BEFORE THE
KENTUCKY PUBLIC SERVICE COMMISSION

In the Matter of: MCI COMMUNICATIONS SERVICES, INC.; BELLATLANTIC COMMUNICATIONS, INC.; NYNEX LONG DISTANCE COMPANY; TTI NATIONAL, INC.; TELECONNECT LONG DISTANCE SERVICES AND & SYSTEMS COMPANY; AND VERIZON SELECT SERVICES, INC. COMPLAINANTS v. WINDSTREAM KENTUCKY WEST, INC.; WINDSTREAM KENTUCKY EAST, INC. – LEXINGTON; AND WINDSTREAM KENTUCKY EAST, INC. – LONDON DEFENDANTS	)	Case No. 2007-00503

TESTIMONY OF SPRINT COMMUNICATIONS COMPANY, L.P., SPRINT SPECTRUM L.P., NEXTEL WEST CORP., AND NPCR, INC. D/B/A NEXTEL PARTNERS

Sprint Communications Company L.P., Sprint Spectrum L.P., Nextel West Corp., and NPCR, Inc. d/b/a Nextel Partners (collectively, "Sprint Nextel") files the testimony of James A. Appleby. One copy of the confidential version and an original and ten copies of the redacted version are being filed.

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CERTIFICATE OF SERVICE

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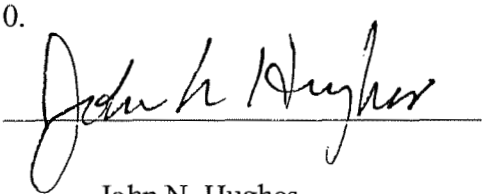
This 14th day of July, 2010.



John N. Hughes

PUBLIC VERSION

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:	)	
	)	
MCI COMMUNICATIONS SERVICES, INC.; BELLATLANTIC COMMUNICATIONS, INC.; NYNEX LONG DISTANCE COMPANY; TTI NATIONAL, INC.; TELECONNECT LONG DISTANCE SERVICES AND & SYSTEMS COMPANY; AND VERIZON SELECT SERVICES, INC.	)	
	)	Case No. 2007-00503
COMPLAINANTS	)	
	)	
v.	)	
	)	
WINDSTREAM KENTUCKY WEST, INC.; WINDSTREAM KENTUCKY EAST, INC. – LEXINGTON; AND WINDSTREAM KENTUCKY EAST, INC. – LONDON	)	
	)	
DEFENDANTS	)	

DIRECT TESTIMONY

OF

JAMES A. APPLEBY

On Behalf of

Sprint Communications Company, L.P., Sprint Spectrum, L.P., Nextel West Corp.

and NPCR, Inc.

CONFIDENTIAL VERSION

July 14, 2010

Q. Please state your name and business address.

A. My name is James A. Appleby. My business address is 6450 Sprint Parkway, Overland Park, Kansas 66251.

Q. **What is your position and who are you representing in this proceeding?**

A. I am employed as a Regulatory Policy Manager for Sprint Nextel Corporation. I am testifying on behalf of Sprint Communications Company, L.P., Sprint Spectrum, L.P., Nextel West Corp., and NPCR, Inc. (collectively, "Sprint Nextel"). Sprint Nextel is a provider of wireline long distance service, wireless communications services and wholesale services to cable providers in Kentucky.

Q. Please summarize your educational background and business experience.

A. I hold a Bachelor of Science degree in accounting from Shippensburg University in the state of Pennsylvania. I became a Certified Public Accountant in Pennsylvania in 1989. I have been employed by Sprint since 1989. I began working with Sprint's Regulatory Policy Group in 1996. In my current position as Regulatory Policy Manager, I am responsible for the development of state and federal regulatory and legislative policy for all divisions of Sprint Nextel Corporation. I am also responsible for the coordination of policy across business units. The specific policy issues that I address include, among other things, intercarrier compensation, universal service, pricing, access reform, reciprocal compensation and local competition.

Q. Have you previously testified before other state Commissions?

A. Yes. In my position I have also testified before the Public Service Commission of South Carolina, the Missouri Public Service Commission, the Indiana Utility Regulatory Commission, the Michigan Public Service Commission, the New Jersey Board of Public Utilities, the Virginia State Corporation Commission, the Nebraska Public Service Commission, the Kansas Corporation Commission, the Arizona Corporation Commission, the Illinois Commerce Commission, the Pennsylvania Public Utility Commission and the Iowa Utilities Board. Additionally, I have testified before state legislative committees, and I have also worked with the various state Commissions' staff and the Federal Communication Communication's ("FCC") staff.

Purpose, Scope and Summary of Testimony

Q. What is the purpose and scope of your testimony?

A. My testimony will explain why the subsidies embedded in the access rates of the Windstream Kentucky incumbent local exchange carriers[1] are harmful to competition and consumers. My testimony explains why it is essential to the development of a fully competitive Kentucky telecommunications market that the prices of Windstream's intrastate switched access[2] be reduced. In my testimony, I describe the relationship between high wholesale switched access rates and the price for all retail voice telecommunications services that require those access services as an

[1] Windstream has two operating companies in Kentucky: Windstream Kentucky East, LLC ("Windstream East") and Windstream Kentucky West, LLC (Windstream West") (collectively "Windstream Kentucky"). Windstream East has two study areas: Lexington and London which are referenced herein as "Windstream East-Lexington" and Windstream East-London."

[2] To the extent that I use the term intrastate access, or simply access, I mean intrastate switched access.

essential input. My testimony also explains how the consumers of Kentucky will benefit from reductions in Windstream's switched access charges. Finally, my testimony will provide Sprint Nextel's specific recommendation for Windstream's intrastate access rate reductions and why Windstream no longer requires access subsidies.

Q. Please summarize your testimony.

A. Switched access is a monopoly service. All carriers that compete against Windstream in the retail market must use Windstream's intrastate switched access to terminate non-local calls to Windstream's customers. This includes traffic originated by wireless providers who are charged terminating access on wireless calls to landline customers when such calls cross Metropolitan Trading Area ("MTA") boundaries. Wireless carriers, however, do not collect access charges on toll calls received from other carriers, including Windstream. Carriers cannot compete on an equal footing with Windstream if Windstream is permitted to impose on its competitors input costs that are far above the actual cost of providing those functions. KRS 278.512 states the Legislative finding that the Commission is "authorized and encouraged" to set policies that consider the interests of consumers, the public, providers of telecommunications services and the continued availability of good telecommunications services within a changing environment.[3] In its regulation of intrastate switched access charges, Sprint believes the Commission should consider the impact inflated access charges have on the development of competition in the Commonwealth.

[3] *See* KRS § 278.512(1)(c)

Access prices were historically inflated as a mechanism to subsidize the price of basic local service in a regulated monopoly setting. But this interplay between local service rates and intrastate access rates was established long before LECs developed the ability to collect revenues from numerous other services provisioned over the same network on which they provide local exchange and exchange access services. Windstream within its service territories now offers wireline long distance, numerous new calling features, broadband and video services. These services are often bundled together to provide the consumer's complete service needs. The average revenue per customer Windstream collects continues to expand. The historic trend of retail revenue growth and the potential for further growth in the future makes the collection of subsidies from competing carriers in the form of grossly inflated access rates unnecessary and anti-competitive. Windstream can and should collect the costs of providing retail services from the customers purchasing those retail services instead of collecting a portion of those costs from competitors by charging inflated rates for monopoly switched access. This change is essential to developing a level competitive playing field for all service providers. Doing so will help level the playing field for all competitors.

Sprint recommends that each of Windstream's Kentucky ILECs be required to set its intrastate switched access rates and structure for each individual access element equal to the equivalent interstate switched access rates and structure. This recommendation includes the elimination of the Non-Traffic Sensitive Revenue Requirement charges.

The Kentucky Retail Market Has Changed in Recent Years

Q. How has Kentucky's retail telecommunications market changed in recent years?

A. The retail telecommunications market in Kentucky like other parts of the United States has experienced significant change in recent years. Local exchange carriers throughout the country have been given the opportunity to sell long distance services to their local exchange customer base. Local exchange carriers (incumbent and competitive) and cable providers have augmented their existing networks to deliver broadband services to their customers. Cable providers have developed a voice product to compete with the local exchange carriers. Local exchange carriers have partnered with satellite video providers and/or deployed network capabilities to provide video services to their local exchange customer base. Both local exchange carriers and cable providers now package at least three services (including local voice, long distance, broadband and/or video services) in bundles. In the meantime, wireless carriers have expanded their networks to cover almost all of the population within the country.[4] Wireless carriers have deployed progressively faster mobile broadband networks to facilitate the delivery of many of the same applications customers use at home when they are on the go. Consumers are getting more and more choices for their telecommunications needs. But the Commission's regulation of Windstream's intrastate access rates still reflects the bygone era of local monopolies and long distance providers operating in separate markets.

[4] AT&T Wireless advertises covering 97% of the United States population. (See "AT&T Sets the Record Straight on Verizon Ads," http://www.att.com/gen/press-room?pid=14002) Verizon Wireless continued to invest in its broadband network, billing it as "the nation's largest and most reliable 3G [third generation] network." (see http://aboutus.vzw.com/bestnetwork/overview.html) Sprint currently has America's largest voice calling area of any carrier, reaching more than 307 million people in the U.S., Puerto Rico and U.S. Virgin Islands with a Sprint phone and plan that includes roaming. (see news release, March 17, 2010, http://newsreleases.sprint.com/phoenix.zhtml?ID=1403426&c=127149&p=irol-newsArticle_newsroom) See Exhibit 8.

Q. Has the traditional Long Distance market transitioned into something different?

A. Yes. Significant market changes have greatly diminished the role of stand-alone long distance service providers. Customers no longer expect to purchase long distance as a separate product. In fact, customers prefer of the simplicity of flat rate calling for all of their voice communications needs. Each of the carriers described above offers these all-distance voice service packages. So each carrier type now competes for the long distance calling of customers. As such, each of those carriers is exposed to the high access rates Windstream charges.

Q. Is Windstream as exposed as its competitors to its own high intrastate access charges when it offers retail services that include the ability to place non-local calls?

A. No. While it is true that the Windstream entity that provides long distance calling incurs the cost of Windstream's high intrastate access rates, the economic impact on Windstream Corporation is much less than the impact on the competitors. Windstream Corporation, the corporate parent of all Windstream entities, has both a revenue stream (access revenue to the Windstream ILECs) and an expense entry (access expense from the long distance affiliates) of equal amounts for the switched access traffic its long distance affiliates exchange with the Windstream ILECs. Thus, the expense to Windstream long distance is offset by the revenues of the Windstream ILECs. These revenues and expenses "wash out" of the corporation's books. In fact, when the corporation publishes its consolidated financial statements, accounting rules

require that intra-corporation transactions be eliminated for the financial presentations. The only remaining financial impact of the traffic between the affiliated Windstream carriers is the actual cost of completing Windstream's long distance calls on Windstream local networks. Since the cost to the Windstream ILECs of the call termination is far less than the price of intrastate switched access, Windstream owns a competitive advantage in the retail market over all other competitors, which advantage is caused by high intrastate access rates.

Q. Has the Commission previously limited another ILEC's switched access rates to foster competition in the toll market?

A. Yes. This is one of the reasons the Commission provided for limiting AT&T Kentucky's ("AT&T")[5] intrastate switched access rates. Specifically the Commission wrote:

> "To foster competition in the toll market, access charges may not exceed Federal Communications Commission ("FCC") interstate rates."[6]

Subsequently, AT&T's NTSRR was eliminated.[7]

Q. Has the evolution in the toll market described above changed the need to foster competition?

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[5] BellSouth Telecommunications, Inc. currently does business as AT&T Kentucky. Previously, the company's d/b/a was South Central Bell Telephone Company.
[6] *See* Application of BellSouth Telecommunications Inc. D/B/A South Central Bell Telephone Company To Modify its Method of Regulation, Case No. 94-121, Order, July 20, 1995, p. 2.
[7] *See* Review of BellSouth Telecommunications, Inc.'s Price Regulation Plan, Case No. 99-434, Order, August 3, 2000, p. 10.

A. No, in fact the need is more imperative. The providers of non-local calling have expanded to include other types of carriers beyond stand-alone IXCs. But each of these carriers is exposed to Windstream's high access rates. Further the carrier assessing the inflated access rates, Windstream, is also a participant in the toll market, competing head-to-head with these other carriers. Reform is more important today than when the only competitors in the toll market were a group of stand-alone IXCs that were equally exposed to high access rates. Now one of the carriers in the competition has an advantage caused directly by the high access rates.

Q. Has the Commission expressed concern that high ILEC rates for monopoly switched access services could adversely impact the toll market?

A. Yes. The Commission wisely recognized the market power of AT&T (then doing business as South Central Bell Telephone) in its ability to assess high switched access rates. Specifically the Commission wrote:

> "South Central Bell presently holds a monopoly position for IXC access to the switched network. Thus, it can manipulate the toll market through its pricing of these services. To assure that South Central Bell does not abuse this market power, it should be limited to the FCC rates for all intrastate switched access services it has in common with the interstate services."[8]

Q. Is there any reason to think Windstream does not possess the same market power within its service territory as South Central Bell Telephone possesses within its service territory?

[8] *See* Application of BellSouth Telecommunications Inc. D/B/A South Central Bell Telephone Company To Modify its Method of Regulation, Case No. 94-121, Order, July 20, 1995, p. 22.

A. No. Each ILEC possesses the same amount of market power as the purveyor of a monopoly service, intrastate switched access, to each of its end user customers.

Competition and Consumers Are Harmed by High Switched Access Rates

Q. Are telecommunication carriers affected by inflated switched access rates?

A. Yes. All carriers providing voice communication services in Kentucky must use switched access to terminate non-local calls to Windstream customers. Because these switched access services are an essential input to the services other carriers are providing, these carriers' input costs are increased by Windstream's inflated access rates. Further, the subsidy the carriers are forced to provide to Windstream can then be used by Windstream to undercut the competing carriers' retail service offerings. Obviously, a market in which competing carriers are charged by Windstream a subsidy for use of essential network elements is not one in which a level playing field exists.

Q. How do telecommunication carriers recover these higher input costs?

A. Because the carriers are in business to make a profit, the access costs are recovered in the price of the retail services they are offering in the market just like other input costs. The result is that higher retail prices must be charged by Windstream's competitors while Windstream is permitted to use the access overcharges to suppress the price of its retail service offerings.

Q. Are wireless carriers impacted by high access rates? Aren't they only charged reciprocal compensation rates to terminate their traffic?

A. Wireless carriers are charged reciprocal compensation rates to terminate calls within a Metropolitan Trading Area ("MTA"). But if the end points of a call cross an MTA boundary, the wireless carrier is charged access rates by the local exchange carrier terminating that call.

