

technology that is being driven by deep-pocketed Silicon Valley companies such as Intel and Cisco, also is being touted as a new and fierce competitor to existing wireless and wireline technology. The 2004 version of WiMAX can support data rates as high as 75 Mbps with non-line-of-sight communications, out to nearly 30 miles.¹⁰⁷

Wireless voice competition will also come from the high-speed data networks currently in service and being expanded across the country, which will enable customers to make wireless VoIP calls. Verizon Wireless and Sprint both are rolling out EV-DO networks that provide nearly DSL-speed connectivity, and Cingular is following suit with a GSM equivalent.¹⁰⁸ Research in Motion is also preparing to release a version of its popular BlackBerry mobile communicator featuring VoIP capabilities. Cable companies also will begin to offer wireless, adding to the bundles they currently offer. While initially cable is likely to resell wireless, enhancements are likely to create genuine fixed wireless integration.¹⁰⁹ Such integration would allow cable telephony and wireless to share minutes of use and devices giving consumers a home phone and a mobile phone in a single package with near seamless interchangeability.¹¹⁰

¹⁰⁷ "WiMAX: Coming to an Xbox Near You?" Telecommunications Americas, (July 2005) at 8.

¹⁰⁸ Bill Draper, Sprint Rolls Out Wireless Internet Plan, Associated Press, July 8, 2005 (available at <http://www.technewsworld.com/story/44480.html>, last visited July 29, 2005); Michael Rollins, et al, "Cingular 2Q Results Support Opportunity for Further Margin Expansion," Citigroup Smith Barney Industry Note, July 21, 2005, p. 4.

¹⁰⁹ See Viktor Shvets & Andrew Kieley, Deutsche Bank, *VoIP: State of Play* at 9 (June 22, 2005) ("Integrating VoIP calling with wireless capability is the 'holy grail' for VoIP operators, as it is generally viewed as a 'killer application' which could lead to substantially higher demand for the service. With this sort of capability, VoIP usage in the home not only becomes wireless, but could allow users to make free VoIP calls wherever a WiFi connection is available, or to switch off between cellular and VoIP calling using the same handset.").

¹¹⁰ See P. Howe, *Comcast Plans Boston Launch of Internet Phone Service*, Boston Globe at E1 (April 14, 2005) (confirming Comcast's plan to offer a new integrated wireless / VoIP service that would provide a cell phone that would convert to an unlimited fixed-price Internet phone inside a subscriber's home).

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c. VoIP

In addition to obtaining VoIP service from a cable company, any customer with broadband access—which is now available to more than 90 percent of U.S. households from a provider other than the incumbent LEC¹¹¹—can obtain voice service from multiple independent VoIP providers. Vonage, for example, provides service to more than 800,000 customers and continues to add 15,000 customers per week.¹¹² Skype, a service that allows customers to make *free* computer-to-computer calls “has now enabled more than 7 billion high-quality minutes of talk time for Skype users worldwide.”¹¹³ AOL, the country’s largest Internet service provider, and Google are now providing VoIP service,¹¹⁴ and industry experts expect that other Internet companies will soon follow: “It’s pretty evident that you are going to have Yahoo, MSN, Google, all within the next six months, their entry into this marketplace. These guys own the desktop, and the desktop is the highway out of your house. Anybody who’s got real stickiness with their target audience can drop [a VoIP] application right into their code.”¹¹⁵ Analysts

¹¹¹ See, e.g., NCTA, Industry Overview: Statistics & Resources, (last visited July 22, 2005) <http://www.ncta.com/Docs/PageContent.cfm?pageID=86> (105 million homes passed by cable modem service as of September 30, 2004); see also C. Moffett, et al., Bernstein Research Call, Broadband Update: Dial-up Conversion Still Accelerating, with No End in Sight at 9 (Dec. 2, 2004) (as of the end of the third quarter of 2004, cable modem service was available to 95 percent of cable subscribers); *Inquiry Concerning the Deployment of Advanced Telecommunications Capability*, Third Report, 17 FCC Rcd 2844, ¶¶ 79-88 (2002); *Triennial Review Order* ¶ 263 (“[T]he Commission also has acknowledged the important broadband potential of other platforms and technologies, such as third generation wireless, satellite, and power lines.”) (citing *Third Section 706 Report 2002*, 17 FCC Rcd 2844, ¶¶ 79-88).

¹¹² Vonage, Fast Facts (visited Aug. 29, 2005) http://www.vonage.com/corporate/aboutus_fastfacts.php; Vonage Press Release, *Vonage Contracts with Verizon for Nomadic VoIP E9-1-1 Service* (May 4, 2005).

¹¹³ *SkypeIn and Skype Voicemail Beta*, Business Wire (Apr. 15, 2005).

