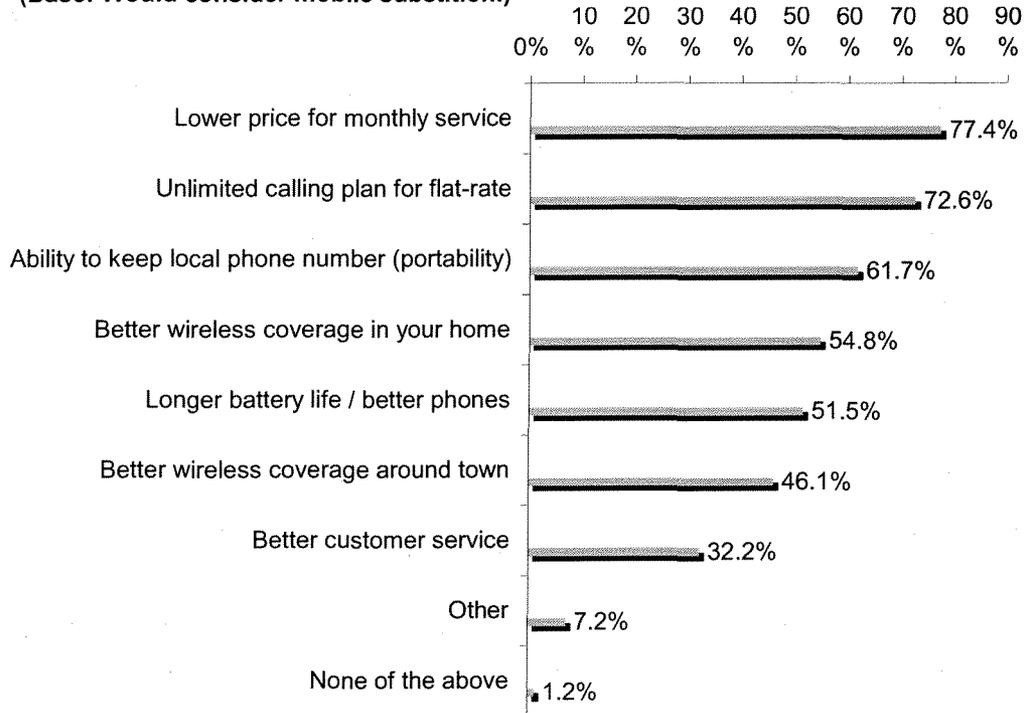
These responses suggest that wireless substitution is driven by perceived cost savings rather than convenience.

The survey responses also underscore the need for wireless carriers to continue strong capital investments in network expansion and improvement of in-building coverage. Carriers may find that emphasizing number portability (from landline to wireless) is an effective marketing technique as well.

It is also interesting to note that one third of the respondents would consider replacing wired phones with wireless phones if the carriers improved their customer service. Please see IN0502093MCM *Wireless Customer Service: Not Over the Hump Yet* (October , 2005) for more information on this topic.

Figure 5. Overall: Factors That Would Drive Wireless Substitution

What factors do you think would increase your likelihood to replace your landline phone with a wireless phone? (Multiple answers allowed.)
(Base: Would consider mobile substitution.)



Source: In-Stat, 9/05

n=332

Factors that Would Inhibit Wireless Substitution

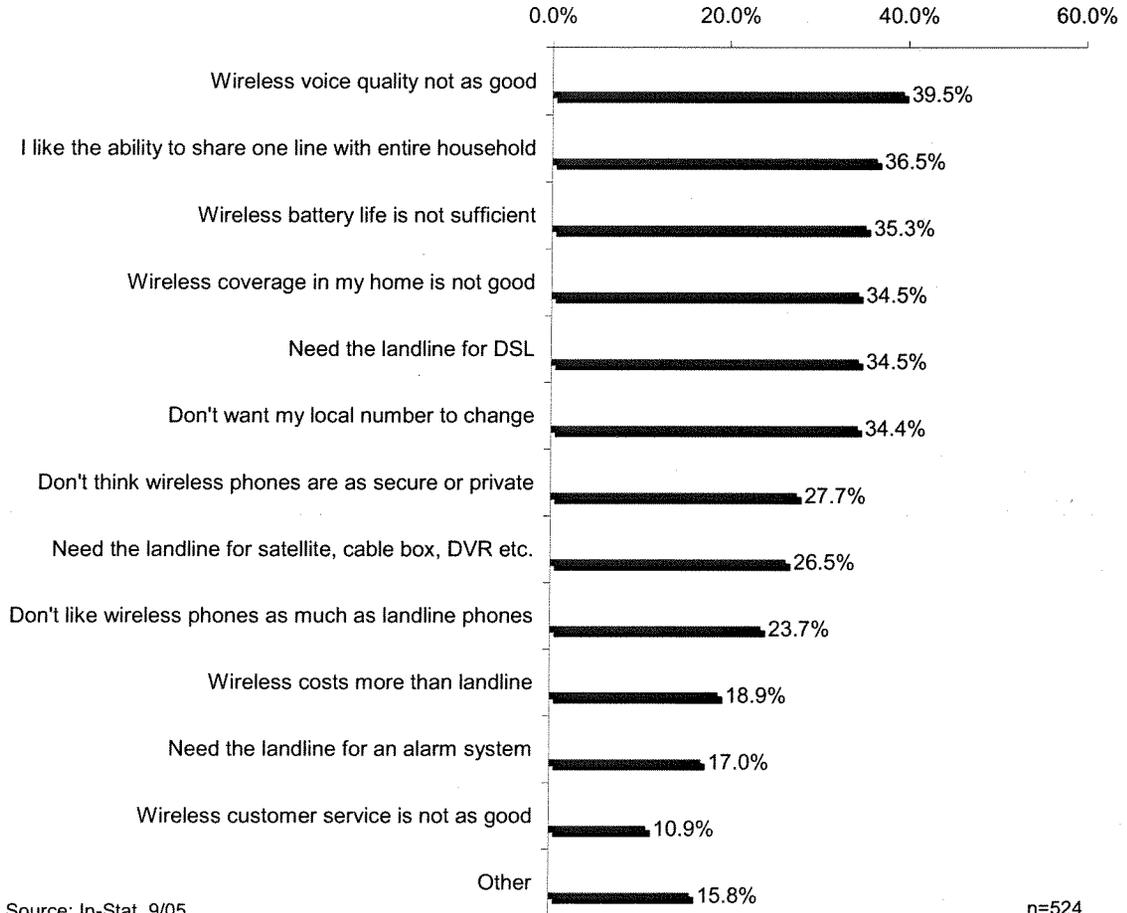
The 524 survey respondents who would not consider replacing their landline with a wireless phone cited several factors as having roughly equal importance to their decision. Among these, voice quality was most often mentioned (39.5%). In-building coverage was also a large factor. Together, these factors imply that wireless carriers still need to improve network performance to rival that of landline.

Use of landline for data services (DSL, security systems, television systems and alarm systems) is also a significant reason for many subscribers not to switch. Customers want to retain their legacy data services, and this seems to outweigh their interest in wireless substitution. To further encourage substitution and promote their strategies at the optimum time, wireless carriers need to consider the availability of solutions that would eliminate the technological need for landline data services, or at least reduce the need for analog landlines for security, television and alarm systems.

Again, number portability is a hot button for consumers, with 34.4% indicating the prospect of losing their local number as a reason not to switch. Carriers looking to increase their rate of wireless substitution would do well to educate consumers as to the availability of number porting, digital call security, and calling plans which help subscribers control their costs.

Figure 6. Overall: Factors That Would Inhibit Wireless Substitution

Why wouldn't you consider replacing your landline phone with a wireless phone?
 (Multiple answers allowed.)
 (Base: Would NOT consider mobile substitution.)



Source: In-Stat, 9/05

n=524

Consumer Profiles—Likelihood to Replace Landline with a Wireless Phone

This section, based on cross-tabulation of survey results with behavioral and demographic responses from other sections of the Consumer Mobility Study, illustrates the main characteristics of those consumers who are most likely to consider replacing their landline phone.

- Overall, the results demonstrate that wireless substitution is much more correlated with behavioral patterns than with traditional household demographics.
- Not surprisingly, customers who are heavy wireless users, who are willing to spend more on their next phone to get advanced features, and who use their phones for both business and personal reasons, are much more likely than average to be willing to consider substituting wireless for their landline phone. In short, familiarity with wireless increases interest in substitution for landline.

Table 1. Summary Table Of Consumer Characteristics and Groups Most Likely And Least Likely To Consider Replacing Their Landline With A Wireless Phone

	Most likely to replace	Least likely to replace
Carrier preferences	Alltel, US Cellular	Verizon, Cingular/AT&T Wireless, Sprint PCS
Age group	30-39	55+
Landline Carrier	Comcast, AT&T, Sprint, Cox	Qwest, SBC, Southwestern Bell, Pacific Bell, Ameritech
Advanced features	Digital music, wireless email	Voice only
Gender	Male	Female
Profession	Executive, Sales	Self-employed, Retired, Consultant
Business and personal use	Both	Business only
Household income	>\$35,000	<\$35,000
Wireless spending	>\$75/mo.	<\$30/mo.
Monthly minutes of use	>1500 minutes/mo.	<180 minutes/mo.

Source: In-Stat, 9/05

Demographics

There were very few statistically significant correlations between most demographic characteristics and the willingness to replace their landline with a wireless phone.