Q. How many MTAs are within the state of Kentucky?

A. There are five MTAs that have at least part of their area within Kentucky. Few states in the country have more MTAs within its boundaries. As a result, wireless carriers are impacted by high access rates they incur for calls that remain within Kentucky but cross the numerous MTA boundaries within the state.

Q. Are consumers harmed by inflated access rates?

A. Yes. Consumers are harmed by unreasonable access rates. It is true that consumers are now afforded more choices for their voice communications needs than when the ILECs were the only providers. Most consumers have a choice of one or more alternative(s): carriers providing cable telephony[9], traditional CLEC service, wireless service[10], and VoIP service.[11] But each of these carriers is charged Windstream's

[9] As of March 2010, approximately 22.7M customers were purchasing cable telephony service nationally. (National Cable and Telecommunications Association Industry Data, http://www.ncta.com/Statistics.aspx)

[10] According to the FCC's Local Competition Report, released June 2010, 3.45 million people in Kentucky were purchasing wireless service as of December 31, 2008 (*See* Table 17). In comparison, only 1.75 million people in Kentucky have non-VoIP landline service (*See* Table 8). Each table is attached within Exhibit JAA-1 (For full report see: http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-299052A1.pdf) The Center for Disease Control and Prevention National Center for Health Statistics reports that as of December 2009, 24.5% of American households now subscribe to wireless service only. In comparison

inflated access rates as the carriers attempt to compete against Windstream. Because these carriers strive to cover their input costs to earn a profit, inflated intrastate switched access costs are impeding the retail offers competing carriers can make available in the market. Consumers are not receiving the best offers in the market because high switched access rates, originally meant to keep service affordable, are now inflating the rates for all alternative services that now exist in the market. If the switched access rates are reduced, consumers will benefit.

Q. Are price reductions the only benefit to consumers from the elimination of access subsidies?

A. No. Reduced retail prices are only one way consumers can benefit from reduced access subsidies. When access bills are lowered, consumers will benefit because service providers will have more resources to expand service coverage, enhance service quality, develop new and innovative service offerings, and provide better pricing in the market. Thus, reducing Windstream's intrastate switched access charges to just and reasonable levels will promote competition, and its many benefits, within the market.

Kentucky, Other States and the FCC Have and Are Reforming Intrastate Switched Access Rates

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only 14.9% of households have landline service only. (*See* Wireless Substitution Early Release Estimates, http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201005.pdf, also attached as Exhibit JAA-2.)

[11] *See* FCC Local Competition Report, Table 8, Exhibit JAA-1. As of the end of 2008, 201,000 interconnected VoIP subscriptions existed in Kentucky. This figure includes cable telephony as well as services such as Vonage.

Q. Has the Kentucky Commission recognized the need to reform intrastate switched access rates?

A. Yes. The Commission years ago aggressively reformed the rates of AT&T. Throughout this testimony I have referenced what reform actions the Commission took and why. The reasons the Commission took action on AT&T's access rates in the past are equally applicable to Windstream in today's market. Further, as you will see later, Sprint's recommendation for Windstream's intrastate access rates is consistent with the reform actions taken by the Commission on AT&T's rates.

Q. Have other states taken action to reduce intrastate switched access rates?

A. Yes. Many states have taken the pro-consumer, pro-competitive action to reduce intrastate access rates. Just in the last year, five states have decided that LEC intrastate access rates need to mirror their interstate rate levels. Those rulings did not just apply to the largest ILEC in the state. Those ruling made the mirroring standard applicable to all ILECs and CLECs operating within the states. Those states that took action include New Jersey, Georgia, Illinois, Michigan and Kansas.[12] Other states have established a mirroring policy earlier. The telecommunications industry and state commissions widely recognize the need to take action to reduce intrastate switched access rates to just and reasonable levels to promote competition and a level playing field.

[12] Kansas Docket No. 08-GIMT-1023-GIT; New Jersey BPU Docket No. TX08090830; Georgia -HB 168 – O.C.G.A. Section 46-5-166(d) (signed by Georgia Governor Perdue June 4, 2010); Illinois - Senate Bill 107; and Michigan 2009 PA 182 (Act 182).

Q. Has the FCC signaled its belief that switched access rates must be addressed?

A. Yes. As recently as March, 2010 in the National Broadband Plan, the staff of the FCC recommended a framework for long-term intercarrier compensation (ICC) reform that creates a glide path to eliminate per-minute charges. Within Stage One of its plan, the FCC would eliminate current distortions that are created by recovering fixed network costs through per-minute rates for origination and termination of traffic. Further, the FCC's framework recognizes the need to have intrastate switched access rates in parity with interstate rates in the early years of the transition.[13] As detailed later in my recommendations section, the FCC's plan is consistent with what Sprint is asking for in this proceeding.

Switched Access is a Monopoly Service

Q. Can switched access ever be anything but a monopoly service?

A. No. As stated above the Commission has previously concluded that switched access is a monopoly service.[14] There can only be one provider of switched access services for calls to and from a local service customer and that is the customer's local service provider. If a customer of Carrier A wishes to talk to the local customer of Carrier B, Carrier A's customer must go through Carrier B's network to reach the called party. When the call is not a local call and is completed within the Commonwealth of Kentucky, Carrier A (whether a wireline, cable telephony,

[13] *See* "Connecting America: The National Broadband Plan," Recommendation 8.7, p. 148.
[14] *See* Application of BellSouth Telecommunications Inc. D/B/A South Central Bell Telephone Company To Modify its Method of Regulation, Case No. 94-121, Order, July 20, 1995, p. 22

wireless, or other service provider) will incur Carrier B's intrastate switched access charges.[15] The service is a monopoly and always will be a monopoly.[16]

Windstream's Switched Access Rates in Kentucky are Unreasonably High by Many Relevant Comparisons

Q. Is there evidence that Windstream's intrastate switched access rates are too high by a wide margin?

A. Yes. Several measures demonstrate that Windstream's intrastate switched access rates are excessive. These measures include: 1) a comparison between Windstream's interstate and intrastate switched access rates; 2) a comparison of the Windstream rates to AT&T-Kentucky access rates; and 3) a comparison of the "teledensity" of Windstream Kentucky to AT&T-Kentucky. I will address these measures.

Q. Why is a comparison of per-minute charges Windstream assesses for interstate and intrastate traffic meaningful?

A. No matter if the call is jurisdictionally an interstate call or an intrastate call, the same ILEC network elements are used to complete a call on Windstream's network regardless of where that call originated. Therefore, comparing the intrastate switched access rate to the interstate switched access rate provides a good indication of what a reasonable rate would be for intrastate switched access service.

[15] This assumes the terminating carrier (Carrier B in the above example) is not a wireless carrier since wireless carriers do not bill access charges.

[16] *See* Notice of Proposed Rulemaking, *In the Matter of Developing a Unified Intercarrier Compensation Regime,* CC Docket No. 01-92, 16 FCC Rcd 9610, at 9616-17 (rel. April 27, 2001)(the FCC acknowledged that terminating access is a monopoly).

Q. How do Windstream's intrastate rates compare to their respective interstate rates?

A. Windstream – East charges more than **[Begin Confidential]** **[End Confidential]** as much per minute for intrastate switched access service as it does for interstate switched access service. Windstream – West also charges far more. Its intrastate charges are nearly **[Begin Confidential]** **[End Confidential]** as much for intrastate service compared to the interstate access services.[17]

Q. How does Windstream's intrastate rate in Kentucky compare to the intrastate switched access rates of the other large ILEC in Kentucky?

A. AT&T Kentucky's intrastate switched access rate and interstate switched access rate approximate $.005 per minute.[18] The Windstream ILECs average rates of **[Begin Confidential]** **[End Confidential]** for Windstream – East and **[Begin Confidential]** **[End Confidential]** for Windstream – West are, respectively, more than **[Begin Confidential]** **[End Confidential]** and more than **[Begin Confidential]** **[End Confidential]** more than AT&T – Kentucky's intrastate switched access rate per minute.[19] Again, the Windstream rates are out of line when compared to another large ILEC's rates.

[17] See CONFIDENTIAL Exhibit JAA-3 which uses the 2008 data from Windstream's confidential response to Verizon Data Request No. 8 - This average rate includes the intrastate non-traffic sensitive revenue requirement charges.

[18] See CONFIDENTIAL Exhibit JAA-4 which shows the Windstream response toVerizon Data Request No. 32. (Although the Exhibit is designated CONFIDENTIAL because it contains some confidential information, the response to Verizon Data Request No. 32 is not confidential.)

[19] See CONFIDENTIAL Exhibit JAA-4 which uses the 2009 data from Windstream's confidential response to Sprint Data Request No.19.

Q. Is there other data relating to Windstream ILEC service territories in Kentucky that would suggest their intrastate access rates are too high?

A. Yes. Teledensity data provides a meaningful comparison of operating territory economics.[20] Teledensity is a measurement that quantifies relative distribution of a customer base within a service territory. Teledensity illustrates the relative customer distribution by dividing the working loops or lines within a service territory by the square miles of the service territory. A higher teledensity number reflects lower unit costs because there are more units over which to recover fixed costs.

Q. What did you find when you compared the teledensity of Windstream service territories in Kentucky to the teledensity of AT&T in Kentucky?

A. The average teledensity of the Windstream territories in Kentucky is similar to the teledensity of AT&T in Kentucky. The Windstream teledensity in Kentucky is 39.9 working loops per square mile while AT&T's teledensity was 48.3.[21] This data suggests the two ILECs should have similar economics.[22] Yet Windstream is charging far more for intrastate switched access as detailed above.

[20] The FCC used a teledensity analysis to establish the interstate switched access target rate of non-BOC ILECs in the CALLS Order. ILECs with teledensity greater than 19 on a holding company basis received a lower benchmark. *See* Access Charge Reform; Price Cap Performance Review for Local Exchange Carriers; Low- Volume Long Distance Users; Federal-State Joint Board On Universal Service, Sixth Report and Order in CC Docket Nos. 96-262 and 94-1, Report and Order in CC Docket No. 99-249, Eleventh Report and Order in CC Docket No. 96-45, 15 FCC Rcd 12962 (May 31,2000) *("CALLS Order").*

[21] See Exhibit JAA-5 for teledensity calculation for the Windstream ILECs and AT&T.

[22] The Windstream East – Lexington study area, which represents approximately 75% of the Windstream business in Kentucky, has a teledensity greater than AT&T Kentucky.

Q. So Windstream's intrastate access rates are high by many measures. Why is it important that switched access rates be reduced?

A. If rates for switched access services are too high, all carriers with customers that wish to communicate with Windstream customers will provide Windstream with a source of excess profit. This excess profit on the monopoly access services can be used by Windstream to decrease or maintain lower prices for its retail services. In other words, the uneconomic, anticompetitive profit extracted by Windstream from their direct competitors directly enables Windstream to offer lower retail prices while simultaneously hindering the competitors' ability to compete. This harm to competition ultimately inflates the price of retail services to consumers and contravenes the pro-competitive policies of the Legislature and the Commission.

Windstream Should Reduce Their Intrastate Switched Access Rates to Interstate Levels

Q. What is your recommendation to the Commission?

A. Sprint recommends the Commission require each of Windstream's ILECs operating in the Commonwealth of Kentucky to set their intrastate switched access rate and structure for each individual access service equal to each ILEC's equivalent interstate switched access service rate and structure. Further, those intrastate rates should continue to mirror interstate levels and structure should future changes in the interstate rates occur.

Q. Does this recommendation include the elimination of charges associated with the Non-Traffic Sensitive Revenue Requirement (NTSRR)?

A. Yes. The NTSRR is local loop costs or costs associated with the retail customer's connection to the local network. Those costs are incurred when the retail customer chooses to purchase a retail service from Windstream. Those costs should be collected by Windstream from its own retail customers.

Q. Has the Commission previously ruled that an ILEC's intrastate switched access rates should mirror its interstate switched access rates?

A. Yes. AT&T, then doing business as South Central Bell, was ordered to mirror its interstate rates[23] and has done so since the August 1, 1995.[24] The Commission later ensured all future interstate rate changes were also mirrored by AT&T.[25]

Q. Has the Commission previously ruled that the NTSRR of an ILEC should be recovered from retail services?

A. Yes. AT&T, then doing business as South Central Bell, was ordered to eliminate the NTSRR and instead collect the revenues from retail services. In that case, it was

[23] *See* Application of BellSouth Telecommunications Inc. D/B/A South Central Bell Telephone Company To Modify its Method of Regulation, Case No. 94-121, Order, July 20, 1995, p. 50.
[24] Application of BellSouth Telecommunications Inc. D/B/A South Central Bell Telephone Company To Modify its Method of Regulation, Case No. 94-121, Order on BellSouth's Motion For Clarification, November 3, 1995, p. 1.
[25] The Commission required AT&T to mirror any interstate future changes. *See* In the Matter of: The Tariff Filing of BellSouth Telecommunications Inc. to Mirror FCC Interstate Access Rates, Case No. 98-065, Order, March 31, 1999, p. 4.

determined that AT&T could collect the reduced access revenues in basic local service rates and message toll service (MTS).[26]

Q. Why is the interstate rate level the appropriate standard for Windstream's rates in this proceeding?

A. Reducing Windstream's intrastate switched access rate to its interstate rate level is appropriate for several reasons. First, the ILECs are providing interstate switched access service at these FCC-approved levels. Windstream has not challenged the interstate rates at the FCC as non-compensable, so clearly those rate levels sufficiently cover the cost of those functions. Second, by using existing interstate switched access rates of each Windstream ILEC, the Commission will avoid the need to determine the cost standard to be used to set the rates at which Windstream should exchange intrastate switched access traffic in this proceeding. Third, mirroring intrastate rates to interstate rates will reduce access rate arbitrage schemes and tariff shopping.[27] Finally, and likely most important, the services and infrastructure used to provide intrastate switched access services are the same as the services and infrastructure used to provide interstate switched access services. As the Commission explained in the AT&T ruling,

> "There is no evidence that the costs of interstate and intrastate access services are substantially different."[28]

[26] *See* In the Matter of: Review of BellSouth Telecommunications Inc.'s Price Cap Plan, Case No. 99-434, September 5, 2000 letter from Fred L. Gerwing (AT&T) to Thomas M. Dorman, Executive Director, Attachment 5: Elimination of Non Traffic Sensitive Revenue Requirement (NTSRR).
[27] The Commission also believes mirroring will limit tariff shopping. *See* Application of BellSouth Telecommunications Inc. D/B/A South Central Bell Telephone Company To Modify its Method of Regulation, Case No. 94-121, Order, July 20, 1995, p. 50.
[28] *Id.*

For these reasons, an order requiring Windstream to mirror their interstate rate levels in this proceeding is a reasonable step in the reform of intrastate switched access service in Kentucky.

Q. Can you estimate the amount of access reductions Windstream ILECs would experience if its intrastate switched access rates are set equal to its interstate rates?