¹¹⁴ See AOL Press Release, *America Online Introduces AOL® Internet Phone Service* (Apr. 7, 2005); Google Press Release, *Google Launches Open, Instant Communication Service* (Aug. 24, 2005).

¹¹⁵ C. Wilson, *AOL Helps Usher in VoIP’s Growth Spurt*, Telephony at 10 (Mar. 14, 2005); Viktor Shvets & Andrew Kieley, *Deutsche Bank, VoIP: State of Play* at 6 (June 22, 2005) (noting that MSN is

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estimate that these non-cable VoIP providers are adding 400,000 subscribers per quarter and will reach 8-10 million users by 2009.¹¹⁶

Customers are starting to view VoIP service as a replacement for their telephone line. Approximately 50 percent of Vonage customers bring their old phone number when they sign up.¹¹⁷ This substitution is driven in large measure by price. As analysts have noted, third-party VoIP providers offer service “at rates significantly below comparable RBOC prices” and “significant price degradation is becoming evident.”¹¹⁸

Consumer adoption of VoIP is likely to be rapid, particularly among heavy long distance users, in part due to substantially lower long distance rates.¹¹⁹ As shown below, VoIP providers sell voice services for substantially less than Verizon’s wireline package.¹²⁰

“currently evaluating a full-fledged VoIP service” and that Yahoo! has introduced a test version of VoIP over instant messaging and has acquired DialPad, a fee-based VoIP provider).

¹¹⁶ Viktor Shvets & Andrew Kieley, Deutsche Bank, *VoIP: State of Play* at 4, 6 (June 22, 2005).

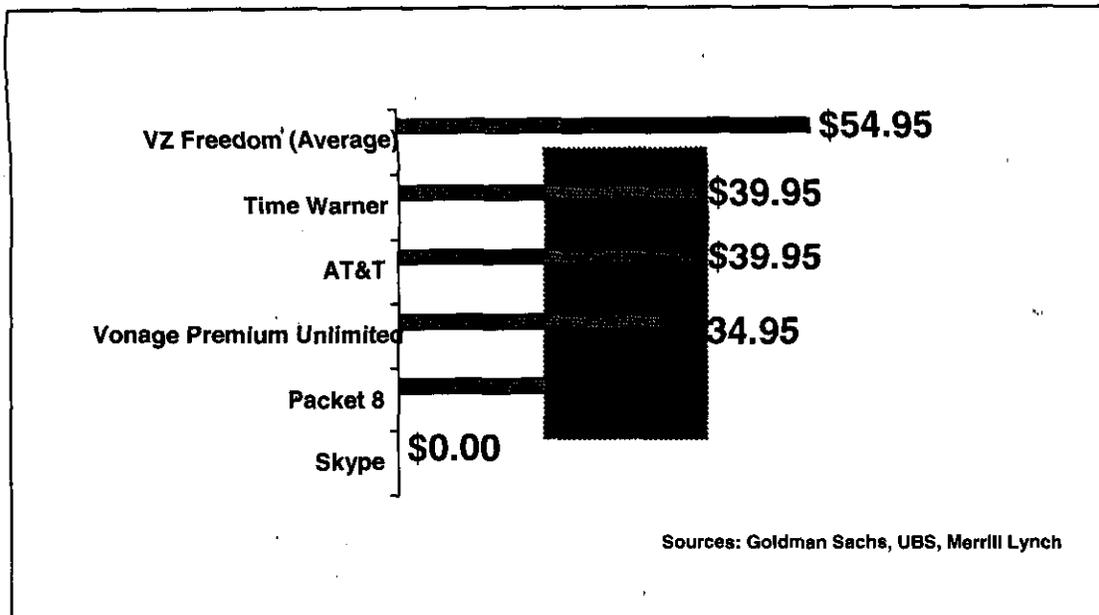
¹¹⁷ See J. Hodulik, et al., UBS Investment Research, *The Vonage Story: The Who, What, Where, and How* at 5 (Nov. 24, 2003); A. Quinton, et al., Merrill Lynch, *US VoIP Update: Competitive, Regulatory, and Other Issues* at 9 (Nov. 25, 2003).

¹¹⁸ Jeffrey Halpern, et al., Bernstein Research Call, *Quarterly VoIP Monitor: The “Real” Price Gap for VoIP Driving Rapid Subscriber Growth* at 5-6 & Exh. 5 (July 15, 2005); Viktor Shvets & Andrew Kieley, Deutsche Bank, *VoIP: State of Play* at 7 (June 22, 2005).

¹¹⁹ See Banc of America Equity Research, *Wireline Services Pricing Update*, October 3, 2004, VZ-004-0012100 (documenting steady downward trends in VoIP pricing).