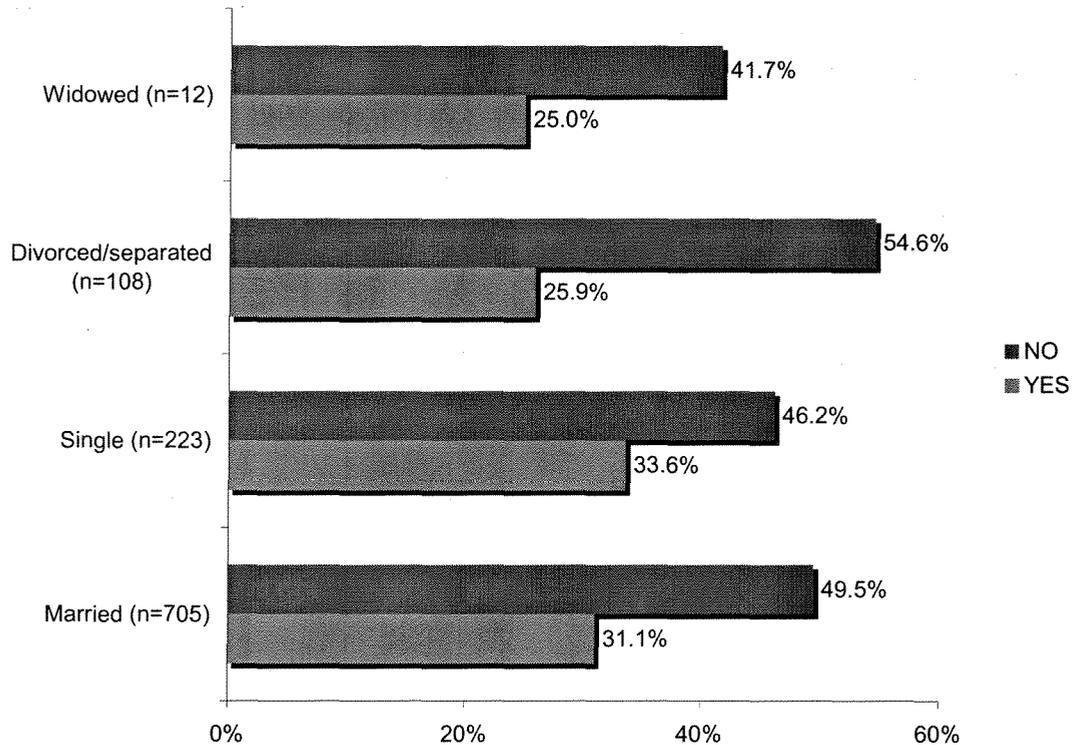
The weakest connections were in marital status, residence location, gender, size of household, and education level.

Marital Status

Survey results demonstrated no significant correlation between marital status and likelihood to replace landlines with wireless phones.

Figure 7. Marital Status: Likelihood to Replace Landline with a Wireless Phone

Would you consider replacing your landline phone with a wireless phone? (Base: Has both landline and wireless phone)



Note: "Don't Know" represents balance of responses.
Source: In-Stat, 9/05

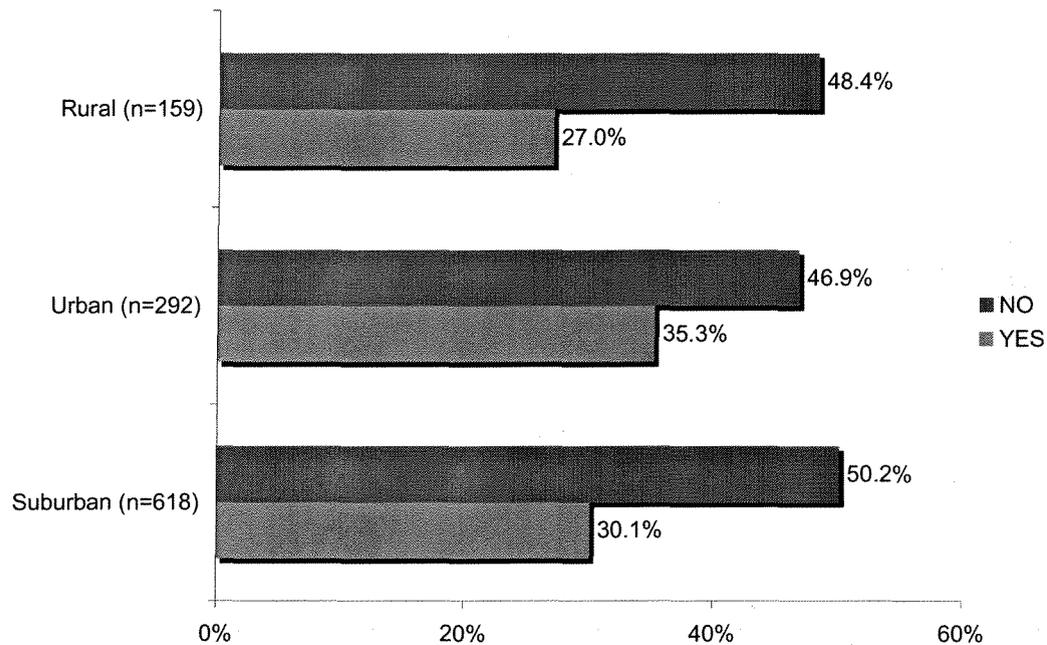
n=1,048

Residence Location

The Consumer Mobility Study yielded no significant correlation between residence location and likelihood to replace landlines with wireless phones. Given that limited wireless coverage was cited as a significant reason for *not* substituting, this suggests that carriers can focus their in-building coverage improvements in urban areas with greater net impact overall.

Figure 8. Residence Location: Likelihood to Replace Landline with a Wireless Phone

Would you consider replacing your landline phone with a wireless phone?
(Base: Has both landline and wireless phone)



Note: "Don't Know" represents balance of responses.
Source: In-Stat, 9/05

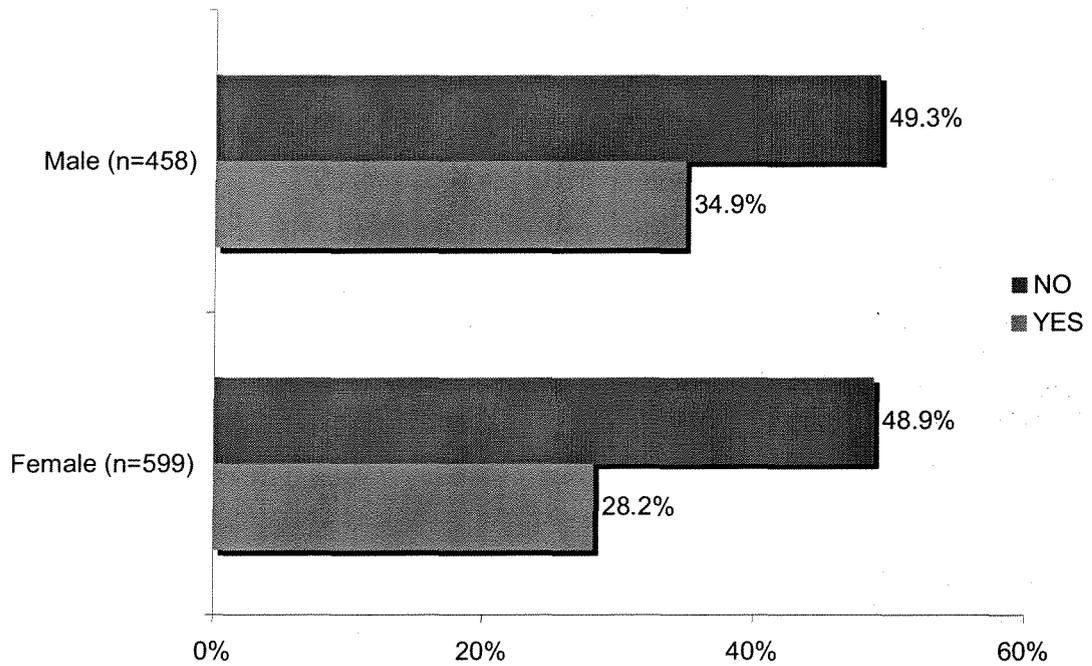
n=1,069

Gender

Male respondents were somewhat more likely than females to be willing to consider replacing their landline with a wireless phone. However, opposition to replacement was roughly the same between both gender groups.

Figure 9. Gender: Likelihood to Replace Landline with a Wireless Phone

Would you consider replacing your landline phone with a wireless phone?
(Base: Has both landline and wireless phone)



Note: "Don't Know" represents balance of responses.