A. Yes. Windstream's data suggests the intrastate access reduction would be approximately **[Begin Confidential]** **[End Confidential]** for Windstream – East and Windstream – West, respectively. The reduction equals approximately **[Begin Confidential]** **[End Confidential]** per access line for Windstream – East and Windstream – West, respectively.[29]

Q. Can Windstream collect this access revenue reduction from its own retail customers?

A. Yes. As demonstrated within the next section, Windstream has shown an ability to generate more revenue per customer. The full suite of services Windstream now possesses permits the replacement of these access revenues with revenues generated by purchases of retail service provisioned over the local network connections.

Q. Is the vast majority of the access overcharges designed to collect the cost of the customers local network connection or loop?

[29] See CONFIDENTIAL Exhibit JAA-3 which uses 2008 data from Windstream's confidential response to Verizon Data Request No. 8 and 10 - This average access rate used includes the non-traffic sensitive revenue requirement charges.

A. Yes. Nearly **[Begin Confidential]** **[End Confidential]** of the access revenue reductions would be from the elimination of the Non-Traffic Sensitive Revenue Requirement charges.[30] These charges were designed to recover a portion of the cost of the local loop before Windstream offered the many services it now can offer to its retail customers on that loop. I will detail the value of these services to Windstream through its financial reporting to the corporation's shareholders in the next section.

Windstream Continues to Expand Average Revenue per User Through the Sale of More and More Retail Services to their Customer Base

Q. Has Windstream greatly expanded the number of the services they now have to offer to their local telephone customers?

A. Yes. Today, Windstream offers much more than just local exchange and exchange access services to their customer base. Windstream now offers in-territory long distance, broadband, video services and an expansive list of customer calling features. These services are packaged and bundled together with local exchange service. These service bundles are the lead product offerings for Windstream in today's market. The discounts offered on these bundles provide significant incentive for customers to purchase all of their services from one provider. With the development of these new retail services and the corresponding bundling of the new services with local service, Windstream is not limited to their basic local service as the only means to recover the cost of the local network connection from their end-user customers. Windstream can now cover that basic network connection cost over a combination of services, offered

[30] See CONFIDENTIAL Exhibit JAA-3 which utilizes the confidential response to Verizon Data Request No. 14

in most cases over the same local network connection. Windstream is now capable of recovering its full basic network connection costs from its own end user customers. There is no policy reason to continue to require Windstream's competitors to fund its operations through access rates that are far above the actual cost of the access functions. In fact, just the opposite is true. In this environment of expanding revenue opportunities Windstream, allowing Windstream to charge inflated access rates is anti-competitive and harms consumers' choices in the market.

Q. Is there any public information that would demonstrate the expanding revenue opportunities for Windstream?

A. Yes. Windstream Corporation's financial reporting provides meaningful information about its financial strength. The Windstream data in the financial reports is provided for all of its operating territories nationally, and does not state Kentucky-specific information. In support of the data provided on Exhibit JAA–6, I have provided the Quarterly Supplemental Information spreadsheet Windstream provided to its shareholders at year end 2009. Windstream data is provided from 1st quarter 2007 to 4th quarter 2009.[31]

Q. Does Windstream report significant revenue per customer growth driven by the value of the new services?

[31] Also included in Exhibit JAA-6 is Windstream Supplemental Data provided in 2nd quarter of 2008. Because Windstream changed the reporting methodology of many of its metrics, I did not use 2006 data found on that report. Instead I include that report for the long distance customer counts only because that is the last time Windstream published that information.

A. Yes. Windstream has been able to increase the average revenue per consumer from $77.03 in the 1st quarter of 2007 to $82.31 in the 4th quarter of 2009. That is an increase in the average bill of $5.28 over that period.[32] Adoption of new services is helping to propel this average revenue growth.

Q. Does Windstream provide high-speed Internet service over the same network connection to the customer premise as traditional voice services?

A. Yes. Windstream provisions high-speed internet service, Digital Subscriber Line ("DSL"), over the same customer network connection, or local loop, as traditional voice services.

Q. Does the Supplemental Report provide any instructive data on Windstream's high speed Internet service?

A. Yes. Windstream has been able to expand the number of customers purchasing broadband service from 784.5 thousand to 1.132 million from 1st quarter 2007 to 4th quarter 2009. Access line penetration for high-speed Internet has grown from 22.5% to 37.4% during that same interval.[33] High Speed Internet service is priced at approximately $30 per month when purchased in a bundle with other services. If Windstream is able to sell broadband service within Kentucky at the same rate as it sells nationally, Windstream would have approximately 143,800 broadband

[32] See Exhibit JAA-6
[33] *Id.*

customers in Kentucky. At $30 per line per month, Windstream likely is generating nearly $52 million annually[34] in revenues in Kentucky via broadband service.

Q. Is Windstream also providing long distance service to the majority of their local service customers?

A. Yes. As recently as the 2nd quarter of 2008 Windstream reported that 65.6%[35] of its customers also purchase long distance service from Windstream Corporation's long distance affiliated company. I believe Windstream's long distance penetration is similar today.

Q. Why is long distance market share also important?

A. Again, the more products you are able to sell to your customers, the more revenues you have to recover your fixed costs like the cost of the basic local network connection.

Q. Are video services also becoming an important service product for the Windstream?

A. Yes. Windstream is offering satellite video services to their customers within Kentucky. While satellite video services are not provisioned over the Windstream telephone local network, these services provide yet another service over which to earn a margin that can help recover Windstream's fixed costs. Windstream Corporation

[34] *Id.*
[35] *Id.*

had sold digital television services, which includes digital satellite service, to 12.2% of its customer base. [36]

Q. Do you believe the Kentucky Commission should consider the financial value of these additional services when deciding what to do about the switched access subsidies embedded in Windstream rates?

A. Yes. Sprint believes that if the Commission is provided complete financial information about operations of Windstream, it will be clear that high access rates are not necessary in today's market and into the future. Even if one assumes – which Sprint does not – that extracting subsidy payments from competitors to maintain low-cost local service is a valid policy justification supporting inflated access charges, in the environment described above it is inappropriate to allow switched access rates to be charged without consideration of the existence of these ample new revenue sources.

Q. Is it necessary to keep intrastate switched access rates at their current level in order to keep local service rates low?

A. No. Intrastate switched access levels were originally set decades ago when the ILECs were monopoly providers of local exchange service and had limited services from which to recover their network costs. Both before and following the breakup of the old Bell system, the monopoly access rates were set far above cost as a regulatory mechanism to keep local exchange service rates low and thereby ensure the universal availability of low cost basic telephone service. The telecommunications market has

[36] *Id.*

dramatically changed such that ILECs now offer a full slate of services over their exchange access network from which to recover their network costs (i.e., local, toll, long distance, high speed internet, and other services). There remains no justification whatsoever for charging inflated access rates as a means of subsidizing retail local service.

Additional Financial Information to Consider

Q. Will Windstream attempt to explain it needs to generate the same amount of revenue that the high access rates have provided?

A. Yes. Without a doubt Windstream will make its case for revenue neutrality. Windstream is likely to request replacement of those access revenues through the Kentucky Universal Service fund. But I offer yet another financial barometer of the financial strength of the Windstream's landline operations. The Windstream Corporation is paying an annual dividend to its shareholders of $1.00 per share or a 9.46% annual return on the current price of Windstream's common stock. With approximately 457M shares outstanding, Windstream is distributing to its shareholders the equivalent of $12.57 for each access line monthly.[37] In comparison, the Windstream ILECs in Kentucky can reduce intrastate switched access rates to parity with their interstate rates for approximately **[Begin Confidential] [End Confidential]** per line.[38] Sprint's recommendation does not preclude recovery of the reduced access revenues. Sprint is simply asking that Windstream is required to collect any revenue recovery from its own end users. If the revenue is collected from

[37] See Exhibit JAA-7
[38] See CONFIDENTIAL Exhibit JAA-3

competitive retail services instead of monopoly switched access or universal service funding, then competition can help protect the consumers.

Summary of Testimony

Q. Please summarize your testimony.

A. To ensure and promote full competition, carriers cannot be expected to continue to subsidize Windstream's retail services through inflated intrastate switched access rates. Windstream has ample opportunity to recover reductions in access revenue through its existing and ever expanding set of services it is offering to consumers and businesses in its service territory. By causing cost recovery to be drawn from services over which consumers have a competitive choice as opposed to monopoly switched access services, the consumer is provided complete pricing information about the cost of the services of all providers in the market. The current cost recovery model forces Windstream's competitors, and those competitors' customers, to subsidize Windstream. When competing companies are not burdened by the high switched access charges, Kentucky consumers will receive better pricing choices and competitors will have greater resources to create innovative new product offerings that consumers' desire.

Q. Does this conclude your Direct Testimony?

A. Yes, it does.

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

VERIFICATION

STATE OF KANSAS)
) ss.
COUNTY OF JOHNSON)

I, James A. Appleby, being first duly sworn on oath, state I am Regulatory Policy Manager for Sprint Nextel Corporation and that I have prepared the foregoing direct testimony which is true and correct to the best of my knowledge, information and belief.

Respectfully submitted,

James A. Appleby

Subscribed and sworn to before me
this 13th day of July, 2010.

NOTARY PUBLIC – State of Kansas
RHAMIE GLADE
My Appt. Exp. 9-12-2012

Johnson County

Notary Public

Exhibit JAA-1
To the Direct Testimony of
James A. Appleby
Filed on behalf of Sprint Nextel
in CASE NO. 2007-00503

Local Telephone Competition: Status as of December 31, 2008

Industry Analysis and Technology Division
Wireline Competition Bureau
June 2010

This report is available for reference in the FCC's Reference Information Center, Courtyard Level, 445 12th Street, SW, Washington, DC. Copies may be purchased by contacting Best Copy and Printing, Inc., 445 12th Street, SW, Room CY-B402, Washington, DC 20554, telephone (800) 378-3160, or via their website at www.bcpiweb.com. The report can also be downloaded from the Wireline Competition Bureau Statistical Reports Internet site at www.fcc.gov/wcb/stats.

Table 8
Total End-User Switched Access Lines and VoIP Subscriptions by State as of December 31, 2008
(In Thousands)

State	ILECs				Non-ILECs				Total	Non-ILEC % of Total
	Switched Access Lines	VoIP purchased as		Total	Switched Access Lines	VoIP purchased as		Total		
		Stand-alone	Bundled with Internet			Stand-alone	Bundled with Internet			
Alabama	1,745	#	#	1,746	307	57	95	460	2,205	21%
Alaska	289	0	0	289	*	1	*	*	*	*
American Samoa	10	0	0	10	0	0	0	0	10	0
Arizona	1,847	#	#	1,847	956	73	175	1,204	3,051	39
Arkansas	1,018	#	3	1,021	143	19	61	223	1,245	18
California	16,274	6	66	16,345	2,464	413	1,659	4,536	20,882	22
Colorado	1,873	0	0	1,873	430	88	320	838	2,711	31
Connecticut	1,515	1	24	1,540	247	45	333	625	2,165	29
Delaware	379	#	1	380	79	*	*	164	544	30
District of Columbia	733	#	4	737	131	12	38	182	919	20
Florida	7,395	4	40	7,440	1,179	385	1,125	2,690	10,130	27
Georgia	3,465	2	2	3,468	622	158	376	1,157	4,626	25
Guam	54	0	0	54	*	*	*	*	*	*
Hawaii	512	#	0	512	40	*	*	114	626	18
Idaho	581	#	#	582	81	10	30	122	703	17
Illinois	5,282	2	58	5,342	738	246	662	1,646	6,989	24
Indiana	2,524	1	22	2,547	266	73	219	559	3,106	18
Iowa	1,113	#	#	1,113	198	97	13	307	1,421	22
Kansas	933	#	6	939	264	25	128	417	1,356	31
Kentucky	1,458	#	#	1,458	292	25	176	493	1,951	25
Louisiana	1,634	#	#	1,634	289	41	158	488	2,122	23
Maine	539	#	2	542	108	*	*	211	753	28
Maryland	2,581	1	7	2,588	462	88	304	854	3,443	25
Massachusetts	2,477	1	15	2,493	794	134	661	1,590	4,084	39
Michigan	3,444	2	67	3,512	607	177	658	1,442	4,954	29
Minnesota	1,922	0	#	1,922	554	84	234	873	2,794	31
Mississippi	963	#	#	963	111	21	49	182	1,145	16
Missouri	2,463	1	2	2,465	256	62	196	514	2,980	17
Montana	387	0	0	387	46	7	47	101	488	21
Nebraska	584	#	#	584	250	10	38	298	882	34
Nevada	970	#	2	972	188	54	172	414	1,386	30
New Hampshire	469	0	1	470	172	33	137	343	813	42
New Jersey	3,715	1	25	3,741	784	118	1,015	1,917	5,658	34
New Mexico	754	#	#	754	72	14	35	121	875	14
New York	6,534	2	20	6,557	2,063	191	2,257	4,511	11,068	41
North Carolina	3,511	3	5	3,519	463	106	516	1,084	4,603	24
North Dakota	241	0	0	241	79	*	*	113	354	32
Northern Mariana Isl.	17	0	0	17	0	0	0	0	17	0
Ohio	4,291	1	34	4,326	644	74	745	1,463	5,790	25
Oklahoma	1,210	#	6	1,216	318	39	162	519	1,736	30
Oregon	1,284	#	1	1,286	301	49	221	571	1,856	31
Pennsylvania	5,233	1	9	5,243	1,326	194	667	2,186	7,430	29
Puerto Rico	755	0	0	755	121	8	81	210	965	22
Rhode Island	292	#	#	292	259	*	*	316	608	52
South Carolina	1,625	#	4	1,629	243	50	179	472	2,101	22
South Dakota	251	0	0	251	98	*	*	140	391	36
Tennessee	2,296	1	#	2,297	426	69	255	751	3,048	25
Texas	8,634	5	34	8,673	1,242	200	908	2,350	11,022	21
Utah	776	0	0	776	134	32	103	269	1,046	26
Vermont	289	0	#	289	54	*	*	88	378	23
Virgin Islands	61	0	0	61	0	*	*	*	*	*
Virginia	3,254	1	9	3,265	1,015	122	290	1,427	4,692	30
Washington	2,363	#	3	2,367	444	105	471	1,020	3,386	30
West Virginia	714	#	1	714	121	16	58	195	909	21
Wisconsin	2,231	#	15	2,246	372	54	340	765	3,012	25
Wyoming	209	#	#	209	15	6	33	54	263	20
Nationwide	117,975	38	491	118,503	23,000	3,957	16,769	43,726	162,230	27

= Rounds to zero. * Data withheld to maintain firm confidentiality.