¹²⁰ VoIP will also continue to put downward pressure on wireline feature prices. For example, a recent report by In-Stat (a market research firm) observed that there likely will be “continued price decreases on value-add local voice features such as voice-mail, and caller id, since these features are bundled into the base service price of cellular and VoIP services.” Daryl Schoolar, *VoIP, Wireless, and Circuit Switched: The Future of the US Voice Services, 2003-2008*, In-Stat Report No. IN0401333TX, November 2004.

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In response to this competitive threat, Verizon developed its own VoIP offering named VoiceWing. Verizon specifically set its prices for this new product so that they would be competitive with the offerings of Vonage, AT&T, Packet 8, and Voice Pulse, particularly for its own DSL customers. Verizon planned a substantial marketing campaign to support the VoiceWing introduction but recognized it would need to spend substantially more to rival the impact Vonage has already made.

d. Other Technologies

E-mail and instant messaging also displace a significant fraction of traffic that used to travel on wireline networks, including revenue-producing traffic such as long distance calls. If only 5 percent of the estimated nine billion messages U.S. users send each day¹²¹ substitute for a

¹²¹ See K. Thies, *E-mails and Records Management in the Legal Environment*, Legal Tech Newsletter (Nov. 14, 2003) (“Almost 9 billion e-mails are sent every day in the United States.”); see also B. Silverman, *IM Viruses Are Latest Threat to the Networks*, New York Post (June 13, 2004) (“Almost 80 million Americans use instant-messaging services at home or work, according to an April 2004 Nielsen/NetRatings survey.”); E. Stein, *Will IM Pay?*, CFO Magazine (May 2004) (“Radicati Group, a technology market research specialist, reckons there are already 60 million business IM accounts. IM could have as many as 182 million business users by 2007, claims Ferris Research.”).

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90-second voice call, that data traffic displaces more than 10 percent of the voice traffic that would otherwise have been handled by wireline networks.¹²² Although e-mail and instant messaging may not displace access lines, the diversion of traffic from wireline service to these technologies reduces the value of wireline service to consumers and therefore the price they are willing to pay.

Moreover, other technologies are poised to become significant competitors for voice traffic. Broadband-over-powerline (BPL), for example, enables users to have access both to high-speed Internet access and VoIP service. This service is just beginning to be commercially offered. As the FCC observed, four utilities began offering BPL to customers in 2004.¹²³ Moreover, BPL providers are attracting increasing levels of investment. For example, Current Communications, a provider of BPL started by Liberty Media, recently obtained \$100 million in funding from Goldman Sachs, Google, and Hearst.¹²⁴ The FCC also has now adopted rules designed to “to provide a framework that will both facilitate the rapid introduction and development of BPL systems” and minimize any harmful interference.¹²⁵ As it noted, because power lines reach virtually every customer location, “[t]his new technology offers the potential

¹²² Ind. Anal. & Tech. Div., WCB, FCC, *Trends in Telephone Service* at Table 10.1 (Aug. 2003) (Total 2001 Dial Equipment Minutes of 4.8 trillion divided by 2 yields 2.4 trillion conversation minutes; 246 billion/2.4 trillion = 10.3%) (5 percent of 9 billion is 450 million multiplied by 365 days yields 164 billion multiplied by 1.5 (90 seconds) yields 246 billion minutes annually).

¹²³ Eleventh Annual Report, *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, 20 FCC Rcd. 2755 ¶ 133 (2005).

¹²⁴ See Bill Alpert, *Powerline Promise*, Barron's Online (July 11, 2005).

¹²⁵ Report and Order, *Amendment of Part 15 Regarding New Requirements and Measurement Guidelines for Access Broadband Over Power Line Systems*, 19 FCC Rcd 21265 ¶ 2 (2004).

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for the establishment of a significant new medium for extending broadband access,”¹²⁶ and therefore an additional avenue for obtaining VoIP, “to American homes and businesses.”¹²⁷

B. The Acquisition of MCI Will Not Injure Competition in the Sale of Standalone Local Residential Wireline Voice Services

Even if there were a separate relevant market for standalone local services, the transaction does not present a competitive concern—for reasons including but not limited to those discussed above. MCI is effectively not a competitor for the sale of standalone local services. It has an insignificant (and rapidly declining) number of residential local customers—less than 0.1% of all local lines—to whom it provides standalone local voice services, generates negligible (and rapidly declining) revenues from such services, does not actively market standalone services through any of its marketing channels, and is (in any event) generally subject to price regulation in states where it offers standalone local services. MCI’s standalone local offerings therefore provide no constraint on the pricing of these services.