Source: In-Stat, 9/05

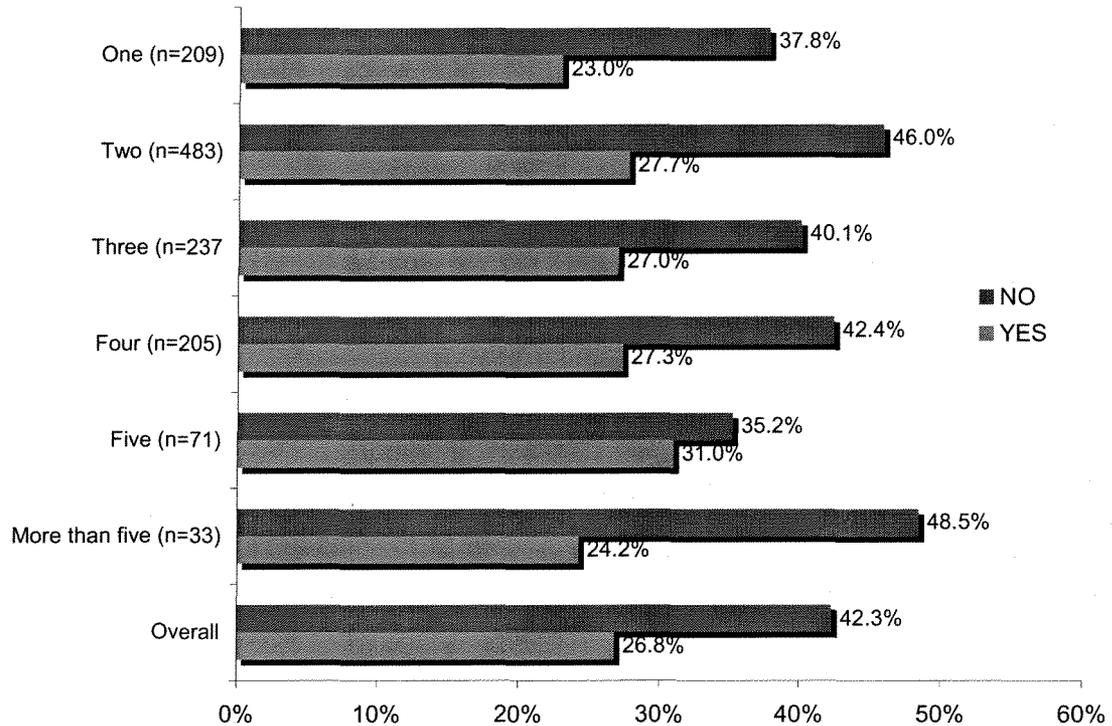
n=1,057

Size of Household

Regardless of household size, all groups were approximately equally likely as the total respondent base to replace their landline with a wireless phone.

Figure 10. Size of Household: Likelihood to Replace Landline with a Wireless Phone

**Would you consider replacing your landline phone with a wireless phone?
(Base: Has both landline and wireless phone)**



Note: "Don't Know" represents balance of responses.

n=1,238

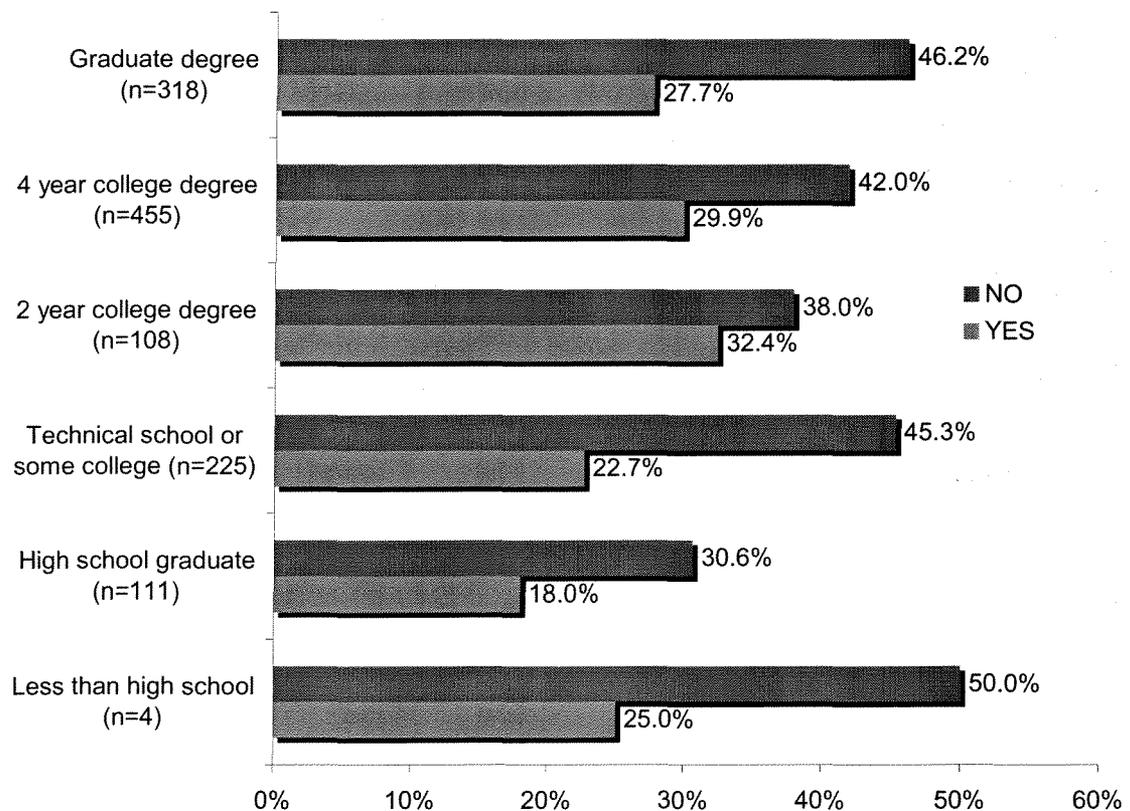
Source: In-Stat, 9/05

Education Levels

- There was a weak correlation between level of education and willingness to consider replacing the landline with a wireless phone. Respondents with some college or less education (high school graduate, less than high school) had higher disparity between Yes and No respondents.
- However, respondents with graduate degrees showed nearly the same likelihood to replace their landline as those with less than high school education.

Figure 11. Education Levels: Likelihood to Replace Landline with a Wireless Phone

Would you consider replacing your landline phone with a wireless phone?
(Base: Has both landline and wireless phone)



Note: "Don't Know" represents balance of responses.

Source: In-Stat, 9/05

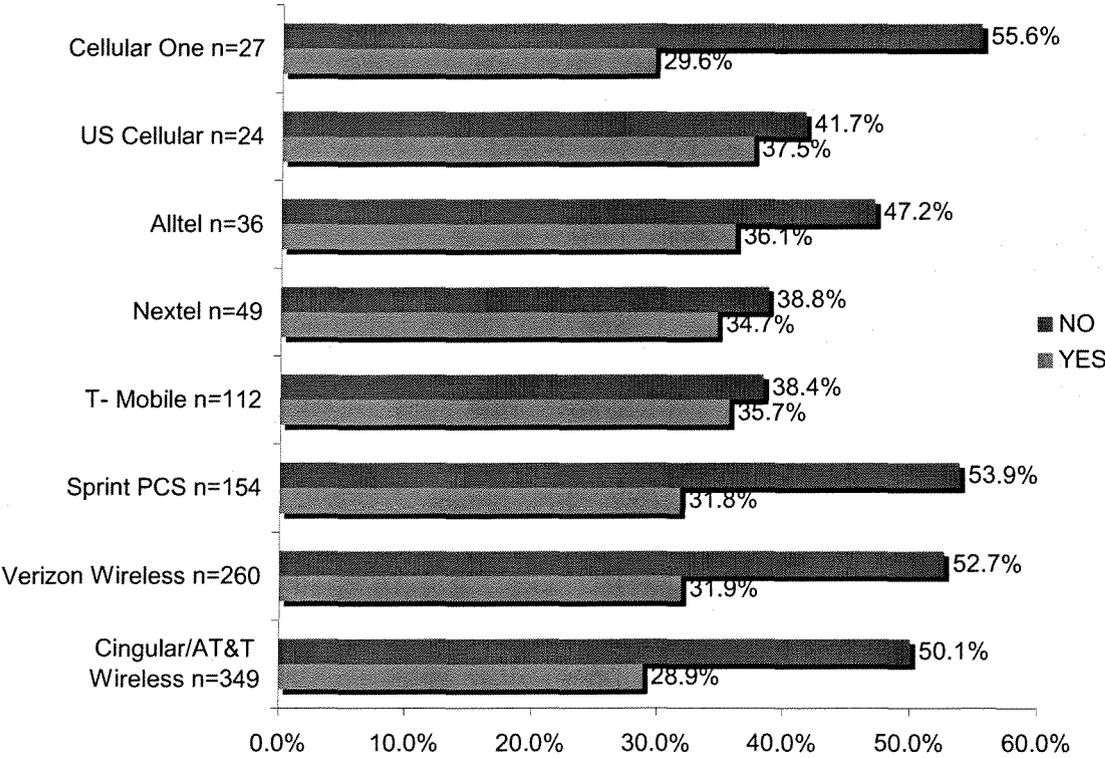
n=1,221

Wireless Carrier Preferences

- Alltel, US Cellular, T-Mobile, and Nextel subscribers show the greatest willingness to replace their landline with a wireless phone. However, results should be viewed with caution due to a small sample size.
- Verizon, Cingular/AT&T Wireless, Sprint PCS, and Cellular One customers were least likely to consider replacing their landline. These companies had the widest disparity between “No” and “Yes” responses, indicating a stronger preference to avoid replacing landline with their wireless phone.