Table 17
Mobile Telephone Facilities-based Carriers and Mobile Telephony Subscribers

State	Dec 2008		Subscribers (In Thousands)							
	Carriers	% Resold [1]	2005		2006		2007		2008	
			Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec
Alabama	15	7 %	2,874	3,105	3,276	3,375	3,605	3,765	3,887	3,960
Alaska	12	13	341	377	397	412	432	460	480	383
American Samoa	*	*	*	*	*	*	*	*	*	*
Arizona	13	8	3,543	3,844	4,153	4,405	4,637	4,800	4,936	4,983
Arkansas	9	9	1,681	1,781	1,924	2,044	2,149	2,288	2,446	2,530
California	18	7	24,572	25,537	27,497	29,717	30,204	32,247	31,946	32,177
Colorado	12	11	3,041	3,247	3,428	3,608	3,756	3,968	4,066	4,311
Connecticut	8	7	2,329	2,463	2,582	2,705	2,787	2,884	2,959	3,030
Delaware	7	8	585	618	650	683	724	751	775	778
District of Columbia	7	9	753	825	879	880	966	936	1,047	1,096
Florida	13	9	12,620	12,568	14,177	14,762	15,255	15,605	15,809	16,158
Georgia	14	5	6,001	6,079	6,865	7,282	7,598	7,941	8,142	8,322
Guam	*	*	*	*	*	*	*	*	*	*
Hawaii	7	4	934	983	1,010	1,035	1,067	1,096	1,115	1,184
Idaho	18	7	774	834	901	973	1,019	1,086	1,125	1,167
Illinois	15	7	8,227	8,655	9,148	9,589	9,949	10,330	10,634	10,919
Indiana	12	11	3,443	3,716	3,973	4,271	4,448	4,675	4,824	4,956
Iowa	67	8	1,634	1,811	1,867	2,010	2,058	2,166	2,245	2,319
Kansas	15	11	1,660	1,794	1,905	2,047	2,133	2,261	2,326	2,421
Kentucky	13	10	2,508	2,662	2,821	2,966	3,101	3,291	3,343	3,445
Louisiana	11	7	2,942	3,192	3,356	3,492	3,612	3,765	3,896	4,012
Maine	8	17	711	746	787	845	882	941	972	1,012
Maryland	9	8	3,968	4,239	4,471	4,691	4,818	5,024	5,124	5,234
Massachusetts	7	7	4,488	4,728	4,917	5,129	5,289	5,470	5,624	5,749
Michigan	13	8	6,230	6,604	6,863	7,094	7,333	7,608	7,821	8,027
Minnesota	9	11	3,132	3,380	3,543	3,702	3,834	4,048	4,164	4,345
Mississippi	12	8	1,631	1,821	1,923	2,030	2,070	2,196	2,252	2,312
Missouri	14	9	3,595	3,853	4,068	4,322	4,480	4,674	4,835	4,940
Montana	8	7	466	525	575	620	650	694	723	748
Nebraska	13	5	1,071	1,160	1,199	1,272	1,325	1,387	1,451	1,496
Nevada	13	7	1,605	1,777	1,883	1,990	2,093	2,167	2,249	2,268
New Hampshire	8	11	791	849	897	943	973	1,022	1,045	1,080
New Jersey	7	6	6,234	6,617	6,954	7,207	7,419	7,654	7,834	8,008
New Mexico	11	9	1,025	1,170	1,253	1,333	1,416	1,489	1,555	1,536
New York	11	10	12,996	13,805	14,574	15,262	15,901	16,395	17,260	16,702
North Carolina	14	8	5,503	5,792	6,209	6,627	6,962	7,306	7,428	8,024
North Dakota	9	6	368	432	457	473	492	513	541	581
Northern Mariana Isl.	*	*	*	*	*	*	*	*	*	*
Ohio	14	9	6,994	7,504	7,939	8,380	8,723	9,099	9,357	9,565
Oklahoma	19	8	2,002	2,189	2,317	2,480	2,572	2,723	2,808	2,889
Oregon	10	9	2,056	2,339	2,484	2,656	2,781	2,923	3,007	3,084
Pennsylvania	14	10	7,397	7,942	8,349	8,831	9,201	9,615	9,895	10,214
Puerto Rico	7	2	2,003	2,111	2,171	2,301	2,323	2,411	2,502	2,624
Rhode Island	7	9	689	749	765	798	829	848	874	888
South Carolina	15	9	2,607	2,784	3,001	3,209	3,340	3,500	3,573	3,323
South Dakota	10	6	434	481	514	548	570	596	611	631
Tennessee	14	8	4,066	4,417	4,731	5,127	4,971	5,246	5,791	5,518
Texas	28	6	14,424	15,644	16,928	17,822	18,792	19,677	20,390	21,008
Utah	15	7	1,414	1,530	1,649	1,775	1,874	1,971	2,046	2,095
Vermont	7	16	295	314	334	358	375	402	421	435
Virgin Islands	*	*	*	*	*	*	*	*	*	*
Virginia	11	9	4,851	5,073	5,325	5,607	6,148	6,416	6,242	6,856
Washington	11	9	4,062	4,249	4,495	4,799	5,035	5,292	5,461	5,624
West Virginia	11	17	821	858	965	1,040	1,095	1,173	1,236	1,295
Wisconsin	12	10	3,200	3,366	3,517	3,510	3,641	3,842	3,966	4,265
Wyoming	13	9	315	342	359	387	410	441	457	484
Nationwide	175	8 %	192,053	203,667	217,418	229,619	238,316	249,332	255,729	261,284

* Data withheld to maintain firm confidentiality. Some data for June 2008 have been revised.

[1] Percentage of mobile telephony subscribers purchasing their service subscriptions from a mobile wireless reseller.

Exhibit JAA-2
To the Direct Testimony of
James A. Appleby
Filed on behalf of Sprint Nextel
in CASE NO. 2007-00503

(Released 12/16/2009)

Wireless Substitution: Early Release of Estimates From the National Health Interview Survey, January - June 2009

by Stephen J. Blumberg, Ph.D., and Julian V. Luke
Division of Health Interview Statistics, National Center for Health Statistics

Overview

Preliminary results from the January-June 2009 National Health Interview Survey (NHIS) indicate that the number of American homes with only wireless telephones continues to grow. More than one of every five American homes (22.7%) had only wireless telephones (also known as cellular telephones, cell phones, or mobile phones) during the first half of 2009--an increase of 2.5 percentage points since the second half of 2008. In addition, one of every seven American homes (14.7%) had a landline yet received all or almost all calls on wireless telephones. This report presents the most up-to-date estimates available from the federal government concerning the size and characteristics of these populations.

NHIS Early Release Program

This report is published as part of the NHIS Early Release Program. In May and December of each year, the Centers for Disease Control and Prevention's National Center for Health Statistics (NCHS) releases selected estimates of telephone coverage for the civilian noninstitutionalized U.S. population based on data from NHIS, along with comparable estimates from NHIS for the previous 3 years. The estimates are based on in-person interviews that NHIS conducts continuously throughout the year to collect information on health status, health-related behaviors, and health care utilization. The survey also includes information about household telephones and whether anyone in the household has a wireless telephone.

Two additional reports are published as part of the NHIS Early Release Program. *Early Release of Selected Estimates Based on Data From the National Health Interview Survey* is published quarterly and provides estimates for 15 selected measures of health. *Health Insurance Coverage: Early Release of Estimates From the National Health Interview Survey* is also published quarterly and provides additional estimates regarding health insurance coverage.

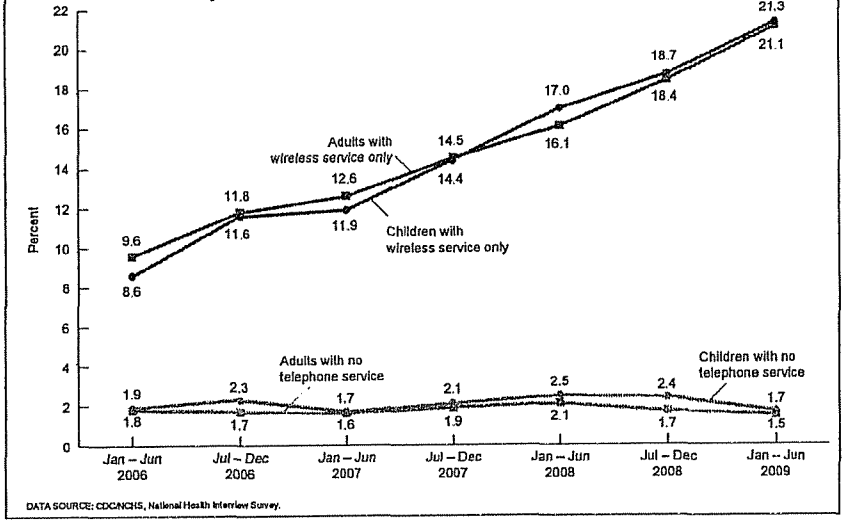
Methods

For many years, NHIS has included questions on residential telephone numbers, to permit recontacting of survey participants. Starting in 2003, additional questions were asked to determine whether a family's telephone number was a landline telephone. Respondents were also asked whether "you or anyone in your family has a working cellular telephone."

A "family" can be an individual or a group of two or more related persons living together in the same housing unit (a "household"). Thus, a family can consist of only one person, and more than one family can live in a household (including, for example, a household where there are multiple single-person families, as when unrelated roommates are living together).

In this report, families are identified as "wireless families" if anyone in the family had a working cellular telephone at the time of interview. This person (or persons) could be a civilian adult, a member of the military, or a child. Households are identified as "wireless-only" if they include at least one wireless family and if there are no working landline telephones inside the household. Persons are identified as wireless-only if they live in a wireless-only household. A similar approach is used to identify adults living in households

Percentages of adults and children living in households with only wireless telephone service or no telephone service: United States, 2006–2009



DATA SOURCE: CDC/NCHS, National Health Interview Survey.

with no telephone service (neither wireless nor landline). Household telephone status (rather than family telephone status) is used in this report because most telephone surveys draw samples of households rather than families.

From January through June 2009, information on household telephone status was obtained for 12,447 households that included at least one civilian adult or child. These households included 23,632 civilian adults aged 18 years and over and 8,818 children under age 18.

Analyses of demographic characteristics are based on data from the NHIS Person and Household files. Demographic data for all civilian adults living in interviewed households were used in these analyses. Estimates stratified by poverty status are based on reported income only (i.e., not on imputed income). Household income was unknown for 10% of adults.

Analyses of selected health measures are based on data from the NHIS Sample Adult file. Health-related data for one civilian adult randomly selected from each family were used in these analyses. From January through July 2009, data on household telephone status and selected health measures were collected from 10,258 randomly selected adults.

Because NHIS is conducted throughout the year and the sample is designed to yield a nationally representative sample each week, data can be analyzed quarterly. Weights are created for each calendar quarter of the NHIS sample. NHIS data weighting procedures are described in more detail in a previous NCHS report (*Vital and Health Statistics*, series 2, no 130). To provide access to the most recent information from NHIS, estimates using the January-June 2009 data are being released prior to final data editing and final weighting. These estimates should be considered preliminary and may differ slightly from estimates using the final data files.

Point estimates and 95% confidence intervals were calculated using SUDAAN software, to account for the complex sample design of NHIS. Differences between percentages were evaluated by using two-sided significance tests at the 0.05 level. Terms such as "more likely" and "less likely" indicate a statistically significant difference. Lack of comment regarding the difference between any two estimates does not necessarily mean that the difference was tested and found to be not significant. Because of small sample sizes, estimates based on less than 1 year of data may have large variances, and caution should be used in interpreting these estimates.

Questionnaire Changes in 2007

From 2003 to 2006, NHIS families were considered to have landline telephone service if the survey respondent provided a telephone number, identified it as "the family's phone number," and said that it was not a cellular telephone number. If the family's phone number was reported to be a cellular telephone number, the respondent was asked if there was "at least one phone inside your home that is currently working and is not a cell phone."

In 2007, the questionnaire was changed so that the survey respondent for each family was asked if there was "at least one phone inside your home that is currently working and is not a cell phone," unless the respondent indicated not having any phone when asked for a telephone number.

From 2003 to 2006, the questions about cellular telephones were asked at the end of the survey. Because of incomplete interviews, more than 10% of households were not asked about wireless telephones. In 2007, the questions were asked earlier in the survey, resulting in fewer families with unknown wireless telephone status.

In 2007, a new question was added to the survey for persons living in families with both landline and cellular telephones. The respondent for the family was asked to consider all of the telephone calls that his or her family receives and to report whether "all or almost all calls are received on cell phones, some are received on cell phones and some on regular phones, or very few or none are received on cell phones." This new question permits the identification of persons living in "wireless-mostly" households, defined as households with both landline and cellular telephones in which all families receive all or almost all calls on cell phones.

Finally, in 2007, the questionnaire was redesigned to improve the collection of income information. Initial evaluations suggest that the resulting poverty estimates are generally comparable with those from years 2006 and earlier. However, as a result of the changes, the poverty ratio variable has fewer missing values since 2007 compared with prior years.

Telephone Status

In the first 6 months of 2009, more than one of every five households (22.7%) did not have a landline telephone but did have at least one wireless telephone (**Table 1**). Approximately 21.1% of all adults--approximately 48 million adults--lived in households with only wireless telephones; 21.3% of all children--nearly 16 million children--lived in households with only wireless telephones.

The percentage of households that are wireless-only has been steadily increasing. The 2.5-percentage-point increase from the last 6 months of 2008 through the first 6 months of 2009 is nearly equivalent to the 2.7-percentage-point increase observed from the first 6 months of 2008 through the last 6 months of 2008. The percentage of households that are wireless-only increased by approximately 5 percentage points in just 12 months, from 17.5% in the first 6 months of 2008 to 22.7% in the first 6 months of 2009.

The percentage of adults living in wireless-only households has also been increasing steadily (see **figure**). During

the first 6 months of 2009, more than one of every five adults lived in wireless-only households. One year before that (i.e., during the first 6 months of 2008), one of every six adults lived in wireless-only households. And 2 years before that (i.e., during the first 6 months of 2006), only 1 of every 10 adults lived in wireless-only households.

The percentages of adults and children living without any telephone service have remained relatively unchanged over the past 3 years. Approximately 1.9% of households had no telephone service (neither wireless nor landline). More than 3 million adults (1.5%) and 1 million children (1.7%) lived in these households.

Demographic Differences

The percentage of U.S. civilian noninstitutionalized adults living in wireless-only households is shown by selected demographic characteristics and by survey time period in **Table 2**. For the period January through June 2009,

- More than two in three adults living only with unrelated adult roommates (68.5%) were in households with only wireless telephones. This is the highest prevalence rate among the population subgroups examined.
- Two in five adults renting their home (40.9%) had only wireless telephones. Adults renting their home were more likely than adults owning their home (12.8%) to be living in households with only wireless telephones.
- Nearly half of adults aged 25-29 years (45.8%) lived in households with only wireless telephones. More than one-third of adults aged 18-24 (37.6%) and approximately one-third of adults aged 30-34 (33.5%) lived in households with only wireless telephones.
- As age increased from 35 years, the percentage of adults living in households with only wireless telephones decreased: 21.5% for adults aged 35-44; 12.8% for adults aged 45-64; and 5.4% for adults aged 65 and over. However, as shown in **Table 2**, the percentage of wireless-only adults within each age group has increased over time.
- Adults living in poverty (33.0%) and adults living near poverty (26.5%) were more likely than higher income adults (18.9%) to be living in households with only wireless telephones.
- Adults living in the South (25.0%) and Midwest (21.9%) were more likely than adults living in the Northeast (14.6%) to be living in households with only wireless telephones.
- Hispanic adults (28.2%) were more likely than non-Hispanic white adults (19.7%) or non-Hispanic black adults (21.3%) to be living in households with only wireless telephones.
- No statistically significant difference was observed between the percentage of men (22.5%) and the percentage of women (19.8%) living in households with only wireless telephones.