1. Lines

In January 2005, MCI’s consumer business had [BEGIN PROPRIETARY] [END PROPRIETARY] standalone local lines.¹²⁸ They accounted for only [BEGIN PROPRIETARY] [END PROPRIETARY] of all of MCI’s mass market customers and only [BEGIN PROPRIETARY] [END PROPRIETARY] of its customers who purchase local voice services from MCI.¹²⁹ The number of MCI standalone local customers declined by [BEGIN PROPRIETARY] [END PROPRIETARY] between January 2003 and January

¹²⁶ *Id.* at ¶ 1.

¹²⁷ *Id.*

¹²⁸ *See* Huyard Decl. ¶ 2.

¹²⁹ *Ibid.*

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2005.¹³⁰ MCI expects to have about [BEGIN PROPRIETARY] [END

PROPRIETARY] standalone local lines by the end of 2005. This number is expected to drop further to [BEGIN PROPRIETARY] [END PROPRIETARY] standalone local lines by the end of 2006, a [BEGIN PROPRIETARY] [END PROPRIETARY] decline from January 2005 and an [BEGIN PROPRIETARY] [END PROPRIETARY] decline from January 2003.

[BEGIN PROPRIETARY]

[END PROPRIETARY]

MCI's local standalone lines represent an insignificant fraction of local residential lines within the Verizon footprint. In the Verizon states, MCI had [BEGIN PROPRIETARY]

¹³⁰ MCI had [BEGIN PROPRIETARY] [END PROPRIETARY] residential standalone local lines in January 2003. *See ibid.* Between the end of the second quarter of 2004 and January 2005, the number of standalone lines declined by approximately [BEGIN PROPRIETARY] [END PROPRIETARY].

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[END PROPRIETARY] standalone local lines in January 2005.¹³¹ They accounted for fewer than [BEGIN PROPRIETARY] [END PROPRIETARY] of Verizon's residential switched access lines in service at the end of 2004 and an even smaller fraction of all residential access lines in Verizon territory.¹³²

[BEGIN PROPRIETARY]

[END PROPRIETARY]

2. Revenues

MCI not only has an insignificant (and declining) number of standalone local lines, but also generates negligible revenues from standalone local services. In January 2005, MCI's standalone local consumer revenues were [BEGIN PROPRIETARY] [END

¹³¹ See Huyard Decl. ¶ 3.

¹³² On December 31, 2004, Verizon had approximately 34.2 million residential switched access lines in service. About one half of MCI's standalone local customers in Verizon's region are located in New York State. Even in this state, however, the percentage of MCI's residential standalone customers is trivial, less than [BEGIN PROPRIETARY] [END PROPRIETARY] of all switched access lines, and not more than [BEGIN PROPRIETARY] [END PROPRIETARY] of all CLEC lines. *FCC Local Competition Report* at Table 6.

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PROPRIETARY].¹³³ This amount represented less than **[BEGIN PROPRIETARY]**

[END PROPRIETARY] of MCI's consumer revenue and less than **[BEGIN PROPRIETARY]**

[END PROPRIETARY] of revenue from consumers who purchase local telephone services from MCI.¹³⁴ Indeed, local standalone services are so insignificant that MCI does not even maintain separate profit and loss accounts for them.

The situation is no different in Verizon territory. MCI's local standalone lines within the Verizon footprint generated **[BEGIN PROPRIETARY]** **[END PROPRIETARY]** in revenue in January 2005, or approximately **[BEGIN PROPRIETARY]** **[END PROPRIETARY]** of MCI's aggregate standalone long distance, standalone local, and integrated local/long distance revenues in that area.¹³⁵

3. Marketing

MCI engages in almost no marketing of standalone local service. MCI sends no direct mail offering standalone local service, and nowhere on its web site does MCI indicate that it sells such a service.¹³⁶ In addition, MCI makes no outbound telemarketing calls for standalone local service and does not initiate any offers of such service to inbound callers. MCI call center representatives market only the Neighborhood plans with packages of local and long distance minutes.

¹³³ See Huyard Decl. ¶ 2.

¹³⁴ *Id.*

¹³⁵ See Huyard Decl. ¶ 3.

¹³⁶ According to MCI's web site, MCI offers local voice service only when a customer also buys at least long distance as well from MCI. See <http://consumer.mci.com/ComparePlans.htm#LDPlans> (last visited July 25, 2005).

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MCI's subscription products include certain standalone local plans, but MCI does not actively market them. Some are grandfathered plans that are no longer offered. Some are default plans for customers whose long distance portion of a Neighborhood suite may have been disconnected or who have switched to another Primary Interexchange Carrier for long distance calling. In addition, certain states require that MCI offer a Lifeline plan, which effectively requires MCI to offer a standalone local plan. However, it exercises no competitive restraint on other service providers, both because of its trivial presence and because prices for its and the incumbent's basic standalone local service generally remain subject to state regulation.