Figure 12. Wireless Carrier Preferences: Likelihood to Replace Landline with a Wireless Phone

Would you consider replacing your landline phone with a wireless phone?
 (Base: Has a landline phone)



Note: "Don't Know" represents balance of responses.
 Source: In-Stat, 9/05

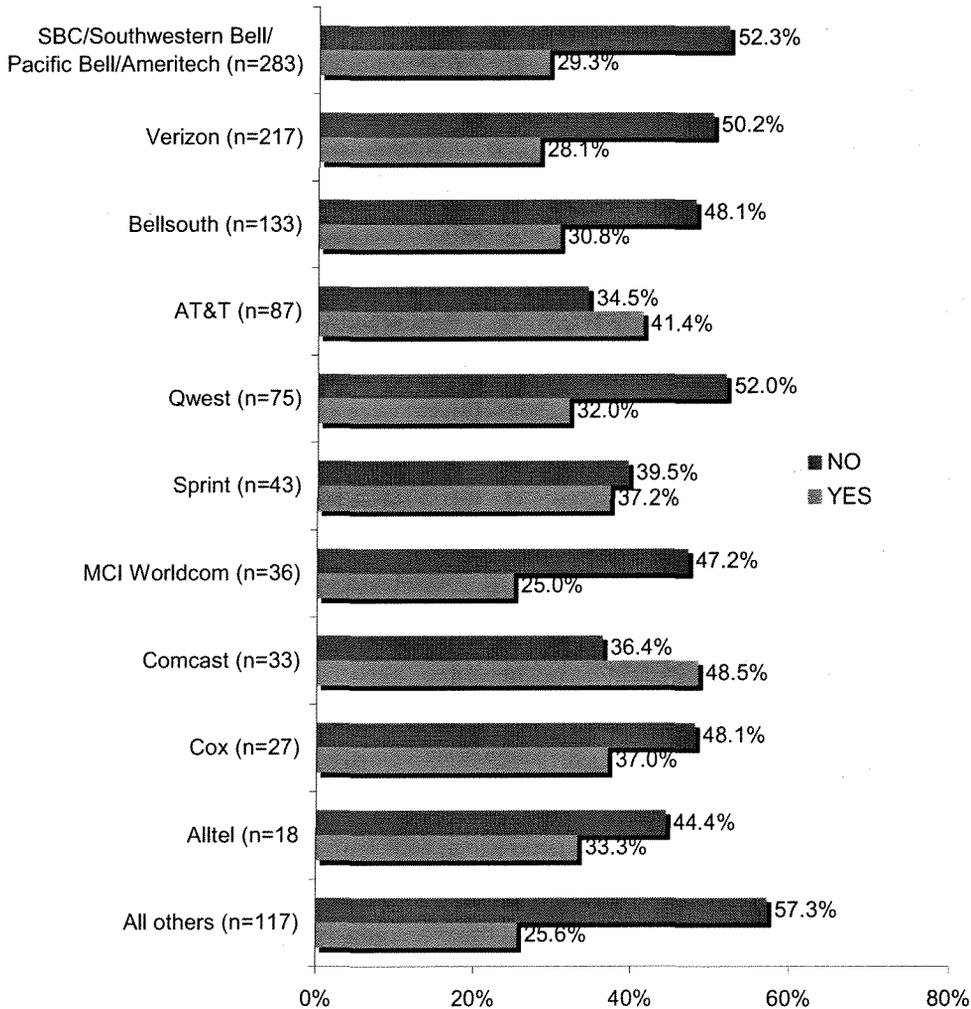
n=1,011

Landline Carrier Relationship

- Landline customers of Comcast, AT&T, Sprint, and Cox show the greatest willingness to replace their landline with a wireless phone. Customers of SBC/Southwestern Bell/Pacific Bell/Ameritech and Qwest showed the greatest loyalty to their landline carriers.
- Despite the small sample size, it is interesting to note that the one of the local voice service providers whose customers would switch to wireless is cable operator Comcast, the only non-telco operator on the list. The other is AT&T, which has been attempting to extricate itself from its short-lived residential local access business.

Figure 13. Landline Carrier Relationship: Likelihood to Replace Landline with a Wireless Phone

Would you consider replacing your landline phone with a wireless phone?



Note: "Don't Know" represents balance of responses.
Source: In-Stat, 9/05

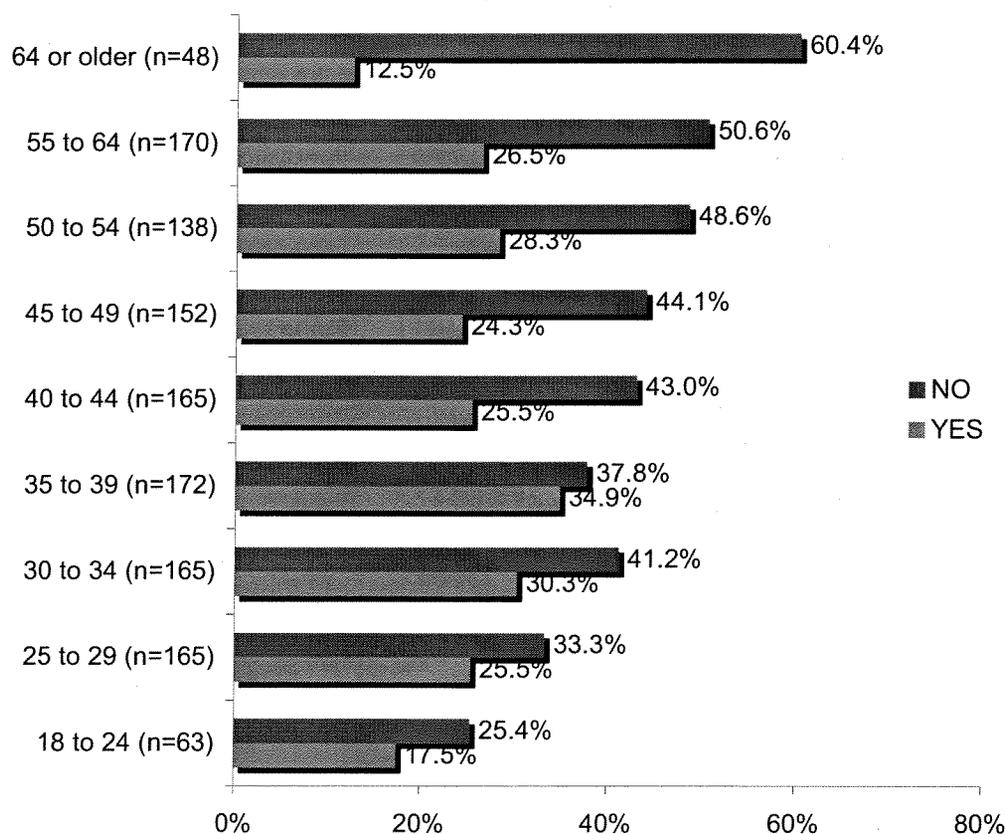
n=1,069

Age Groups: Likelihood to Replace Landline with a Wireless Phone

- The 30–39 age group of respondents was most likely to consider replacing their landline. Generally, as respondents get older, they are more likely to refuse to replace their landline, especially the age group 55 and older.
- The 18–24 year old age group is the least decisive, with 57.1% answering “Don’t Know” to the question. However, this indicates a marketing opportunity for wireless carriers. Indecisiveness suggests that they are open to suggestion and education. Explaining the benefits of one wireless phone (one bill, potentially lower monthly outlay, convenience, etc.) to this group could result in an increase in wireless usage as they abandon their landline phones.

Figure 14. Age Groups: Likelihood to Replace Landline with a Wireless Phone

**Would you consider replacing your landline phone with a wireless phone?
(Base: Has both landline and wireless phone)**



Note: "Don't Know" represents balance of responses.