Demographic Distributions

The demographic differences noted in the previous section are based on the distribution of household telephone status within each demographic group. When examining the population of wireless-only adults, some readers may instead wish to consider the distribution of various demographic characteristics within the wireless-only adult population. For example, although young adults aged 18-29 years were more likely than older adults to live in households with only wireless telephones, these young adults made up only 42.8% of all wireless-only adults. Young adults were a minority among all wireless-only adults because young adults made up only 22% of the total adult population.

Table 3 presents the percent distribution of selected demographic characteristics for adults living in households with only wireless telephones, by survey time period. The estimates in this table reveal that the distributions of selected demographic characteristics changed little over the 3-year period shown. The exceptions were related to sex, age, and employment status. From 2006 to the first 6 months of 2009,

- The proportion of women among all wireless-only adults increased from approximately 46% to 48.6%.
- Among all wireless-only adults, the proportion of adults aged 30 years and over has steadily increased. In the first 6 months of 2009, the majority of wireless-only adults (57.2%) were aged 30 and over, up from 48.4% 3 years earlier.
- The proportion of employed adults among all wireless-only adults has decreased from approximately 78% to 71.1%. Over the same time period, there was growth in the proportion of adults with an employment status other than working, keeping house, or going to school. These adults (largely unemployed or retired) made up 18.7% of wireless-only adults in the first 6 months of 2009, up from 10.3% 3 years earlier.

Wireless-mostly Households

Among households with both landline and wireless telephones, 24.8% received all or almost all calls on the wireless telephones, based on data for the period July through December 2008. These wireless-mostly households make up 14.7% of all households.

The percentage of adults living in wireless-mostly households has been increasing (see **Table 4**). During the first 6 months of 2009, nearly 37 million adults (16.2%) lived in wireless-mostly households. Although this prevalence estimate was not significantly different from the estimate for the last 6 months of 2008 (15.4%), it

was significantly greater than the estimate for the first 6 months of 2008 (14.4%).

Table 4 presents the percentage of adults living in wireless-mostly households by selected demographic characteristics and by survey time period. For the period January through June 2009,

- Adults working at a job or business (19.5%) and adults going to school (21.1%) were more likely to be living in wireless-mostly households than were adults keeping house (12.7%) or with another employment status such as retired or unemployed (9.0%).
- Adults with college degrees (19.7%) were more likely to be living in wireless-mostly households than were high school graduates (13.7%) or adults with less education (12.1%).
- Adults living with children (20.5%) were more likely than adults living alone (10.0%) or with only adult relatives (14.7%) to be living in wireless-mostly households.
- Adults living in poverty (11.0%) and adults living near poverty (12.0%) were less likely than higher income adults (18.8%) to be living in wireless-mostly households.
- Adults living in metropolitan areas (16.9%) were more likely to be living in wireless-mostly households than were adults living in more rural areas (13.5%).

Selected Health Measures by Household Telephone Status

Many health surveys, political polls, and other research are conducted using random-digit-dial telephone surveys. Until recently, these surveys did not include wireless telephone numbers in their samples. Now, despite operational challenges, most major survey research organizations have begun including wireless telephone numbers when conducting random-digit-dial telephone surveys. If they did not, the exclusion of households with only wireless telephones (along with the small proportion of households that have no telephone service) could bias results. This bias, known as coverage bias, could exist if there are differences between persons with and without landline telephones for the substantive variables of interest.

The NHIS Early Release Program updates and releases estimates for 15 key health indicators every 3 months. **Table 5** presents estimates by household telephone status (landline, wireless-only, or without any telephone service) for all but two of these measures. ("Pneumococcal vaccination" and "personal care needs" were not included because these indicators are limited to older adults aged 65 years and over.) For the period January through June 2009,

- The prevalence of binge drinking (i.e., having five or more alcoholic drinks in 1 day during the past year) among wireless-only adults (35.3%) was nearly twice as high as the prevalence among adults living in landline households (19.3%). Wireless-only adults were also more likely to be current smokers than were adults living in landline households.
- Compared with adults living in landline households, wireless-only adults were more likely to report that their health status was excellent or very good, more likely to experience serious psychological distress, and less likely to have ever been diagnosed with diabetes.
- The percentage without health insurance coverage at the time of interview among wireless-only adults under 65 years of age (29.4%) was more than twice as high as the percentage among adults in that age group living in landline households (13.7%).
- Compared with adults living in landline households, wireless-only adults were more likely to have experienced financial barriers to obtaining needed health care, and they were less likely to have a usual place to go for medical care. Wireless-only adults were also less likely to have received an influenza vaccination during the previous year.
- Wireless-only adults (48.6%) were more likely than adults living in landline households (37.1%) to have ever been tested for human immunodeficiency virus (HIV), the virus that causes AIDS.

The potential for bias due to undercoverage remains a real and growing threat to surveys conducted only on landline telephones. Telephone surveys limited to landline households may still be viable for health surveys of all adults and for surveys of most subpopulations regarding their health status. However, for health-related behaviors, health care service use indicators, and health care access measures (such as those in **Table 5**), caution is warranted when using landline surveys to draw inferences about subpopulations more likely to be wireless-only (such as young or low-income adults).

For More Information

For more information about the potential implications for health surveys that are based on landline telephone interviews, see

- Blumberg SJ, Luke JV. Reevaluating the need for concern regarding noncoverage bias in landline surveys. Am J Public Health 99:1806-10. 2009.
- Blumberg SJ, Luke JV, Cynamon ML, Frankel MR. Recent trends in household telephone coverage in the United States. In: Lepkowski JM et al., eds, Advances in telephone survey methodology. New York: John Wiley and Sons. pp 56-86. 2008.

The potential for bias may differ from one state to another because the prevalence of wireless-only households varies substantially across states. For more information about state-level

prevalence estimates from the 2007 NHIS, see

- Blumberg SJ, Luke JV, Davidson G, Davern ME, Yu T, Soderberg K. Wireless substitution: State-level estimates from the National Health Interview Survey, January-December 2007. National health statistics report; no 14. Hyattsville, MD: National Center for Health Statistics. 2009.

For more information about NHIS and the NHIS Early Release Program, or to find other Early Release reports, please see the following websites:

- http://www.cdc.gov/nchs/nhis.htm
- http://www.cdc.gov/nchs/nhis/releases.htm.

Suggested Citation

Blumberg SJ, Luke JV. Wireless substitution: Early release of estimates from the National Health Interview Survey, January-June 2009. National Center for Health Statistics. December 2009. Available from: http://www.cdc.gov/nchs/nhis.htm.

Table 1. Percent distribution of household telephone status, by date of interview, for households, adults, and children: United States, January 2006-June 2009

Date of interview		Household telephone status						
		Landline households with a wireless telephone	Landline households without a wireless telephone	Landline households with unknown wireless telephone status	Nonlandline households with unknown wireless telephone status	Wireless-only households	Phoneless households	Total
	Number of households (unweighted)	Percent of households						
Jan-Jun 2006	16,009	45.6	30.9	10.3	0.7	10.5	2.0	100.0
Jul-Dec 2006	13,056	44.3	29.6	10.2	0.8	12.8	2.2	100.0
Jan-Jun 2007[1]	15,996	58.9	23.8	1.7	0.1	13.6	1.9	100.0
Jul-Dec 2007	13,083	58.8	21.8	1.3	0.1	15.8	2.2	100.0
Jan-Jun 2008	16,070	58.5	20.6	0.9	0.0	17.5	2.5	100.0
Jul-Dec 2008	12,597	59.6	17.4	0.9	0.0	20.2	1.9	100.0
Jan-Jun 2009	12,447	59.4	15.5	0.4	0.0	22.7	1.9	100.0
95% confidence interval[2]		57.84-60.90	14.38-16.77	0.30-0.64	0.01-0.05	21.29-24.25	1.59-2.24	
	Number of adults (unweighted)	Percent of adults						
Jan-Jun 2006	29,842	49.5	28.2	10.4	0.6	9.6	1.8	100.0
Jul-Dec 2006	24,473	48.1	27.3	10.5	0.7	11.8	1.7	100.0
Jan-Jun 2007[1]	29,982	63.3	20.8	1.7	0.1	12.6	1.6	100.0
Jul-Dec 2007	24,514	63.2	19.1	1.2	0.1	14.5	1.9	100.0
Jan-Jun 2008	30,150	63.0	17.9	0.8	0.0	16.1	2.1	100.0
Jul-Dec 2008	23,726	63.7	15.1	1.0	0.0	18.4	1.7	100.0
Jan-Jun 2009	23,632	63.5	13.4	0.4	0.0	21.1	1.5	100.0
95% confidence interval[2]		62.01-65.03	12.32-14.51	0.30-0.65	0.01-0.06	19.70-22.59	1.28-1.80	

See footnotes at end of table.

Date of interview	Number of children (unweighted)	Household telephone status: Landline households with a wireless telephone	Landline households without a wireless telephone	Landline households with unknown wireless telephone status	Nonlandline households with unknown wireless telephone status	Wireless-only households	Phoneless households	Total
		Percent of children						
Jan-Jun 2006	11,670	53.4	23.8	11.5	0.9	8.6	1.9	100.0
Jul-Dec 2006	9,165	51.9	21.5	11.9	0.9	11.6	2.3	100.0
Jan-Jun 2007[1]	11,532	68.3	16.4	1.6	0.0	11.9	1.7	100.0
Jul-Dec 2007	9,122	68.5	13.8	1.1	0.0	14.4	2.1	100.0
Jan-Jun 2008	11,238	67.3	12.6	0.6	0.0	17.0	2.5	100.0
Jul-Dec 2008	8,635	67.1	11.1	0.7	0.0	18.7	2.4	100.0
Jan-Jun 2009	8,818	67.6	9.1	0.3	0.0	21.3	1.7	100.0
95% confidence interval[2]		65.34-69.76	7.95-10.29	0.17-0.66	0.00-0.06	19.32-23.35	1.30-2.34	

0.0 means quantity is more than zero but less than 0.05.

0.00 means quantity is more than zero but less than 0.005.

[1] Questionnaire changes that occurred in 2007 should be considered when evaluating recent trends in household telephone status. See text for more information about these changes.

[2] Confidence intervals refer to the time period January through June 2009.

DATA SOURCE: National Health Interview Survey, January 2006-June 2009. Data are based on household interviews of a sample of the civilian noninstitutionalized population.

Table 2. Percentage of adults living in wireless-only households, by selected demographic characteristics and by calendar half-years: United States, January 2006-June 2009

Demographic characteristic	Calendar half-year							95% confidence interval[2]
	Jan-Jun 2006	Jul-Dec 2006	Jan-Jun 2007[1]	Jul-Dec 2007[1]	Jan-Jun 2008	Jul-Dec 2008	Jan-Jun 2009	
	Percent							
Race/ethnicity								
Hispanic or Latino, any race(s)	11.2	15.3	18.0	19.3	21.6	25.0	28.2	25.09-31.62
Non-Hispanic white, single race	9.0	10.8	11.3	12.9	14.6	16.6	19.7	18.22-21.34
Non-Hispanic black, single race	10.5	12.8	14.3	18.3	18.5	21.4	21.3	18.38-24.46
Non-Hispanic Asian, single race	10.2	11.8	10.6	12.1	16.5	17.8	18.0	14.55-22.01
Non-Hispanic other, single race	9.8	17.2	22.8	17.5	12.8	17.3	20.6	13.59-29.99
Non-Hispanic multiple race	15.4	14.6	17.3	22.8	22.3	22.5	28.7	22.24-36.27
Age								
18-24 years	22.6	25.2	27.9	30.6	31.4	33.1	37.6	33.78-41.62
25-29 years	22.3	29.1	30.6	34.5	35.7	41.5	45.8	42.34-49.31
30-34 years	12.1	17.6	16.5	22.0	27.0	30.4	33.5	30.07-37.19
35-44 years	8.2	10.1	10.8	12.5	15.5	17.5	21.5	19.84-23.18
45-64 years	5.3	6.1	7.1	8.0	9.2	11.6	12.8	11.58-14.04
65 years and over	1.3	1.9	2.0	2.2	2.8	3.3	5.4	4.41-6.65
Sex								
Male	10.7	13.1	13.8	15.9	18.0	20.0	22.5	21.04-24.01
Female	8.5	10.5	11.5	13.2	14.4	17.0	19.8	18.30-21.43
Education								
Some high school or less	8.3	12.9	14.6	15.4	16.1	18.8	22.2	19.84-24.78
High school graduate or GED[3]	9.6	10.6	11.8	13.4	15.2	17.8	20.8	18.94-22.78
Some post-high school, no degree	11.9	14.4	14.7	17.0	19.0	20.1	23.6	21.57-25.76
4-year college degree or higher	8.5	10.1	10.8	12.7	14.3	17.7	18.2	16.24-20.35
Employment status last week								
Working at a job or business	11.6	13.9	15.0	16.6	19.0	21.5	24.3	22.60-26.03
Keeping house	7.1	8.6	9.5	12.8	12.6	16.0	16.6	14.15-19.28
Going to school	17.3	20.4	21.3	28.9	21.5	23.5	29.7	24.27-35.73
Something else (incl. unemployed)	4.2	6.2	6.4	7.6	8.9	11.0	14.0	12.70-15.35

See footnotes at end of table.