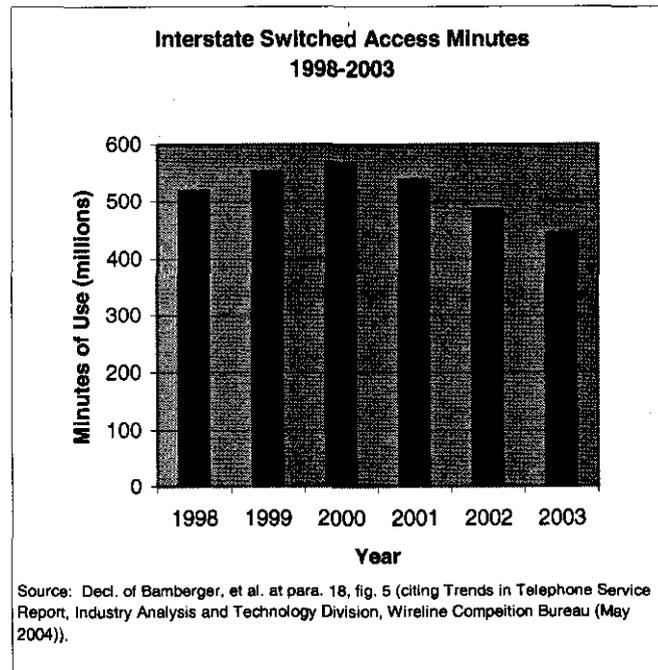
C. The Transaction Will Not Injure Competition in the Sale of Standalone Long Distance Services to Mass Market Customers

Even if there were a separate market for consumer long distance services, the transaction does not present a competitive concern—for reasons including but not limited to those discussed above. First, MCI is already an insignificant player in the acquisition of new customers for consumer standalone long distance services, and its position in both the sale and provision of such services is diminishing further every day. Indeed, long before the announcement of this transaction, MCI began to take steps to reduce its marketing of standalone residential long distance. It eliminated nearly all of its marketing efforts to standalone long distance customers, and it increased prices to existing long distance customers. MCI is simply no longer an active participant in sales of standalone long distance services. Second, the sellers of consumer long distance services, including MCI, are clearly constrained by all-distance offerings. All consumers with long distance service also purchase local service, so it is easy for them to compare the prices of their local and long distance services together with those of the numerous all-distance plans, be they wireline, wireless, cable, or VoIP.

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1. The sale of standalone consumer long distance by wireline carriers is diminishing rapidly

Across the telecommunications industry, the sale and use of standalone consumer long distance, as historically offered by interexchange carriers, is disappearing. Switched interstate access minutes fell more than 20% from their peak in 2000 through 2003.¹³⁷



As has gone the industry, so has gone MCI. MCI's consumer long distance business has been declining since 2000, and the trend has recently accelerated. In the last two and a half years, MCI's standalone consumer long distance business has plummeted in revenue, minutes, and customers. From January 2003 through April 2005, MCI's domestic standalone long distance revenues shrank [BEGIN PROPRIETARY] [END PROPRIETARY], from [BEGIN PROPRIETARY] [END PROPRIETARY]¹³⁸ to [BEGIN

¹³⁷ See Carlton et al. Decl. ¶18 & Fig. 5.

¹³⁸ See Huyard Decl. ¶ 2.

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PROPRIETARY] **[END PROPRIETARY].**¹³⁹ During the same time, the number of standalone long distance accounts fell **[BEGIN PROPRIETARY]** **[END PROPRIETARY]**, from **[BEGIN PROPRIETARY]** **[END PROPRIETARY]**¹⁴⁰ to **[BEGIN PROPRIETARY]** **[END PROPRIETARY].**¹⁴¹ Similarly, the total number of minutes used by MCI's standalone long distance customers dropped **[BEGIN PROPRIETARY]** **[END PROPRIETARY]**, from **[BEGIN PROPRIETARY]** **[END PROPRIETARY]** in January 2003 to **[BEGIN PROPRIETARY]** **[END PROPRIETARY]** in January 2005.¹⁴²

Within Verizon's territory, MCI experienced a similar overall decline in revenue and number of accounts, but in still less time. From January 2003 through January 2005, MCI's standalone long distance revenue dropped **[BEGIN PROPRIETARY]** **[END PROPRIETARY]**, from **[BEGIN PROPRIETARY]** **[END PROPRIETARY]** to **[BEGIN PROPRIETARY]** **[END PROPRIETARY];**¹⁴³ and minutes of use fell **[BEGIN PROPRIETARY]** **[END PROPRIETARY]** (twelve percentage points further in Verizon's territory than nationally) from **[BEGIN PROPRIETARY]** **[END PROPRIETARY]** to **[BEGIN PROPRIETARY]** **[END PROPRIETARY].**¹⁴⁴
[BEGIN PROPRIETARY]

¹³⁹ See *id.* ¶ 3.