n=1,238

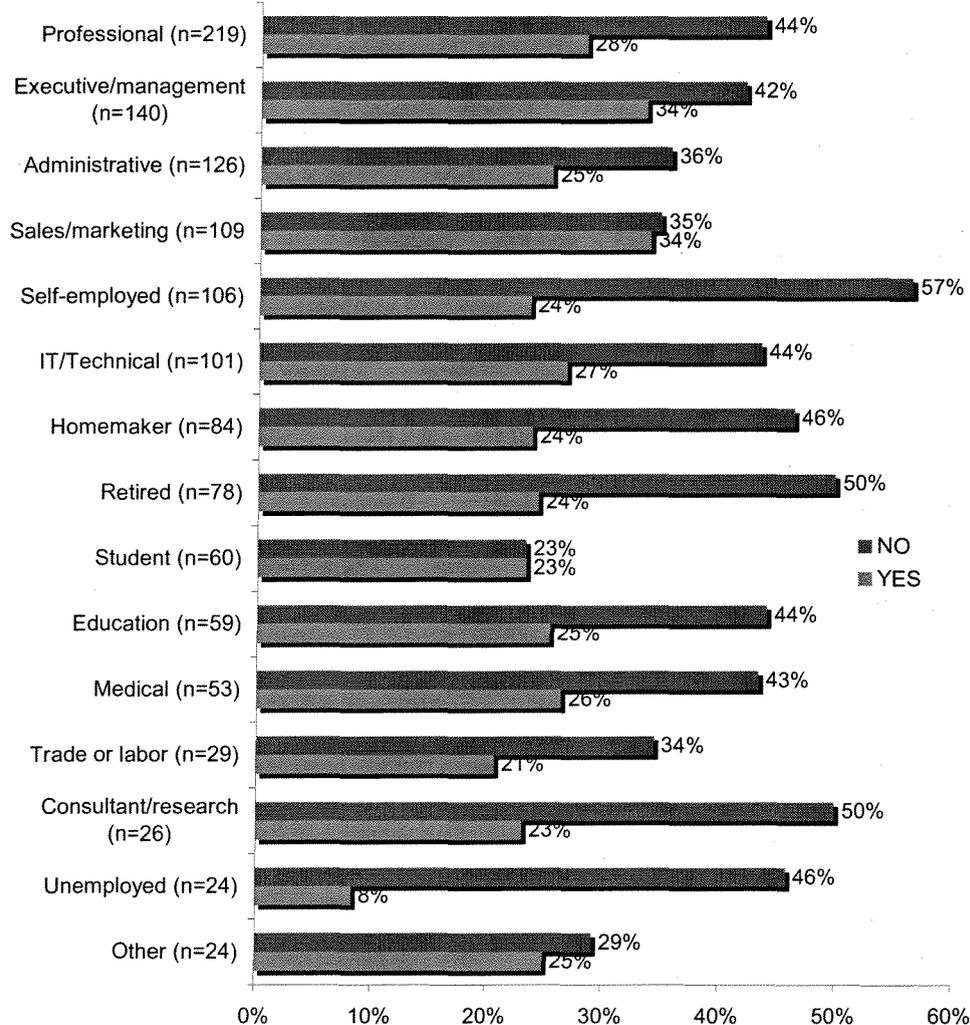
Source: In-Stat, 9/05

Profession

- Willingness to replace landlines is highest among Executive/management and Sales/marketing professionals. Likelihood to substitute is more evenly spread among most other groups, ranging from 23 to 28 percent.
- Consultants, Self-employed, Unemployed, Homemaker, and Retired consumers were the least likely to consider replacing their landlines.
- These results suggest that traditional “road warriors” are a prime market for wireless substitution. Carriers can increase minutes of use by encouraging those customers to go wireless-only.

Figure 15. Profession: Likelihood to Replace Landline with a Wireless Phone

What is your occupation?



Note: "Don't Know" represents balance of responses.
Source: In-Stat, 9/05

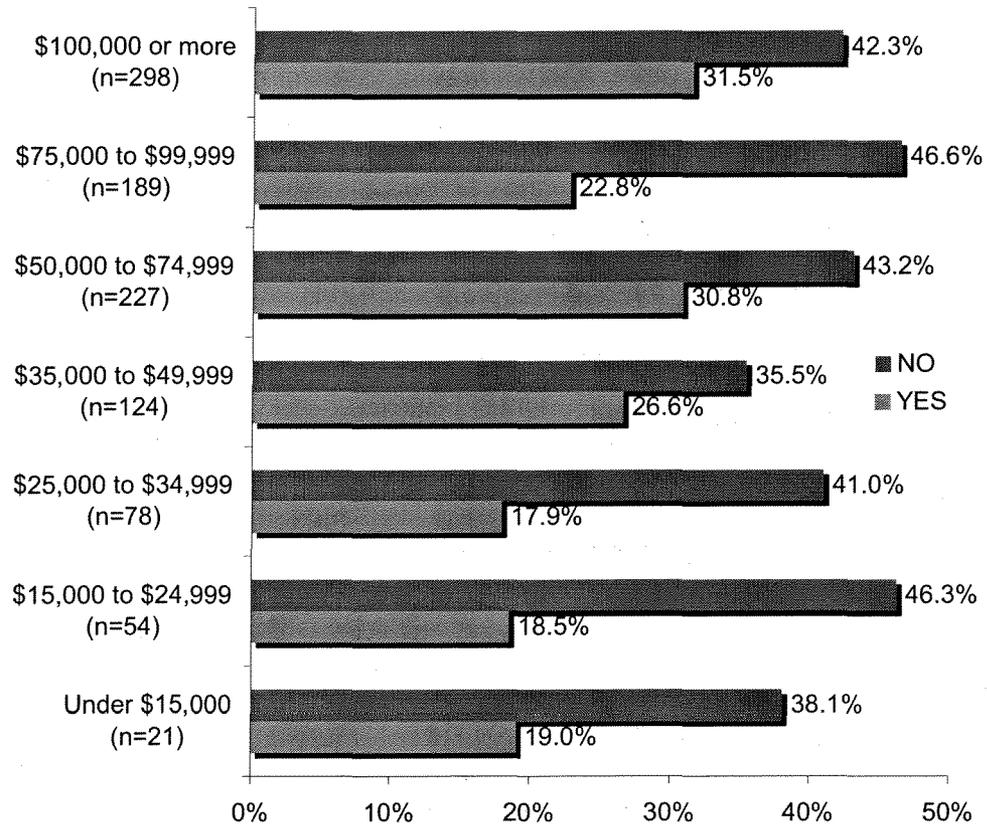
n=1,238

Household Income

A weak correlation exists between household income and the willingness to consider replacing landlines with wireless phones. Respondents with lower income levels (\$34,999 and less) were less likely to consider substitution.

Figure 16. Household Income: Likelihood to Replace Landline with a Wireless Phone

Would you consider replacing your landline phone with a wireless phone?
 (Base: Has both landline and wireless phone)



Note: "Don't Know" represents balance of responses.

Source: In-Stat, 9/05

n=991

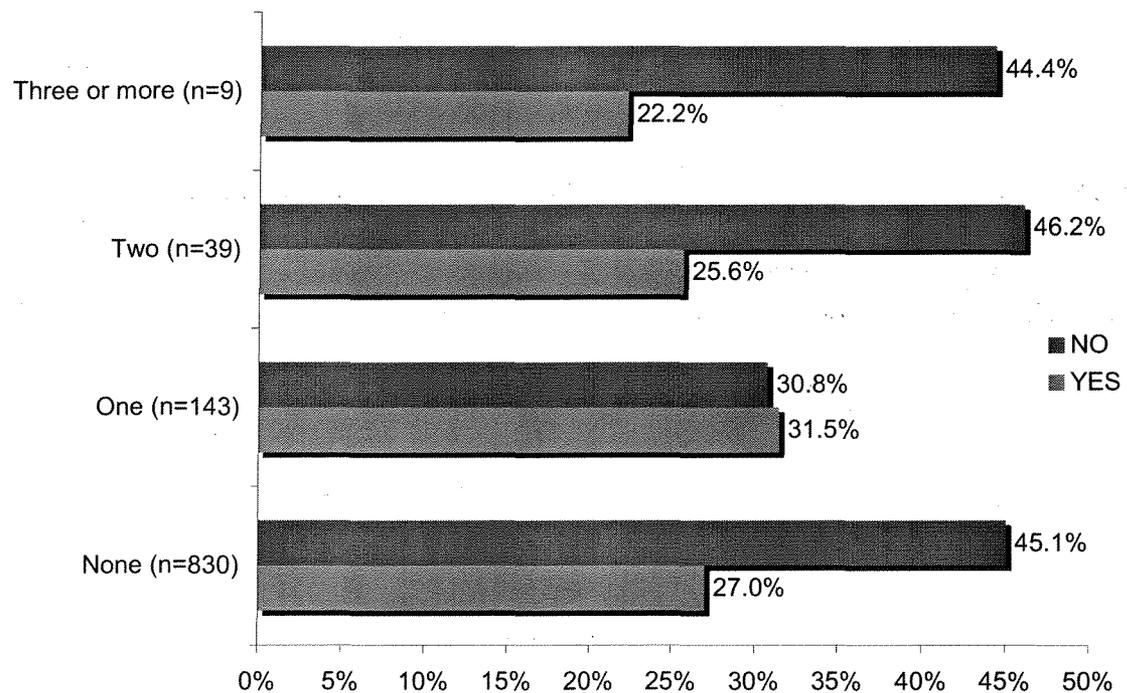
Teenagers in Household

- Respondents with one teenager (ages 12 to 17) in the household were somewhat more likely than average to consider replacing their landline with a wireless phone.
- Consumers with no teenagers were nearly as likely as the overall base to consider wireless substitution, as were those with two or more teenagers.

Figure 17. Teenagers in Household: Likelihood to Replace Landline with a Wireless Phone

Would you consider replacing your landline phone with a wireless phone?

(Base: Has landline phone, more than one person living in household.)



Note: "Don't Know" represents balance of responses.

Source: In-Stat, 9/05

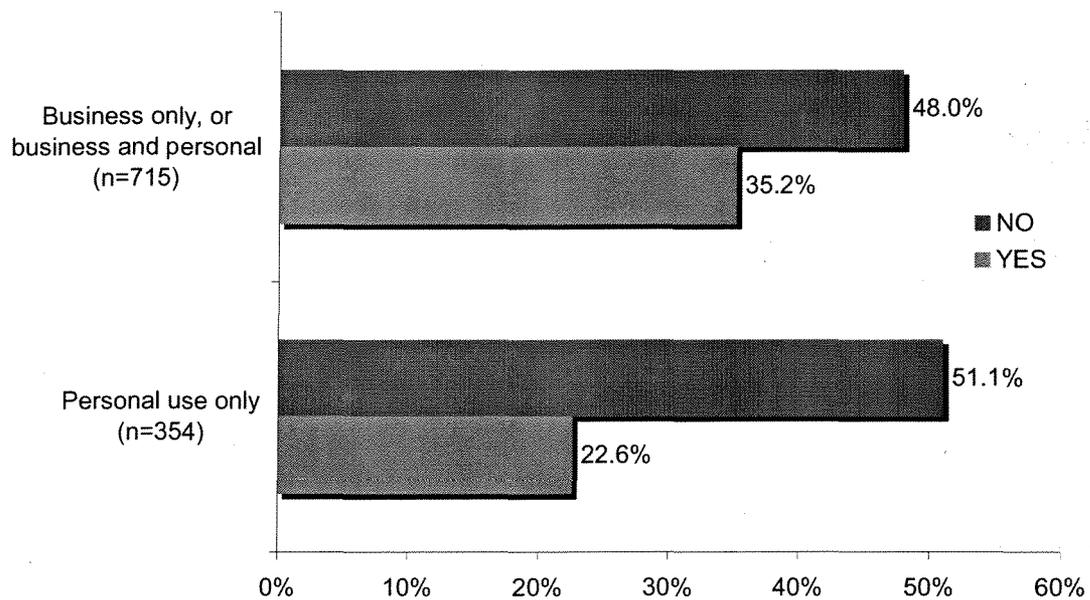
n=1,021

Personal and Business Use

- Respondents who use their wireless phone for both personal and business purposes were much more likely to consider replacing their landline. This is the first of several data points that suggest that increasing familiarity with wireless infers willingness to substitute.
- Combining this with earlier results regarding Executive/management and Sales/marketing professionals, suggests an obvious profile of a likely customer to substitute. Carriers can market to this “traditional” customer to encourage substitution and thereby increase the customer’s dependence on wireless.