Demographic characteristic	Calendar half-year							95% confidence interval[2]
	Jan-Jun 2006	Jul-Dec 2006	Jan-Jun 2007[1]	Jul-Dec 2007[1]	Jan-Jun 2008	Jul-Dec 2008	Jan-Jun 2009	
Household structure								
Adult living alone	16.2	18.2	20.3	22.9	24.6	28.1	30.8	28.18-33.48
Unrelated adults, no children	44.2	54.0	55.3	56.9	63.1	60.6	68.5	57.64-77.62
Related adults, no children	7.1	8.5	9.8	11.0	12.5	14.7	16.8	15.29-18.34
Adult(s) with children	8.6	10.5	11.3	13.0	15.1	17.2	20.4	18.54-22.34
Household poverty status[4]								
Poor	15.8	22.4	21.6	27.4	26.0	30.9	33.0	29.76-36.51
Near poor	14.4	15.7	18.5	20.8	22.6	23.8	26.5	23.70-29.44
Not poor	9.4	11.3	10.6	11.9	14.2	16.0	18.9	17.34-20.64
Geographic region[5]								
Northeast	7.2	8.6	8.8	10.0	9.8	11.4	14.6	11.82-17.85
Midwest	10.2	11.4	14.0	15.3	17.8	20.8	21.9	19.49-24.48
South	11.4	14.0	14.9	17.1	19.6	21.3	25.0	22.70-27.51
West	7.8	11.0	10.9	12.9	13.7	17.2	19.0	16.57-21.69
Metropolitan statistical area status								
Metropolitan	10.3	12.7	13.7	15.5	17.5	19.7	22.4	20.72-24.08
Not metropolitan	7.0	8.0	8.4	10.0	10.9	13.5	16.5	14.04-19.36
Home ownership status[6]								
Owned or being bought	5.1	5.8	6.7	7.3	9.0	9.9	12.8	11.67-14.05
Renting	22.5	26.4	28.2	30.9	33.6	39.2	40.9	38.04-43.74
Other arrangement	10.7	*20.3	22.5	23.2	23.4	17.7	33.6	22.94-46.31
Number of wireless-only adults in survey sample (unweighted)	2,804	2,878	3,819	3,558	4,939	4,426	5,078	

*Estimate has a relative standard error greater than 30% and does not meet National Center for Health Statistics (NCHS) standards for reliability.

[1] Questionnaire changes that occurred in 2007 should be considered when evaluating recent trends in household telephone status. See text for more information about these changes.

[2] Confidence intervals refer to the time period January through June 2009.

[3] GED is General Educational Development high school equivalency diploma.

[4] Poverty status is based on household income and household size using the U.S. Census Bureau's poverty thresholds. "Poor" persons are defined as those below the poverty threshold. "Near poor" persons have incomes of 100% to less than 200% of the poverty threshold. "Not poor" persons have incomes of 200% of the poverty threshold or greater. Early Release estimates stratified by poverty status are based on reported income only and may differ from similar estimates produced later that are based on both reported and imputed income. NCHS imputes income when income is unknown, but the imputed income file is not available until a few months after the annual release of National Health Interview Survey microdata. For households with multiple families, household income and household size were calculated as the sum of the multiple measures of family income and family size.

[5] In the geographic classification of the U.S. population, states are grouped into the following four regions used by the U.S. Census Bureau. *Northeast* includes Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, and Pennsylvania. *Midwest* includes Ohio, Illinois, Indiana, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Kansas, and Nebraska. *South* includes Delaware, Maryland, District of Columbia, West Virginia, Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Oklahoma, Arkansas, and Texas. *West* includes Washington, Oregon, California, Nevada, New Mexico, Arizona, Idaho, Utah, Colorado, Montana, Wyoming, Alaska, and Hawaii.

[6] For households with multiple families, home ownership status was determined by considering the reported home ownership status for each family. If any family reported owning the home, then the household level variable was classified as "owned or being bought" for all persons living in the household. If one family reported renting the home and another family reported "other arrangement," then the household level variable was classified as "other arrangement" for all persons living in the household.

DATA SOURCE: National Health Interview Survey, January 2006-June 2009. Data are based on household interviews of a sample of the civilian noninstitutionalized population.

Table 3. Percent distribution of selected demographic characteristics, by date of interview, for adults living in wireless-only households: United States, January 2006-June 2009

Demographic characteristic	Calendar half-year							95% confidence interval[2]
	Jan-Jun 2006	Jul-Dec 2006	Jan-Jun 2007[1]	Jul-Dec 2007[1]	Jan-Jun 2008	Jul-Dec 2008	Jan-Jun 2009	
	Percent distribution							
Race/ethnicity								
Hispanic or Latino, any race(s)	15.2	17.1	18.9	18.0	18.1	18.5	18.4	15.8-21.4
Non-Hispanic white, single race	65.6	64.0	61.5	61.2	62.2	61.9	63.8	60.7-66.8
Non-Hispanic black, single race	12.5	12.4	12.9	14.4	13.2	13.3	11.7	10.1-13.5
Non-Hispanic Asian, single race	4.7	4.4	3.8	3.8	4.6	4.4	3.9	3.1-4.8
Non-Hispanic other, single race	0.6	0.9	1.6	0.8	0.6	0.6	0.7	0.5-1.2
Non-Hispanic multiple race	1.4	1.2	1.3	1.8	1.3	1.2	1.5	1.2-2.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Age								
18-24 years	30.5	27.6	28.4	27.2	24.9	23.1	22.9	20.6-25.4
25-29 years	21.1	22.7	22.3	22.1	20.5	21.0	19.9	18.3-21.7
30-34 years	11.0	12.9	11.3	13.0	14.3	14.0	13.6	12.2-15.1
35-44 years	16.8	16.6	16.3	16.3	17.8	17.4	18.4	17.0-19.9
45-64 years	18.5	17.6	19.1	18.9	19.6	21.6	21.0	19.3-22.7
65 years and over	2.2	2.6	2.6	2.5	2.9	2.9	4.3	3.5-5.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Sex								
Male	54.1	53.9	52.9	53.0	53.7	52.4	51.4	50.1-52.8
Female	45.9	46.1	47.1	47.0	46.3	47.6	48.6	47.2-49.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Education								
Some high school or less	14.8	17.4	17.5	16.2	15.5	15.8	15.5	13.7-17.6
High school graduate or GED[3]	28.3	27.0	27.5	27.5	27.8	27.2	27.7	25.5-30.1
Some post-high school, no degree	34.7	34.2	32.7	32.9	33.9	31.7	33.3	31.1-35.5
4-year college degree or higher	22.1	21.4	22.3	23.4	22.8	25.3	23.5	21.1-26.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

See footnotes at end of table.

Demographic characteristic	Calendar half-year							95% confidence interval[2]
	Jan-Jun 2006	Jul-Dec 2006	Jan-Jun 2007[1]	Jul-Dec 2007[1]	Jan-Jun 2008	Jul-Dec 2008	Jan-Jun 2009	
Employment status last week								
Working at a job or business	78.6	76.7	77.1	74.3	75.9	74.5	71.1	69.4-72.9
Keeping house	5.2	4.9	5.2	5.6	5.0	5.3	4.5	3.9-5.3
Going to school	5.6	4.9	5.1	5.8	4.1	3.7	4.6	3.6-5.8
Something else (incl. unemployed)	10.3	13.0	12.1	13.1	13.7	15.4	18.7	17.2-20.2
Unknown, not reported	0.2	0.6	0.6	1.3	1.4	1.1	1.1	0.7-1.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Household structure								
Adult living alone	25.4	24.2	25.1	24.4	23.2	23.6	22.1	20.2-24.1
Unrelated adults, no children	6.8	10.1	6.0	7.7	6.4	5.2	5.4	3.9-7.6
Related adults, no children	33.1	32.4	34.4	34.2	35.1	36.9	36.0	33.6-38.6
Adult(s) with children	34.6	33.3	34.6	33.7	35.3	34.3	36.4	33.8-39.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Household poverty status[4]								
Poor	12.7	15.7	14.6	16.1	14.1	15.5	15.5	13.5-17.7
Near poor	19.5	17.1	18.4	18.4	18.1	16.8	17.9	16.3-19.6
Not poor	47.9	46.2	50.5	49.7	53.4	53.3	56.7	53,6-59.7
Unknown, not reported	19.9	21.0	16.5	15.8	14.4	14.4	10.0	8.5-11.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Geographic region[5]								
Northeast	13.8	13.4	12.7	12.4	10.7	11.3	12.2	9.4-15.6
Midwest	24.1	22.2	25.1	24.6	25.0	26.0	23.9	19.6-28.8
South	44.1	44.4	42.6	42.7	45.2	41.1	43.8	38.4-49.2
West	18.0	20.0	19.7	20.4	19.1	21.6	20.1	16.8-24.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Metropolitan statistical area status								
Metropolitan	84.4	86.7	86.1	86.9	85.9	85.1	83.3	79.4-86.6
Not metropolitan	15.6	13.3	13.9	13.1	14.1	14.9	16.7	13.5-20.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

See footnotes at end of table.

Demographic characteristic	Calendar half-year							95% confidence interval[2]
	Jan-Jun 2006	Jul-Dec 2006	Jan-Jun 2007[1]	Jul-Dec 2007[1]	Jan-Jun 2008	Jul-Dec 2008	Jan-Jun 2009	
Home ownership status[6]								
Owned or being bought	37.4	33.8	37.7	34.8	39.2	37.1	42.1	39.0-45.2
Renting	60.5	62.6	59.0	61.3	58.1	61.1	55.0	51.7-58.3
Other arrangement	2.1	3.7	3.3	3.8	2.7	1.8	2.9	1.7-5.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Number of wireless-only adults in survey sample (unweighted)	2,804	2,878	3,819	3,558	4,939	4,426	5,078	

*Estimate has a relative standard error greater than 30% and does not meet National Center for Health Statistics (NCHS) standards for reliability.

[1] Questionnaire changes that occurred in 2007 should be considered when evaluating recent trends in household telephone status. See text for more information about these changes.

[2] Confidence intervals refer to the time period January through June 2009.

[3] GED is General Educational Development high school equivalency diploma.

[4] Poverty status is based on household income and household size using the U.S. Census Bureau's poverty thresholds. "Poor" persons are defined as those below the poverty threshold. "Near poor" persons have incomes of 100% to less than 200% of the poverty threshold. "Not poor" persons have incomes of 200% of the poverty threshold or greater. Early Release estimates stratified by poverty status are based on reported income only and may differ from similar estimates produced later that are based on both reported and imputed income. NCHS imputes income when income is unknown, but the imputed income file is not available until a few months after the annual release of National Health Interview Survey microdata. For households with multiple families, household income and household size were calculated as the sum of the multiple measures of family income and family size.

[5] In the geographic classification of the U.S. population, states are grouped into the following four regions used by the U.S. Census Bureau. *Northeast* includes Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, and Pennsylvania. *Midwest* includes Ohio, Illinois, Indiana, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Kansas, and Nebraska. *South* includes Delaware, Maryland, District of Columbia, West Virginia, Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Oklahoma, Arkansas, and Texas. *West* includes Washington, Oregon, California, Nevada, New Mexico, Arizona, Idaho, Utah, Colorado, Montana, Wyoming, Alaska, and Hawaii.

[6] For households with multiple families, home ownership status was determined by considering the reported home ownership status for each family. If any family reported owning the home, then the household level variable was classified as "owned or being bought" for all persons living in the household. If one family reported renting the home and another family reported "other arrangement," then the household level variable was classified as "other arrangement" for all persons living in the household.

DATA SOURCE: National Health Interview Survey, January 2006-June 2009. Data are based on household interviews of a sample of the civilian noninstitutionalized population.

Table 4. Percentage of adults living in wireless-mostly households, by selected demographic characteristics and by calendar half-years: United States, January 2007-June 2009

Demographic characteristic	Calendar half-year					95% confidence interval[1]
	Jan-Jun 2007	Jul-Dec 2007	Jan-Jun 2008	Jul-Dec 2008	Jan-Jun 2009	
	Percent[2]					
Total	12.6	14.0	14.4	15.4	16.2	15.23-17.17
Race/ethnicity						
Hispanic or Latino, any race(s)	13.2	14.5	16.0	15.9	18.0	16.02-20.13
Non-Hispanic white, single race	12.3	13.2	14.2	14.9	15.6	14.50-16.80
Non-Hispanic black, single race	11.9	15.1	13.3	14.7	15.0	12.88-17.34
Non-Hispanic Asian, single race	16.0	20.3	16.4	20.3	19.6	17.03-22.42
Non-Hispanic other single race	14.6	*8.6	*10.1	15.5	22.9	13.97-35.08
Non-Hispanic multiple race	14.6	19.7	17.7	24.2	22.5	15.92-30.73
Age						
18-24 years	17.3	18.2	19.2	18.8	20.0	17.92-22.28
25-29 years	17.2	19.7	17.3	18.3	17.7	15.13-20.54
30-44 years	15.5	17.3	18.2	19.0	20.3	18.65-22.00
45-64 years	11.5	13.0	13.8	15.4	16.5	15.22-17.79
65 years and over	3.4	3.9	4.4	4.9	5.3	4.36-6.32
Sex						
Male	13.2	14.3	14.9	15.4	16.2	15.18-17.38
Female	12.0	13.6	14.0	15.2	16.1	15.18-17.09
Education						
Some high school or less	8.0	8.7	10.0	9.8	12.1	10.48-13.90
High school graduate or GED[3]	10.6	12.7	12.5	13.2	13.7	12.52-14.89
Some post-high school, no degree	15.7	16.6	17.0	18.6	17.7	16.26-19.13
4-year college degree or higher	14.9	16.2	17.1	18.0	19.7	18.12-21.42
Employment status last week						
Working at a job or business	15.5	16.8	17.3	18.4	19.5	18.26-20.76
Keeping house	9.3	10.4	11.9	11.9	12.7	10.91-14.72
Going to school	17.2	20.4	25.2	21.5	21.1	17.49-25.13
Something else (incl. unemployed)	5.3	6.7	6.6	7.8	9.0	8.04-10.10
Household structure						
Adult living alone	10.8	10.7	10.1	12.2	10.0	8.73-11.50
Unrelated adults, no children	13.9	20.1	*15.4	21.3	13.9	8.19-22.62
Related adults, no children	11.6	12.1	12.8	13.2	14.7	13.38-16.22
Adult(s) with children	14.4	17.2	18.1	19.2	20.5	18.91-22.12
Household poverty status[4]						
Poor	8.4	8.6	10.8	9.5	11.0	8.91-13.44
Near poor	9.7	11.4	10.3	11.3	12.0	10.24-14.00
Not poor	14.8	15.9	17.1	18.2	18.8	17.62-20.04
Geographic region[5]						
Northeast	11.3	11.7	13.8	12.0	15.3	13.08-17.78
Midwest	10.6	13.3	12.6	13.2	14.6	12.67-16.77
South	13.8	14.3	14.6	16.2	16.7	15.21-18.22
West	13.7	15.9	16.4	18.7	17.7	15.75-19.85
Metropolitan statistical area status						
Metropolitan	13.2	14.7	15.0	15.8	16.9	15.81-18.07
Not metropolitan	10.2	10.9	12.1	13.4	13.5	11.78-15.40

See footnotes at end of table.

Demographic characteristic	Calendar half-year Jan-Jun 2007	Jul-Dec 2007	Jan-Jun 2008	Jul-Dec 2008	Jan-Jun 2009	95% confidence interval[1]
Home ownership status[6]						
Owned or being bought	12.1	14.0	14.7	15.9	17.2	16.05-18.44
Renting	13.9	13.8	13.9	13.0	13.9	12.42-15.51
Other arrangement	12.2	14.1	14.8	24.6	13.8	9.66-19.36
Number of adults in survey sample who live in landline households with wireless telephones (unweighted)	3,733	3,435	4,302	3,663	3,908	

* Estimate has a relative standard error greater than 30% and does not meet National Center for Health Statistics (NCHS) standards for reliability.