¹⁴⁰ See *id.* ¶ 2.

¹⁴¹ See *id.* ¶ 3.

¹⁴² See *id.* ¶ 2.

¹⁴³ See *id.* ¶ 3.

¹⁴⁴ See *id.* ¶ 3. MCI's domestic standalone long distance minutes per account in Verizon's region decreased from approximately **[BEGIN PROPRIETARY]** **[END PROPRIETARY]** minutes in Jan 2003 to approximately **[BEGIN PROPRIETARY]** **[END PROPRIETARY]** in May 2005.

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[END PROPRIETARY]

So clear has been the decline of standalone long distance that the traditional long distance carriers have all considered, and moved toward, abandoning sales of standalone long distance to mass market customers.¹⁴⁵ Most dramatically, in August 2004, AT&T announced its departure from the mass market altogether, noting continued declines in long distance revenue.¹⁴⁶ Sprint has decided to focus its efforts on its wireless business, as demonstrated by its pending merger with Nextel¹⁴⁷ and its decision to acquire its affiliate, U.S. Unwired, Inc.¹⁴⁸

¹⁴⁵ See Kate Griffen, Yankee Group, *After the Fall: Reshaping the Wireline Industry*, May 2004, .

¹⁴⁶ *AT&T Announces Second-Quarter 2004 Earnings, Company to Stop Investing in Traditional Consumer Services; Concentrate Efforts on Business Markets* (July 22, 2004), <http://www.att.com/news/2004/07/22-13163> (last visited July 25, 2005).

¹⁴⁷ *Sprint and Nextel to Combine in Merger of Equals* (Dec. 15, 2004), http://www2.sprint.com/mr/news_dtl.do?id=5080 (last visited July 25, 2005).

¹⁴⁸ *Sprint to Acquire Wireless Affiliate US Unwired for \$1.3B* (July 11, 2005), http://www2.sprint.com/mr/news_dtl.do?id=7300 (last visited July 25, 2005).

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And, as discussed, MCI will continue to de-emphasize the provision of standalone long distance services to residential customers.¹⁴⁹ MCI has cut advertising and telemarketing expenditures, closed call centers and customer service centers, and reduced headcount. MCI has also raised standalone residential long distance rates and plans further increases;¹⁵⁰ which will almost certainly result in a further decline in its long distance customer base.

2. All-Distance Services, Including From Wireless, Cable, and VoIP, Are Effective Alternatives to Standalone Long Distance

Standalone long distance has shriveled because customers increasingly have turned to all-distance calling plans as they have become accustomed to such plans through their experience with wireless services. As explained above, intermodal alternatives have decimated MCI's standalone consumer long distance business. From January 2003 to January 2005, MCI lost approximately [BEGIN PROPRIETARY] [END PROPRIETARY] standalone long distance minutes,¹⁵¹ and wireless minutes grew approximately 450 billion minutes.¹⁵² Although some of MCI's losses can be explained by the RBOCs' beginning to sell long distance service, RBOC gains are just a fraction of the losses of MCI and other interexchange carriers. Nationally, RBOCs gained \$286 million in quarterly long distance revenues from the third quarter of 2003 through the second quarter of 2004, while interexchange carriers lost \$1,477 million in quarterly revenues.¹⁵³

¹⁴⁹ See Huyard Decl. ¶ 13.

¹⁵⁰ See Huyard Decl. ¶ 18.

¹⁵¹ Huyard Decl. ¶ 2.

¹⁵² Estimated from CTIA-The Wireless Association, *Background on CTIA's Semi-Annual Wireless Industry Survey*, 8, "Reported Wireless Minutes of Use Exceed One Trillion in 2004" (2005), <http://files.ctia.org/pdf/CTIAYearend2004Survey.pdf> (last visited July 25, 2005).

¹⁵³ See Frank Governali, Goldman Sachs, *Preview in Pictures (PiP) - 3Q2004*, October 2004.