Figure 18. Personal and Business Use: Likelihood to Replace Landline with a Wireless Phone

Would you consider replacing your landline phone with a wireless phone?
(Base: Has both landline and wireless phone)



Note: "Don't Know" represents balance of responses.
Source: In-Stat, 9/05

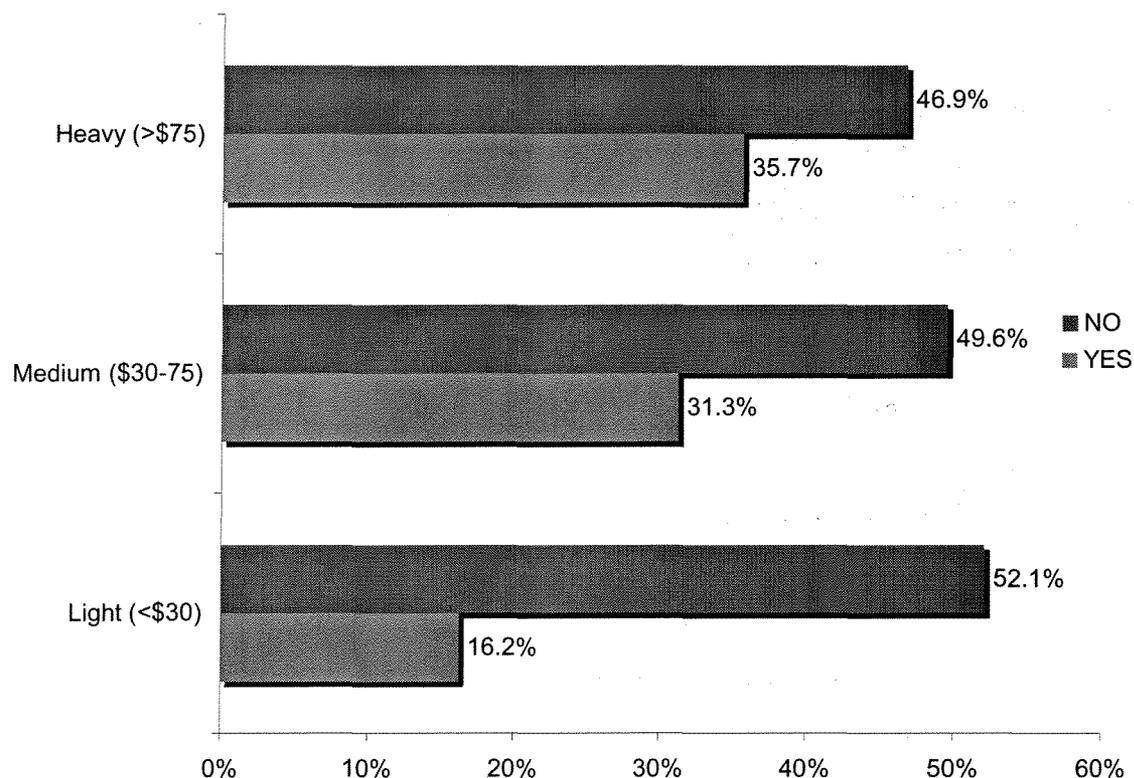
n=1,069

Monthly Wireless Spending

- The 2005 survey showed a distinct correlation between monthly average wireless bill and likelihood to substitute wireless for landline. (Monthly wireless spending includes voice and data services.) Heavy users of wireless were much more inclined to consider substitution (by a factor of two) than light users.
- Again, increasing familiarity with wireless infers willingness to substitute. Carriers can respond by focusing their marketing efforts on the highest-usage customers.

Figure 19. Monthly Wireless Spending: Likelihood to Replace Landline with a Wireless Phone

Would you consider replacing your landline phone with a wireless phone?
(Base: Has both landline and wireless phone)



Note: "Don't Know" represents balance of responses.
Source: In-Stat, 9/05

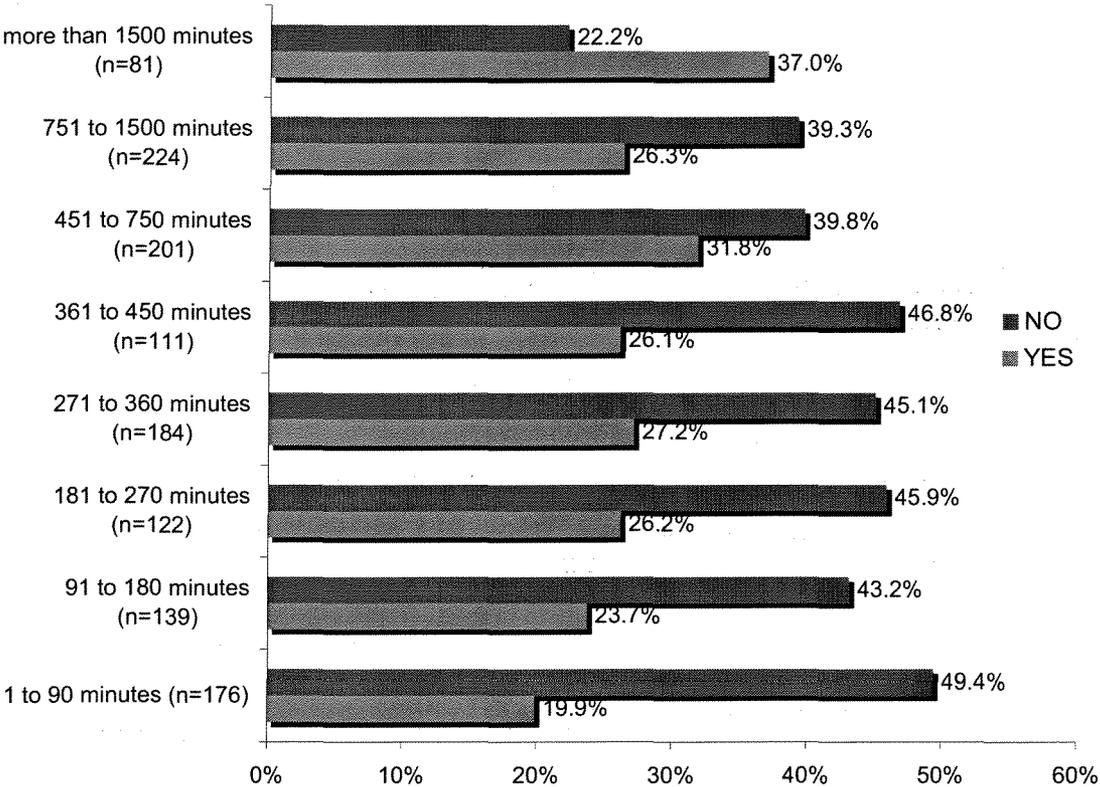
n=1,069

Minutes of Use

Respondents who use their wireless phones heavily (>1500 minutes per month) are much more inclined to consider substitution, by a factor of two compared to light users (<90 minutes per month). This correlates with the findings above in “Monthly Wireless Spending,” and “Personal and Business Use.”