[1] Confidence intervals refer to the estimate of the percentage of adults living in wireless-mostly households for the time period January through June 2009.

[2] The sum of the percentage of adults in households that receive all or nearly all calls on wireless phones (shown here) and the percentage of adults in households that receive some or very few calls on wireless phones (data not shown) is equal to the percentage of adults living in landline households with wireless telephones (see Table 1).

[3] GED is General Educational Development high school equivalency diploma.

[4] Poverty status is based on household income and household size using the U.S. Census Bureau's poverty thresholds. "Poor" persons are defined as those below the poverty threshold. "Near poor" persons have incomes of 100% to less than 200% of the poverty threshold. "Not poor" persons have incomes of 200% of the poverty threshold or greater. Early Release estimates stratified by poverty status are based on reported income only and may differ from similar estimates produced later that are based on both reported and imputed income. NCHS imputes income when income is unknown, but the imputed income file is not available until a few months after the annual release of National Health Interview Survey microdata. For households with multiple families, household income and household size were calculated as the sum of the multiple measures of family income and family size.

[5] In the geographic classification of the U.S. population, states are grouped into the following four regions used by the U.S. Census Bureau. *Northeast* includes Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, and Pennsylvania. *Midwest* includes Ohio, Illinois, Indiana, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Kansas, and Nebraska. *South* includes Delaware, Maryland, District of Columbia, West Virginia, Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Oklahoma, Arkansas, and Texas. *West* includes Washington, Oregon, California, Nevada, New Mexico, Arizona, Idaho, Utah, Colorado, Montana, Wyoming, Alaska, and Hawaii.

[6] For households with multiple families, home ownership status was determined by considering the reported home ownership status for each family. If any family reported owning the home, then the household level variable was classified as "owned or being bought" for all persons living in the household. If one family reported renting the home and another family reported "other arrangement," then the household level variable was classified as "other arrangement" for all persons living in the household.

DATA SOURCE: National Health Interview Survey, January 2007-June 2009. Data are based on household interviews of a sample of the civilian noninstitutionalized population.

Table 5. Prevalence rates (and 95% confidence intervals) for selected measures of health-related behaviors, health status, health care service use, and health care access for adults aged 18 years and over, by household telephone status: United States, January-June 2009

Measure	Household telephone service					
	Landline household[1]		Wireless-only household		Phoneless household	
	Percent (95% confidence interval)					
Health-related behaviors						
Five or more alcoholic drinks in 1 day at least once in past year[2]	19.3	(17.87-20.80)	35.3	(32.50-38.20)	27.4	(20.02-36.24)
Current smoker[3]	17.9	(16.64-19.21)	28.4	(25.98-31.02)	29.4	(22.53-37.37)
Engaged in regular leisure-time physical activity[4]	34.6	(33.00-36.27)	37.2	(34.49-39.97)	24.3	(17.74-32.23)
Health status						
Health status described as excellent or very good[5]	59.3	(57.54-60.95)	64.5	(61.73-67.20)	55.8	(47.66-63.74)
Experienced serious psychological distress in past 30 days[6]	2.7	(2.27-3.31)	4.6	(3.67-5.68)	6.2	(3.58-10.68)
Obese (adults aged 20 years and over)[7]	28.0	(26.52-29.49)	26.8	(24.48-29.28)	23.4	(17.58-30.33)
Asthma episode in past year[8]	3.8	(3.25-4.34)	4.2	(3.35-5.27)	*1.8	(0.75-4.39)
Ever diagnosed with diabetes[9]	10.8	(9.89-11.76)	4.5	(3.55-5.59)	6.2	(3.71-10.29)
Health care service use						
Received influenza vaccine during past year[10]	39.0	(37.68-40.39)	22.3	(20.22-24.44)	18.9	(12.72-27.22)
Ever been tested for HIV[11]	37.1	(35.24-39.02)	48.6	(45.52-51.75)	39.7	(31.68-48.27)
Health care access						
Has a usual place to go for medical care[12]	86.5	(85.26-87.60)	69.8	(67.16-72.29)	59.3	(50.47-67.48)
Failed to obtain needed medical care in past year due to financial barriers[13]	7.1	(6.32-7.96)	14.8	(13.10-16.63)	14.2	(9.45-20.92)
Currently uninsured (adults aged 18-64 years)[14]	13.7	(12.51-15.02)	29.4	(26.93-32.04)	45.0	(36.74-53.58)
Number of adults in survey sample (unweighted)	7,463		2,590		205	

* Estimate has a relative standard error greater than 30% and does not meet National Center for Health Statistics standards for reliability.

[1] In this analysis, landline households include households that also have wireless telephone service.

[2] A year is defined as the 12 months prior to interview. The analyses excluded adults with unknown alcohol consumption (about 2% of respondents each year).

[3] Current smokers were defined as those who had smoked more than 100 cigarettes in their lifetime and now smoke every day or some days. The analyses excluded persons with unknown smoking status (about 1% of respondents each year).

[4] Regular leisure-time physical activity is defined as engaging in light-moderate leisure-time physical activity for greater than or equal to 30 minutes at a frequency greater than or equal to five times per week or engaging in vigorous leisure-time physical activity for greater than or equal to 20 minutes at a frequency greater than or equal to three times per week. Persons who were known to have not met the frequency recommendations are classified as "not regular," regardless of duration. The analyses excluded persons with unknown physical activity participation (about 3% of respondents each year).

[5] Health status data were obtained by asking respondents to assess their own health and that of family members living in the same household as excellent, very good, good, fair, or poor. The analyses excluded persons with unknown health status (about 0.5% of respondents each year).

[6] Six psychological distress questions are included in the National Health Interview Survey. These questions ask how often during the past 30 days a respondent experienced certain symptoms of psychological distress (feeling so sad that nothing could cheer you up, nervous, restless or fidgety, hopeless, worthless, that everything was an effort). The response codes (0-4) of the six items

for each person were equally weighted and summed. A value of 13 or more for this scale indicates that at least one symptom was experienced "most of the time" or "all of the time" and is used here to define serious psychological distress.

[7] Obesity is defined as a body mass index (BMI) of 30 kg/m^2 or more. The measure is based on self-reported height and weight. The analyses excluded people with unknown height or weight (about 4% of respondents each year). Estimates of obesity are presented for adults aged 20 years and over because the Healthy People 2010 objectives (http://www.healthypeople.gov) for healthy weight among adults define adults as persons aged 20 and over.

[8] Information on an episode of asthma or an asthma attack during the past year is self-reported by adults aged 18 years and over. A year is defined as the 12 months prior to interview. The analyses excluded people with unknown asthma episode status (about 0.3% of respondents each year).

[9] Prevalence of diagnosed diabetes is based on self-report of ever having been diagnosed with diabetes by a doctor or other health professional. Persons reporting "borderline" diabetes status and women reporting diabetes only during pregnancy were not coded as having diabetes in the analyses. The analyses excluded persons with unknown diabetes status (about 0.1% of respondents each year).

[10] Receipt of flu shots and receipt of nasal spray flu vaccinations were included in the calculation of flu vaccination estimates. Responses to these two flu vaccination questions do not indicate when the subject received the flu vaccination during the 12 months preceding the interview. In addition, estimates are subject to recall error, which will vary depending on when the question is asked because the receipt of a flu vaccination is seasonal. The analyses excluded those with unknown flu vaccination status (about 1% of respondents each year).

[11] Individuals who received human immunodeficiency virus (HIV) testing solely as a result of blood donation were considered not to have been tested for HIV. The analyses excluded those with unknown HIV test status (about 4% of respondents each year).

[12] The usual place to go for medical care does not include a hospital emergency room. The analyses excluded persons with an unknown usual place to go for medical care (about 0.6% of respondents each year).

[13] A year is defined as the 12 months prior to interview. The analyses excluded persons with unknown responses to the question on failure to obtain needed medical care due to cost (about 0.5% of respondents each year).

[14] A person was defined as uninsured if he or she did not have any private health insurance, Medicare, Medicaid, Children's Health Insurance Program (CHIP), state-sponsored or other government-sponsored health plan, or military plan at the time of the interview. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service, such as accidents or dental care. The data on health insurance status were edited using an automated system based on logic checks and keyword searches. The analyses excluded persons with unknown health insurance status (about 1% of respondents each year).

DATA SOURCE: National Health Interview Survey, January-June 2009. Data are based on household interviews of a sample of the civilian noninstitutionalized population.

CONFIDENTIAL Exhibit JAA-3
to the Direct Testimony of James A. Appleby
Filed on Behalf of Sprint Nextel
in CASE NO. 2007-00503

Intrastate Sw. Access

	2008 Intrastate SW ACC MOU	2008 Intrastate SW ACC REV	2008 Intrastate AVE RATE	Source
Windstream - East	853,791,490	$ 28,153,880	$ 0.0330	Confidential - VZ #8
Windstream - West	36,611,377	$ 2,891,761	$ 0.0790	Confidential - VZ #8

Interstate Sw. Access

	Mirroring	Interstate AVE RATE	2008 Intrastate Rate as a % of the Interstate Rate	
Windstream - East	[redacted]			Confidential - VZ #8
Windstream - West				Confidential - VZ #8
Windstream - Total				

Total Access Lines

	12/31/2007	12/31/2008	Average	
Windstream - East	[redacted]			Confidential - VZ #10
Windstream - West				Confidential - VZ #10
Windstream - Total				

	Mirroring per Line
Windstream - East	$ 4.87
Windstream - West	$ 10.30
Windstream - Total	[redacted]

NTSRR

	2008 NTS Revenues	
Windstream - East	[redacted]	Confidential - VZ #14
Windstream - West		
Windstream - Total		
% of Access Redcution		

CONFIDENTIAL Exhibit JAA-4
to the Direct Testimony of James A. Appleby
Filed on Behalf of Sprint Nextel
in CASE NO. 2007-00503

	2009 Intrastate SW ACC MOU	2009 Intrastate SW ACC REV	2009 Intrastate AVE RATE	Source:
Windstream - East	[redacted]			Confidential - SPR #19
Windstream - West				Confidential - SPR #19

		Intrastate Rate	
AT&T - Kentucky	@10 miles	0.004949	Verizon #32
		Windstream East Rate as a % of AT&T's Intrastate Rate	
	@10 miles	[redacted]	
		Windstream West Rate as a % of AT&T's Intrastate Rate	
	@10 miles	[redacted]	
		Interstate Rate	
AT&T - Kentucky	@10 miles	0.004924	Verizon #32
		Windstream East Rate as a % of AT&T's Intrastate Rate	
	@10 miles	[redacted]	
		Windstream West Rate as a % of AT&T's Intrastate Rate	
	@10 miles	[redacted]	

Exhibit JAA-5
to the Direct Testimony of James A. Appleby
Filed on Behalf of Sprint Nextel
in CASE NO. 2007-00503

		USAC 4Q 2009 HC05 Working Loops	Sq. Miles of Service Territory	Teledensity
Windstream	Lexington	348,910	7,088	49.2
Windstream	London	93,298	4,287	21.8
Windstream	West	21,167	239	88.6
Windstream	Total	463,375	11,614	**39.9**
AT&T		882,950	18,294	**48.3**
Lexington % of Total Windstream		75%		

Exhibit JAA-6
to the Direct Testimony of James A. Appleby
Filed on Behalf of Sprint Nextel
in CASE NO. 2007-00503

	1st Qtr. 2007	4th Qtr. 2009	Change	Source
Average Service Revenue per Customer per Month	$ 77.03	$ 82.31	$ 5.28	4th Qtr. 2009 Supplemental Data

High Speed Internet Customer Penetration %	1st Qtr. 2007	4th Qtr. 2009	
Access Lines (in thousands)	3,483.6	3,030.5	4th Qtr. 2009 Supplemental Data
High-Speed Internet Customers (in thousands)	784.5	1,132.1	4th Qtr. 2009 Supplemental Data
Customer Penetration %	22.5%	37.4%	Calculation: Customers / Total Lines

Estimated High Speed Internet Revenue:		4th Qtr. 2009	
Kentucky Access Lines @12-31-08	409.46	384.99	2008 from Verizon #10 - 2009 trended
		4th Qtr. 2009	
Estimated Kentucky Customers (in thousands)		143.8	Calc: 12-31-09 KY lines X Customer Penetration %
Estimated Yield per Subscription Prcie Per Month		$ 30.00	Market price
Estaimted Annual Hish Speed Internet Revenue for Windstream in Kentucky		$51,775,279	Calculation: Customers X Price X 12

Digital Televison Customer Penetration %		
Digital Televison Customers (in thousands)	369.4	4th Qtr. 2009 Supplemental Data
Customer Penetration %	12.2%	Calculation: TVSubs/ 4Q2009 Total Lines

Long Distance Customer Penetration %	2nd Qtr. 2008	
Access Lines (in thousands)	3,124.2	2nd Qtr. 2008 Supplemental Data
Long Distance Customers (in thousands)	2,049.7	2nd Qtr. 2008 Supplemental Data
Customer Penetration %	65.6%	Calculation: LD Customers / total lines

Exhibit JAA-7
to the Direct Testimony of James A. Appleby
Filed on Behalf of Sprint Nextel
in CASE NO. 2007-00503

Windstream Corporation Dividend Payout Magnitude

		Data @ 7-6-10	Row / Calculation	Source
Market Capitalization	$	4,830,000,000	(A)	Yahoo Finance
Stock Share Price	$	10.57	(B)	Yahoo Finance
Approximate Outstanding Shares		456,953,642	(C) = (A) / (B)	
Annual Dividend Payout Per Year Per Share	$	1.00	(D)	Yahoo Finance
Dividend Payout Percentage		9.46%	(E)= (D) / (B)	
Windstream Annual Dividend Distribution	$	456,953,642	(F) = (C) * (D)	
Windstream Total Access Lines 12-31-09		3,030,500	(G)	4Q 2009 Supplemental data attched to Exhibit JAA-6
Dividend Payout % Per Access Line per Month	$	12.57	(H) = (F) / (G) / 12	
Access Reduction per Access Line per Month In Kentucky	$	5.11	(I)	JAA-3 - Confidential Data
Access Reduction as a % of Dividend Payout		41%	(J) = (I) / (H)	

Exhibit JAA-8
To the Direct Testimony of
James A. Apleby
Filed on Behalf of Sprint Nextel
In CASE NO. 2007-00503

AT&T Sets the Record Straight on Verizon Ads

To Our Customers:

As the U.S. market leader in wireless data service, we typically don't respond to competitors' advertising. However, some recent ads from Verizon are so blatantly false and misleading, that we want to set the record straight about AT&T's wireless data coverage.

The key facts are:

AT&T's wireless data coverage reaches 303 million people – or 97% of the U.S. population, where they live and work. Our data coverage consists of 3 different types of technology:

3G. 233 million people or 75% of the population are covered by AT&T's 3G network, the nation's fastest.