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3. Verizon's Acquisition of MCI Will Not Harm Remaining Standalone Long Distance Customers

The availability of price-constraining all-distance alternatives—both landline or wireless—ensures that the Verizon-MCI acquisition will not harm consumers who wish to purchase standalone long distance service.¹⁵⁴ In fact, Verizon's acquisition of MCI will likely benefit such customers.¹⁵⁵

As explained above, MCI strategy for managing the decline of its mass market business includes both reducing expenses and raising its prices. Accordingly, MCI raised the Carrier Cost Recovery Charge for standalone long distance \$0.85 in September 2004¹⁵⁶ and followed that increase with increases in March 2005 ranging from \$1.00 to \$3.00 on standalone long distance packages. Because Verizon will not have MCI's need to raise prices in order to cover fixed costs, it will be much less likely to increase its long distance prices.¹⁵⁷

D. MCI Does Not Serve as a Competitive Constraint in the Market for Telephone Services Provided to Mass Market Small Business Customers

The sale of voice and data services to small businesses¹⁵⁸ is very competitive, and MCI is not a significant seller of these services. Small business customers can choose from a wide variety of circuit switched telecommunications providers, including the many facilities-based

¹⁵⁴ See Carlton et al. Decl., Fig. 6.

¹⁵⁵ See *id.* ¶ 7.

¹⁵⁶ See Huyard Decl. ¶ 18.

¹⁵⁷ See Carlton et al. Decl. ¶ 7.

¹⁵⁸ Verizon and MCI do not define small business identically. For purposes of this paper, small business includes firms that both MCI and Verizon serve through their mass markets organization. For Verizon, the definition includes firms with 1—6 lines. MCI calls similarly sized business customers very small business or VSB—firms with fewer than 20 employees. MCI almost always treats very small businesses and small businesses (20-99 employees) together. These small definitional differences have no material impact on the antitrust analysis.

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CLECs that focused early and successfully on this customer segment, as well as cable providers and VoIP providers such Vonage and Lingo.

MCI's small business segment has always been small. Like its residential service, MCI's small business service is based on the UNE-P. As with its consumer services, MCI offered fixed price packages that included both local and long distance services. MCI initially relied heavily on telemarketing to gain customers. When it lost access to the UNE-P at regulated rates, MCI discontinued its active focus on small business customer sales and marketing.

Verizon itself has been losing small business lines in the past several years at a rate of 4% annually and projects steady losses in small business lines in the coming years. Revenue numbers tell a similar story: Verizon's share of the local services revenue from mass market small businesses in its territory dropped by approximately 12% between the beginning of 2002 and the end of the third quarter of 2004.

The increased competition for small business customers has come from competitors that have significant advantages over MCI. Unlike MCI, many of these competitors, rather than relying on the UNE-P, have built their own facilities and networks to serve small business customers.¹⁵⁹ Such competitors have successfully used local sales forces to create an

¹⁵⁹ A large number of competitors continue to offer facilities-based service or were purchased by another firm now utilizing those assets to provide services to small businesses. These companies include ATX, Cbeyond, Cavalier, PaeTec, RCN, US LEC, Telepacific, XO Communications, Xspedius, Covad, Birch, Integra Telecom, Time Warner Telecom, and Grande Communications. While XO and Time Warner Telecom have broad geographic reaches, some other firms also offer services using leased incumbent facilities in areas no served by their owned facilities to expand their reach. In addition, Qwest offers Internet and voice services to small business customers nationally. *See Qwest VoIP Service Available Nationwide*, Denver Bus. J. (Dec. 8, 2004).

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advantageous image as local or “hometown” companies. For example, Cavalier is particularly strong in Baltimore, as are Choice One in upstate New York and US LEC in Washington, D.C.¹⁶⁰

All of the major cable companies currently offer services specifically designed for small businesses.¹⁶¹ For example, Cablevision (through its Lightpath subsidiary) utilizes its own fiber optic network to provide “voice, data and Internet services for more than 4,000 businesses” in New York, New Jersey and Connecticut.¹⁶² Cox offers a variety of services for small businesses in its region, including Cox Digital Telephone and Voice Mail, Cox Centrex Telephone, Cox Long Distance and Toll Free, Cox Business Internet and Cox Web Hosting and Packages.¹⁶³ RCN’s business voice products include everything from simple dial-tone service, to long

¹⁶⁰ All of these companies promote themselves as facilities-based. *See Company Information Cavalier Telephone*, www.cavtel.com/company/index.shtml (last visited July 15, 2005) (“Cavalier has invested \$215 million to build a state-of-the art telecommunications network, utilizing best-in-class technology. By making the investment in our own network, Cavalier is able to avoid the huge overhead of the incumbent telephone company.”); *See Our Company—Technology Choice One Communications*, www.choiceone.com/ourcompany/ournetwork.php (last visited July 15, 2005) (“At the heart of Choice One Communications’ commitment to excellence, is our ability to build and deliver a sophisticated communications integrated switching platform to our clients. This platform allows us to provide all of your voice and data services over our networks delivering better responsiveness to your service needs.”); *US LEC Network Overview*, www.uslec.com/Site-Network+Overview-1057 (last visited July 30, 2005) (“By owning and operating our own network, US LEC invests time, money and resources into the products and services we deliver to our customers. The quality and reliability of our network translates into improved operations for our customers. We maximize the use of our network to ensure the most cost-effective service is passed along to our customers.”). These cities are simply examples. Wire center data confirms the presence of numerous CLECs across the country. *See, e.g.*, Verizon Response to Request of the U.S. Department of Justice for Additional Information and Documentary Material Regarding the Verizon / MCI Transaction, May 27, 2005, Response to Interrogatory 6 and materials cited therein.