Figure 20. Minutes of Use: Likelihood to Replace Landline with a Wireless Phone

**Would you consider replacing your landline phone with a wireless phone?
(Base: Has both landline and wireless phone)**



Note: "Don't Know" represents balance of responses.
Source: In-Stat, 9/05

n=1,238

Interest in Advanced Features

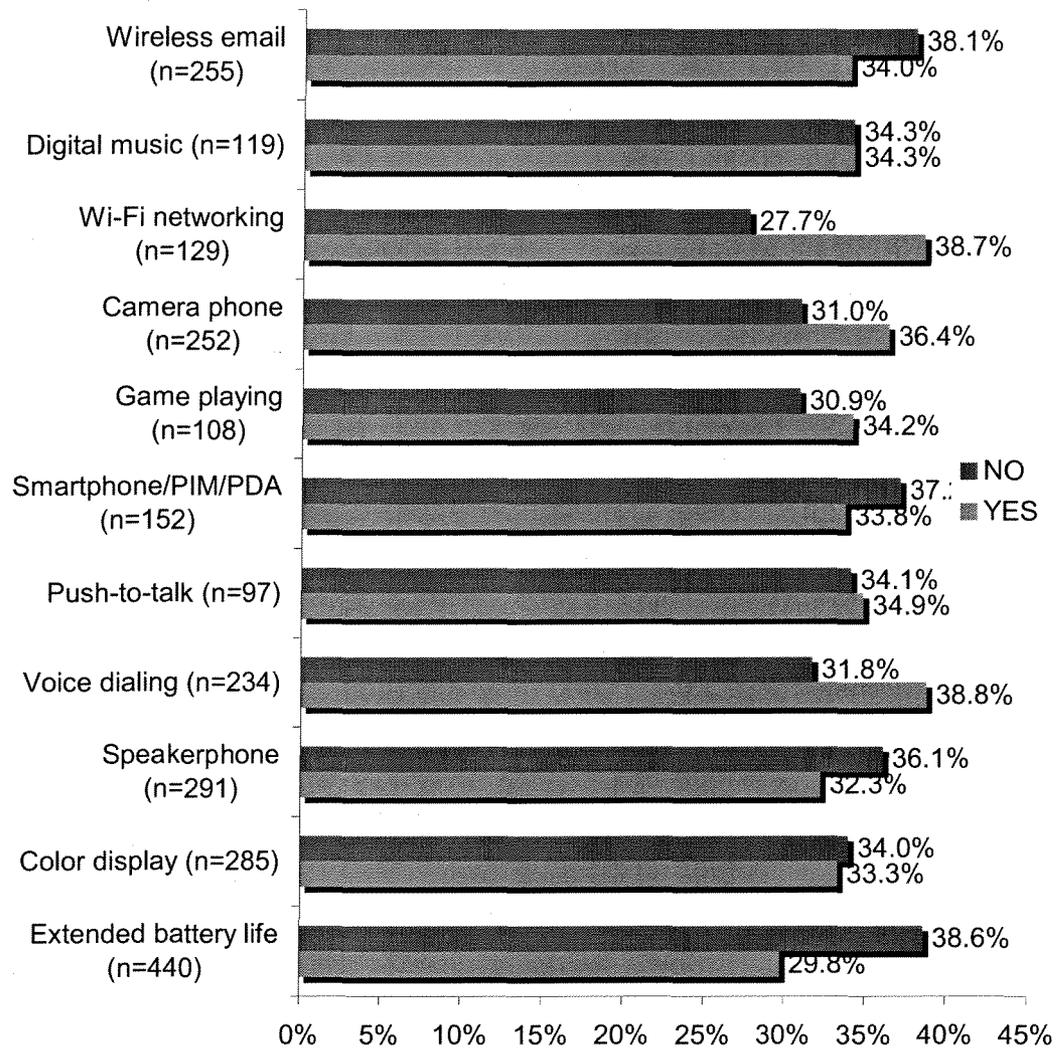
Respondents were asked if they were “willing to spend more on your next wireless phone for any of the following features.” Respondents who expressed interest in advanced features expressed more interest than average in replacing their landline with wireless.

Respondents with an interest in wireless email, digital music, Wi-Fi networking, camera phones, push-to-talk, and game playing were much more interested than average in replacing their landline with wireless.

These results correlate with earlier results regarding monthly spending. More active customers are more likely to substitute. Besides focusing marketing efforts on such customers, carriers can encourage adoption of advanced features to lead up to eventual substitution.

Figure 21. Interest in Advanced Features: Likelihood to Replace Landline with a Wireless Phone

**Would you consider replacing your landline phone with a wireless phone?
(Base: plans to purchase a new wireless phone in the next two years.)**



Note: "Don't Know" represents balance of responses.

n=853

Source: In-Stat, 9/05

Technology Enablers

Respondents to the survey indicated three main motivations for substituting wireless for their landline, and three main concerns that prevent them from substituting.

The three motivations summarize as follows: (1) cost savings compared to landline, (2) flat-rate calling plans (which offer control of cost), and (3) number portability.

The three top concerns were: (1) voice quality, (2) in-building coverage, and (3) perceived need for a landline phone to operate data equipment.

Convenience was less of a motivator for consumers considering substitution. The inherent advantages of wireless (mobility, calling plans with free long distance, phones with built-in address books, etc) seem to be motivation enough, and, to a certain extent, taken for granted. Instead, consumers seem to be looking for wireless to approach the in-building reliability of landline, and the standard connectivity of an analog phone jack.

Because cost savings are a large component of consumers' motivation to substitute wireless for landline, it follows that at least some of those consumers would prefer not to retain their landline if they did not have to. In other words, the survey results suggest that some consumers would appreciate a *complete* substitution scenario, rather than a scenario where they would end up paying monthly service charges on a landline phone strictly used for "backup" (a hedge against wireless outages or poor voice quality) or for connected devices in the home (set-top boxes, alarm systems, etc.)

In short, the survey results suggest two primary areas in which technology solutions could help increase substitution:

- For all consumers, devices that improve in-building coverage. This would primarily include in-building signal boosters and repeaters (not cheap "patch" antennas which do little to nothing).
- For consumers who want total substitution, technology that allows connection of data devices (which formerly required an analog landline phone jack) to the wireless phone, or which replaces the need for analog devices altogether.

In-Building Coverage

In-building signal boosters are designed to provide additional signal strength in areas where the non-boosted signal would be adequate if there were no obstacles in the radio path. Unlike repeaters, boosters do not demodulate the radio signals.

As a result, signal boosters are more compact, less expensive, and use less power than repeaters. However, repeaters offer more robust capabilities and are typically the choice for larger indoor areas.

- Companies such as CellAntenna and Wireless Extenders offer “consumer-grade” boosters and repeaters for as little as \$300. The efficacy of these products varies considerably, and their current prices would make carrier subsidization difficult to justify.
- Viable (affordable, practical, and cost-effective) in-building signal boosting or repeating technology would be a boon to carriers who want to encourage substitution, particularly as the technology price point came down.
- Carriers should partner with manufacturers to bring such technologies to consumers, and combine the offer of this technology into a package with number porting, and a flat-rate calling plan.

Analog Data Devices

Numerous in-home devices require analog jacks to the telephone network. These include security systems, set-top boxes, and fax machines. A total substitution of wireless for landline would require some alternate method to connect these devices to dial tone.

Such devices exist today, in a variety of forms.

- An example is the Cisco ATA 186 Analog Telephone Adapter, which connects analog devices to Ethernet (not found in the majority of homes today). Devices such as this connect analog devices to an IP network, similar to Voice Over IP (VoIP).
- For alarm systems, services such as Uplink (by CellemetryXG) offer a wireless alternative to traditional analog phone lines (for additional information about wireless telemetry alternatives, please see IN0502028MBD, *Wireless Telemetry Services for U.S. Businesses*, October, 2005)
- For faxing, other solutions are gaining speed, including Internet faxing (eFax et al), and email of PDF documents.

A single wireless device to replace analog phone lines in a variety of locations around the home would probably not be practical for wireless carriers to provide. It would be difficult to provide dial tone emulation at all the locations needed within a house, over wireless, at a realistic price point.

Instead, carriers may be better off letting consumers adopt their own technology replacements for their legacy analog devices. A trend has already developed in this direction. Most notably, VoIP services emulate dial tone for devices that require it, such as faxes. VoIP is becoming widely available through cable companies and independent operators, such as Vonage, TimeWarner “Digital Phone,” and Cablevision’s “Optimum Voice” services.

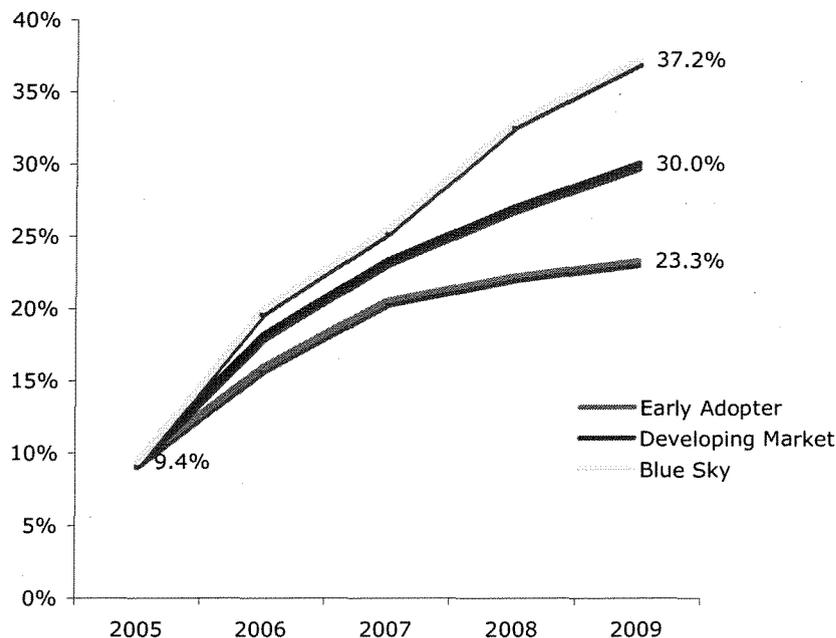
- Total replacement of landline by wireless is only sought by some customers that are particularly price sensitive. Those who are willing to retain a landline (with basic service) for their analog devices, while switching the bulk of their voice usage to wireless, will not have an issue of replacing dial tone for analog devices.
- Customers who do retain their landlines can find that using wireless for voice can still be a financial “win.” Wireless typically provides free long distance, free voice mail, and other services for which they may have been paying on landline.
- Customers who object to the loss of their DSL line (a barrier named by 34.5% of respondents who said they would not consider substituting wireless for landline) often have viable options for Internet service, including cable and wireless. Therefore, increasing availability of broadband Internet service in the home can be considered an enabling factor that will reduce barriers to wireless substitution.
- Given a lack of a single “magic bullet” technology to replace dial tone for all legacy devices that require it, carrier strategies should focus on educating customers about the financial and practical advantages of substitution, as well as educating customers about alternative technologies that can replace the need for dial tone.