EDGE. 301 million people or more than 96% of the population are covered by EDGE.

With both 3G and EDGE coverage, customers can access the Internet, send e-mail, surf the Web, stream music, download videos, send photos, text, talk and more. The only difference – with some data applications, 3G is faster than EDGE

GPRS. Covers 303 million people, allowing you to talk, text, e-mail and access basic websites optimized for wireless.

AT&T is the #1 network for smartphones, with twice the number of smartphone customers than Verizon, our closest competitor. Some of the reasons include:

Most popular smartphones. Unlike Verizon, AT&T offers the most popular smartphones in the industry.

More wireless apps. Unlike Verizon, AT&T customers have access to more than 100,000 applications, more than with any other wireless company.

Talk and E-mail at the same time. Unlike Verizon, AT&T's 3G network lets wireless customers simultaneously talk and surf the web or do e-mail.

Fastest 3G in the nation. Unlike Verizon, AT&T has the nation's fastest 3G network.

Thank you for allowing us to set the record straight. We appreciate your business and will continue to work hard to deliver the best wireless data experience in the industry.

Your AT&T Team

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Nexus One from Google Coming to Sprint; Availability Date Announced Soon

Nexus One(TM) is planned for the Sprint Mobile Broadband Network with twice the network coverage of AT&T and ten times the network coverage of T-Mobile, both by square miles; Expands Sprint's Android(TM) portfolio

OVERLAND PARK, Kan., Mar 17, 2010 (BUSINESS WIRE) -- Nexus One, the first wireless phone sold through Google(TM)'s web store, is planned for Sprint's 3G Mobile Broadband Network. Sprint (NYSE:S) will announce pricing and an exact availability date soon. Nexus One will benefit from Sprint's 3G network with twice the coverage of AT&T and 10 times the coverage of T-Mobile, both based on square miles.[1] Sprint currently has America's largest voice calling area of any carrier reaching more than 307 million people in the U.S., Puerto Rico and U.S. Virgin Islands with a Sprint phone and plan that includes roaming. PC World recently said no one has a more reliable network than Sprint in a 13 city 3G performance test.[2] Customers can check the quality of network coverage with street level mapping at sprint.com/coverage.

"Nexus One is a powerful device that belongs on a powerful network. This is another step in our continued partnership of innovation with Google," said Fared Adib, Sprint vice president of product development. "Sprint customers already have the option of two amazing Android devices with Samsung Moment(TM) and HTC Hero (TM). It is a natural fit for us to add Nexus One to the list of choices available for Sprint customers who want the best value in wireless with the best in Android."

Google's online consumer channel was created to provide an efficient way to connect online users with selected Android phones. Nexus One will not be available in any Sprint retail channels. It will be available directly from Google at google.com/phone. The online experience of Google's web store is designed with a focus on simplicity allowing consumers to match a phone with the service plan that best meets their needs.

"While a pricing plan has not yet been determined for Nexus One, we are confident that it will be consistent with Sprint's commitment to deliver more value than our competitors and keep pricing simple," Adib said. "Right now, our Sprint Everything Data 450 plan with Any Mobile, Anytime(SM) gives customers unlimited calling with any mobile phone in America, unlimited text and unlimited Web for just $69.99 per month - the same price AT&T and Verizon charge for just unlimited talk. Our Everything Data plans include unlimited GPS Navigation at no extra charge and annual phone upgrades with Sprint Premier."

Nexus One runs on Android 2.1, a version of the platform's Eclair software, which offers advanced applications and features including:

- Google Maps(TM) Navigation: offering turn-by-turn driving directions with voice output.
- Email: multiple Gmail(TM) accounts; universal inbox and Exchange support.
- Phone book: aggregate contacts from multiple sources, including Facebook(R).
- Quick Contacts: easily switch between communication and social applications.
- Android Market(TM): access to more than 30,000 applications.

Hardware features of Nexus One include:

- Display: 3.7" AMOLED 480x800 WVGA display
- Thinness: 11.5mm; Weight: 130g
- Processor/Speed: Qualcomm Snapdragon(TM) 3G QSD8250 chipset, delivering speeds up to 1GHz
- Camera: 5 megapixel auto focus with flash and geo tagging
- Onboard memory: 512MB Flash, 512MB RAM
- Expandable memory: 4GB removable SD Card (expandable to 32GB)
- Noise Suppression: Dynamic noise suppression from Audience, Inc.

- Ports: 3.5mm stereo headphone jack with four contacts for inline voice and remote control
- Battery: Removable 1400 mAh
- Personalized laser engraving: Up to 50 characters on the back of the phone
- Trackball: Tri-color notification LED, alerts when new emails, chats, text messages arrive

In addition, Nexus One offers new functionality and software enhancements including:

- Enter text without typing.
- Use a voice-enabled keyboard for all text fields: speak a text message, instant message, tweet, Facebook update, or complete an email.
- Tell your phone what you want it to do.
- Search Google, call contacts, or get driving directions by just speaking into your phone.
- Take personalization to the next level.
- Dynamic, interactive, live wallpapers react to the touch of a finger.
- More widgets and five home screen panels allow for further device customization.
- Capture camera-quality pictures and video with your device.
- 5 megapixel camera includes LED flash, auto focus, zoom, white balance and color effects.
- View pictures and Picasa Web Albums(TM) in the new 3D Gallery.
- Record Hi-Res MPEG4 video, and then upload to YouTube(TM) with one click.
- Read your voicemail messages.
- Get transcribed voicemail with Google Voice(TM) integration, without changing your number.

For more information on Nexus One, please visit http://cts.businesswire.com/ct/CT?id=smartlink&url=http%3A%2F%2Fwww.Google.com%2Fphone&esheet=6218591&lan=en_US&anchor=www.Google.com%2Fphone&index=2&md5=caa3e1ae47993af241de7f4a19e105e6. Follow Sprint on Twitter @sprint to keep up with news on Nexus One for Sprint's 3G Mobile Broadband Network.

About Sprint Nextel

Sprint Nextel offers a comprehensive range of wireless and wireline communications services bringing the freedom of mobility to consumers, businesses and government users. Sprint Nextel is widely recognized for developing, engineering and deploying innovative technologies, including two wireless networks serving more than 48 million customers at the end of the fourth quarter of 2009 and the first and only 4G service from a national carrier in the United States; industry-leading mobile data services; instant national and international push-to-talk capabilities; and a global Tier 1 Internet backbone. The company's customer-focused strategy has led to improved first call resolution and customer care satisfaction scores. For more information, visit http://cts.businesswire.com/ct/CT?id=smartlink&url=http%3A%2F%2Fwww.sprint.com%2F&esheet=6218591&lan=en_US&anchor=www.sprint.com&index=3&md5=9cf4c3e420bc34b80f6609b9f4a9757d.

[1] Coverage comparisons based on publicly available information as of 1/01/10 inclusive of Sprint roaming partners.

[2] *PC World's* test included Sprint, AT&T, Verizon and T-Mobile in 13 major cities in all regions of the country during December 2009 and January 2010. In all, roughly 9,000 individual tests of Sprint's 3G service were conducted from 280 testing locations. Testing sessions were one minute in duration per location, and network performance can be highly variable from neighborhood to neighborhood. In laptop-based tests, Sprint tied with another carrier for first in 3G network reliability.

SOURCE: Sprint

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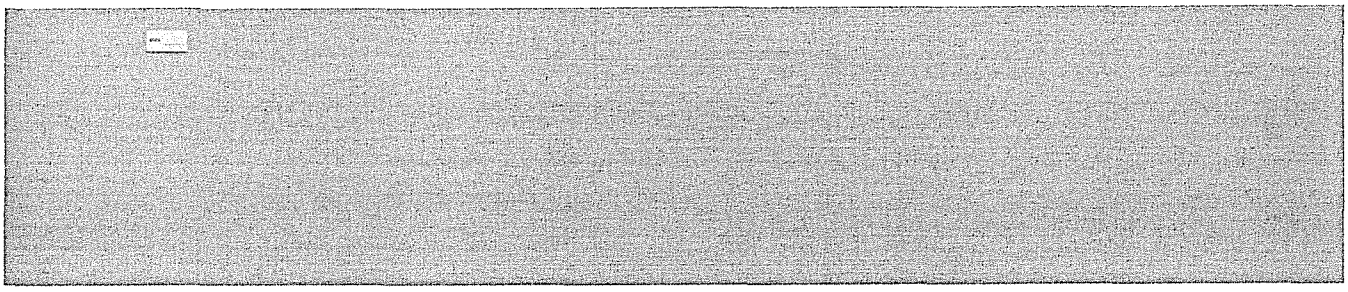

Best Network

Network Facts

Best Network

Network Facts

Network Awards

Verizon Wireless operates the nation's largest and most reliable wireless voice and 3G network, serving 92.8 million customers. Leveraging its greatest asset - its network - Verizon Wireless continues to lead the industry by offering the highest quality products and services while introducing innovative technology solutions.

Network-Powered Services and Features

Verizon Wireless Mobile Broadband - Based on CDMA EV-DO (Evolution-Data Optimized) technology

- Verizon Wireless, the first to build a national wireless broadband network, launched Mobile Broadband in October 2003 and announced a national rollout in January 2004.
- Offering wireless Internet connections at broadband-like speeds.
- In February 2007, Verizon Wireless launched its next-generation high-speed wireless broadband network, based on CDMA 1x Evolution-Data Optimized (EV-DO) Revision A (Rev. A) technology, in cities throughout the country, giving customers the ability to upload files eight to nine times faster than before, giving them faster access to e-mail, everyday corporate data, the Internet and more.
- Mobile Broadband customers in enhanced broadband wireless coverage areas can expect average download speeds of 600 kilobits per second (kbps) to 1.4 megabits and average upload speeds of 500-800 kbps. As of June 2007, Rev. A technology was available throughout the entire EV-DO network. The company's 3G (third generation) network – the nation's largest and most reliable – is now available to 285 million people across the country.

V CAST - Also based on CDMA EV-DO technology, V CAST is the nation's first consumer wireless broadband multimedia service.

- V CAST from Verizon Wireless brings high-quality video, 3D games and music straight to hot new phones.
- Currently available in all markets where Mobile Broadband is offered.

V CAST Music with Rhapsody - Launched in June 2008, V CAST Music with Rhapsody is a monthly subscription service combining the company's world-class mobile music service with Rhapsody's leading desktop music solution.

- V CAST Music with Rhapsody gives customers access to 5 million songs for $14.99 monthly access.
- When customers download the V CAST Music with Rhapsody Software to their PCs and sign up for the monthly subscription, they have the ultimate music management service, including:
  - Creating and accessing playlists, viewing playlists of other users, including celebrities
  - Burning, importing and converting CDs to play anywhere
  - Managing an existing digital music collection for free and syncing it to their mobile phones
  - Buying non-protected MP3s of songs on the PC for 99 cents per song
  - Buying songs on the phone, over-the-air--get two copies of the song for just $1.99 (one is over-the-air, the second master copy is the file customers download onto their PCs)
- Customers with V CAST Music-capable phones can download music over the air using the Verizon Wireless broadband network directly to their wireless phones and to their Windows XP PCs, and can transfer new and existing digital music from the PC to their wireless phone.

- V CAST Song ID, a Verizon Wireless exclusive, lets customers identify music playing on a radio or any music source, purchase and download the ringtone, ringback tone and full track.
- Between January and March 2010, customers completed more than 29 million downloads of V CAST Music and Videos.

NationalAccess- based on 1XRTT technology, provides wireless data services at speeds of 60-80 kbps.

Nationwide TXT Messaging - a two-way short messaging service

- In Q1 2010, Verizon Wireless customers sent or received more than 175 billion text messages through its network.

Picture Messaging - an intuitive service, requiring just a few easy clicks to take and send a photo

- Between January and March 2010, customers exchanged 4.4 billion picture and video messages over its nationwide network.

Network Reliability
Verizon Wireless' network reliability is supported by industry-leading redundancy and maintenance measures.

Redundancy
The Verizon Wireless network is built for reliability in emergencies, with battery back-up power at all facilities and for additional reliability, generators installed at all switching facilities, and many cell site locations. The company also owns a fleet of portable generators that can be deployed to provide emergency power during extended power outages to those cell sites without permanent generators.

Rapid Disaster Response - COLTs
Verizon Wireless "Cell on Light Trucks" (COLTs) can process thousands of calls every hour in the event cell sites or other key communications equipment are damaged or disabled by a community disaster. The 25,000- pound vehicle features two retractable masts, a microwave antenna to link network components, an emergency power generator and a small office. The COLT is also fully equipped with resources needed during emergencies including equipment, fuel, electrical generators, food, water and cots.

Portable Cell Sites - COWs
Verizon Wireless "Cell on Wheels" (COW) are fully functional, generator-powered mobile cell sites that enhance coverage and capacity in a given area. It can accommodate both voice and CDMA data services.

24/7 Network Operations Centers
Verizon Wireless has two network operations centers located in New Jersey and Texas, to monitor all cell sites and switches across its nationwide network.

Network Quality Testing
Verizon Wireless dedicates a team of technical professionals, real life "test men and women" across the country, to monitor and test the network every day to ensure efficient operation.

- The company's nationwide team of more than 90 real-life test men and women drive specially equipped vehicles almost 1 million miles annually on Interstate, US and state highways as well as major roads and surface streets in high-population areas, based upon US Census counts, to test network performance, call quality, and data network performance on the Verizon Wireless network and the networks of up to seven other wireless carriers.
- Vehicles are equipped with computers that automatically make more than 3.5 million voice call attempts and more than 19 million data tests annually on our network and the networks of other carriers.
- Every handset model used on the Verizon Wireless network goes through rigorous laboratory and field testing, conducted by its own handset lab engineers, to ensure the device delivers reliable wireless service at peak performance levels.
- The voice network reliability test results have consistently shown that the rate of ineffective

attempts for the Verizon Wireless national network, in major metropolitan centers and some remote areas, is lower than any other national carrier. The test results also indicate that voice calls that connect on the Verizon Wireless network are more likely to stay connected for the duration of the call. Read examples of our regional reliability studies. Similarly, the data network reliability test results establish that Verizon Wireless has the nation's most reliable wireless broadband network, allowing Verizon Wireless to set up data sessions and complete large file downloads and uploads at a greater rate of success than its national competitors.

- We use the results of our frequent network tests to maintain and fine-tune our network on a regular basis as part of our ongoing quality maintenance programs. We have invested more than $59 billion to build and maintain the Verizon Wireless network nationwide since the company was first formed in 2000. Teams of engineers go out to cell sites on a regular basis to adjust and maintain cell site equipment to ensure optimum performance and the best service for our customers.

Network Leadership

- 92.8 million customers
- 175+ switching facilities
- Nation's largest 3G wireless network
- Verizon Wireless has invested more than $59 billion since it was formed – $5.7 billion on average every year – to increase the coverage and capacity of its premier nationwide network and to add new services.

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