Wireless Substitution Forecasts

The survey results reveal that several traditional demographic segmentations have little or no impact on the customer's willingness to substitute wireless for landline. For example, customer age, gender, marital status, residence location, education level, and size of household were not effective determinants for forecasting purposes.

However, non-demographic profiles such as minutes of use, monthly wireless spending, and interest in advance wireless features were strongly related to interest in substitution. This suggests that interest in substitution is a matter of personality and job commitments more than it is a matter of demographic profiles. In short, the self-reported interest in substitution is the best and primary guideline available for forecasting purposes.

Figure 22. Wireless Substitution Forecast, 2005–2009



Source: In-Stat, 9/05

Adding secondary research to the survey results, In-Stat has modeled forecasts for wireless substitution under three different scenarios:

- **Early Adoption Forecast.** In this forecast, we have accounted for conservative growth based on known existing adoption rates and results from this survey, extrapolated in a nearly straight line. This forecast assumes that no significant technology or market events occur which would improve the current rate of wireless substitution. It also assumes a decline in adoption after 12 months, based on the “early adopter” phase ending and not being replaced by a growth market.

- **Developing Market Forecast.** This forecast accounts for the factors above, and extrapolates the likely impact of improving technology (both in wireless and supporting/enabling technologies such as broadband Internet access in households). It also assumes that youth (who are largely presently undecided about substitution) will adopt wireless as their primary phone in large numbers. Thus, this forecast presents a view of a market that has successfully gone beyond the “early adopter” stage and is continuing to develop.
- **Blue Sky Forecast.** This forecast models the potential impact of all the factors above with additional factors added which *could* occur in an ideal situation. These include decreasing cost of flat-rate wireless plans, a more rapid take-up of broadband Internet in US households, and that a significant number of customers who are presently “somewhat interested” will eventually substitute. It also assumes that no disruptive technologies or events (such as regulation) occur that could slow adoption.

All three scenarios show a significant increase in wireless substitution in the US over the four-year period from 2005 to 2009, ultimately ranging from 23.2% to 37.2% by 2009.

Early Adoption Forecast

The Early Adoption Forecast is the most conservative. Because it does not account for growth drivers that are likely to occur (which are accounted for in the following two forecasts), it should be regarded as a “worst-case” scenario for wireless substitution.

This forecast assumes that no significant technology or market events occur which would improve the current rate of wireless substitution. Key elements accounted for in the forecast include:

- Current levels of wireless substitution (baseline).
- Customers who are “very interested” in substituting wireless for landline in the next 12 months.
- Growth in overall wireless subscribers.
- Moderate improvements in network coverage, capacity, and quality-of-service, in addition to a moderate improvement in customer service.
- Potential competition from VoIP.

Table 2. US Wireless Substitution Forecast—Early Adoption

US Wireless Substitution Forecast (thousands)					
Early Adoption	2005 Est.	2006 Fcst	2007 Fcst	2008 Fcst	2009 Fcst
Total US Switched Access Lines	172,522	167,884	163,426	158,899	155,244
Change (%)		-2.7%	-2.7%	-2.8%	-2.3%
Total US Wireless Subscribers	193,316	207,124	220,380	231,840	243,200
Change (%)		7.1%	6.4%	5.2%	4.9%
Wireless-only Subscribers	18,078	32,991	45,332	51,592	56,699
Change (%)		82.5%	37.4%	13.8%	9.9%
% of Subscribers who are wireless-only	9.4%	15.9%	20.6%	22.3%	23.3%

Source: In-Stat, 9/05

Developing Market Forecast

The Developing Market Forecast assumes that early adopters are signed up in the coming year as expected, and that the market further develops so that other non-early adopters are able to see the justification for substitution, and do so.

Factors that could stimulate wireless substitution faster than the Early Adopter Forecast, resulting in up to 31.9% of mobile subscribers using their wireless phone as their only telephone in 2009, are:

- An increasing adoption rate among young wireless customers to the exclusion of obtaining traditional landline phones.
- Improving technology that enables wireless substitution among homeowners, primarily including expanded cable Internet access.
- Increasing interest in advanced wireless features, adoption of which correlates strongly to interest in substitution.
- Continued moderate declines in flat-rate wireless usage plans.
- Accelerated improvement of network coverage, reliability, and quality-of-service. These improvements could be achieved by a stronger-than-expected capital investment in carrier networks.

Table 3. US Wireless Substitution Forecast—Developing Market

US Wireless Substitution Forecast (thousands)					
Developing Market	2005 Est.	2006 Fcst	2007 Fcst	2008 Fcst	2009 Fcst
Total US Switched Access Lines	172,522	167,884	163,426	158,899	155,244
Change (%)		-2.7%	-2.7%	-2.8%	-2.3%
Total US Wireless Subscribers	193,316	207,124	220,380	231,840	243,200
Change (%)		7.1%	6.4%	5.2%	4.9%
Wireless-only Subscribers	18,078	37,547	51,431	62,560	73,017
Change (%)		107.7%	37.0%	21.6%	16.7%
% of Subscribers who are wireless-only	9.4%	18.1%	23.3%	27.0%	30.0%

Source: In-Stat, 9/05

Blue Sky Forecast

The “Blue Sky” forecast models the potential impact of all the factors in the earlier forecasts, with additional factors added which *could* occur in an ideal situation. This gives us a picture of the “best-case” scenario or, practically speaking, the upper limit of wireless substitution during the forecast period.

This forecast assumes that all the major barriers to substitution named by respondents in the survey have been addressed. Key drivers of this forecast include:

- More rapid than expected decreases in the cost of flat-rate wireless plans for consumers.
- More rapid than expected availability of broadband Internet in US households.
- Very high rates of adoption during the forecast period by youth, and wireless consumers who presently rate themselves as “somewhat interested” in substitution.
- Carriers actively lead marketing and education efforts to encourage substitution.
- No disruptive technologies or events that could slow substitution (including regulatory barriers, drastic decreases in landline phone charges, greater-than-expected adoption of VoIP).
- Excellent quality of service over wireless, and significant improvements in in-building coverage (whether by technology enhancements or continued network build-out).

Table 4. US Wireless Substitution Forecast—Blue Sky

US Wireless Substitution Forecast (thousands)					
Blue Sky	2005 Est.	2006 Fcst	2007 Fcst	2008 Fcst	2009 Fcst
Total US Switched Access Lines	172,522	167,884	163,426	158,899	155,244
Change (%)		-2.7%	-2.7%	-2.8%	-2.3%
Total US Wireless Subscribers	193,316	207,124	220,380	231,840	243,200
Change (%)		7.1%	6.4%	5.2%	4.9%
Wireless-only Subscribers	18,078	41,276	56,261	76,200	90,549
Change (%)		128.3%	36.3%	35.4%	18.8%
% of Subscribers who are wireless-only	9.4%	19.9%	25.5%	32.9%	37.2%

Source: In-Stat, 9/05

Summary and Conclusions

Mobile wireless services have quickly become a viable alternative to traditional landline service for a large number of consumers in the US. While some barriers still exist to the widespread displacement of landlines by wireless phones, consumer attitudes clearly illustrate the potential for wireless substitution as the wireline subscriber base and value proposition continue to deteriorate.

In-Stat draws these conclusions:

- About 9.4% of wireless subscribers already use a wireless phone as their primary telephone. Those who are considering substitution are primarily motivated by the prospect of saving money, as long as they don't have to give up much in terms of quality, reliability, or services.
- Barriers to landline replacement, particularly in-building coverage and inconvenience (such as losing a DSL line or the customer's phone number), are resolvable with other technologies or consumer education.
- Established heavy users of wireless present a ready market, however, youth will be a significant market in the near term as well. Youth, not being as accustomed to having a landline phone of their own, will find it easier to stay with their first phone than older users who have to wean themselves off a landline service.
- Carrier marketing will have a significant role in determining how many wireless subscribers choose to substitute wireless for landline. This is more a battle over perception than it is superior technology. Carriers can stimulate substitution by continuing to attract customers to advanced wireless features, and educating them as to the availability of number portability.
- Between 23.3% and 37.2% of wireless subscribers will use wireless as their primary phone by 2009. Our mid-range (most likely) estimate is 30.0% by 2009.

REDACTED – FOR PUBLIC INSPECTION

1.j. For each AT&T franchise area, provide: The number of AT&T Mobility's residential mobile wireless subscribers. Additionally, provide:

- i) An estimate of AT&T Mobility's share of residential mobile wireless lines.
- ii) An estimate of the proportion of AT&T Mobility's residential mobile wireless subscribers that subscribe to AT&T Mobility instead of a wireline local exchange service and long distance service.

Response: See attached. As noted above in response to 1.h., AT&T has not prepared for its internal purposes an estimate of the number of residential consumers in its franchise areas who have "cut the cord" for AT&T Mobility or any other CMRS provider. Consequently, AT&T derived the attached state-wide estimates for 1.j.i. and 1.j.ii. based on information cited above in 1.h.

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Attachment 1.j.

Table(s) Redacted in Full