¹⁶¹ *See, e.g.*, Hassett et al. Decl. ¶¶ 45-51. Cable modem service has been very successful in serving small-business customers, with analysts finding that “cable operators have been extremely successful in serving businesses with 10 people or less.” Yankee Group, *Cable and DSL Battle for Broadband Dominance* at 6, 13 (Feb. 12, 2004).

¹⁶² *See About Lightpath*, www.optimumlightpath.com/Interior7.html (last visited July 16, 2005).

¹⁶³ *See* www.coxbusiness.com/smbusiness (last visited July 16, 2005).

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distance and toll-free services to voice mail, multi-line and remote call forwarding, in addition to analog PBX trunks and digital T1 facilities.¹⁶⁴

VoIP is another fast-growing option for small business customers. There is no dominant VoIP provider for small businesses, leaving the market open for a number of competitors to emerge. Among those are Covad, Qwest, and Net2Phone, all of which offer VoIP services to small businesses. Covad's service is available in 125 markets and Qwest's in more than 100. Net2Phone recently won a significant contract to provide VoIP services to the members of the National Cable Television Cooperative. Vonage offers small business packages that offer low monthly fees (roughly \$50 per/month), no long-term commitments, free fax service, free nationwide and in-network calling, and the ability to choose a local number in different areas across the country, and add additional lines or virtual numbers for a nominal fee.¹⁶⁵

In short, a combined Verizon/MCI will be confronted by fierce competition for small business customers. The shares of both Verizon and MCI in the small business segment have been declining rapidly and will continue to decline in the future. Their merger will create no competitive problems in this segment.

E. MCI is Not a Competitively Significant Provider of Wholesale Services to VoIP Providers.

The transaction does not threaten to harm competition for wholesale services to cable companies or other VoIP providers or to undermine the ability of cable companies to provide facilities-based voice telephone services. Numerous competitors other than MCI already provide such wholesale services in locations throughout the country. Moreover, VoIP providers,

¹⁶⁴ See www.rcn.com/business/prodserv/voice.php (last visited July 16, 2005).

¹⁶⁵ See *Vonage - The Broadband Company, Small Business Unlimited Plan*, http://www.vonage.com/products_premium_sb.php (last visited July 16, 2005).

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particularly cable companies, are increasingly using self-provisioned facilities to provide VoIP and thereby reducing the need for such wholesale services altogether. There is no possibility that the transaction will deprive cable or other VoIP providers of anything they need to be fully competitive rivals in any mass market business.

MCI currently provides wholesale VoIP service (called "CableNet") to four cable operators—Time Warner Cable, Bright House Networks, Susquehanna Cable, and Armstrong Telecommunications¹⁶⁶—pursuant to non-exclusive, long-term contracts that the combined Verizon/MCI plans to honor. Pursuant to these agreements, MCI interconnects with the cable operator at a softswitch or media gateway (which MCI may operate or own), terminates the traffic over its network, and handles other administrative and provisioning tasks.¹⁶⁷ Under these agreements, MCI is providing CableNet in only **[BEGIN PROPRIETARY] [END PROPRIETARY]** local areas covering parts of **[BEGIN PROPRIETARY] [END PROPRIETARY]** states.¹⁶⁸ A total of only a little more than **[BEGIN PROPRIETARY]**

[END PROPRIETARY] households are served by CableNet-based VoIP services, about a quarter of which are in Verizon's service territories.¹⁶⁹ This represents only about

¹⁶⁶ **[BEGIN PROPRIETARY]**

[[[END PROPRIETARY]

¹⁶⁷ MCI's service is integrated with the cable provider's broadband Internet cable access to enable the cable provider to offer IP-based telephony services to its residential subscribers. MCI has no direct sales, financial, or contractual relationship with the end-user consumer of the cable provider's retail VoIP offering.

¹⁶⁸ MCI provides wholesale service to Time Warner in **[BEGIN PROPRIETARY] [END PROPRIETARY]**; to Bright House in Florida **[END PROPRIETARY]**; to Armstrong in **[BEGIN PROPRIETARY] [END PROPRIETARY]**; and to Susquehanna in **[BEGIN PROPRIETARY] [END PROPRIETARY]**.

¹⁶⁹ Retail customers of CableNet-based services are fairly evenly divided between customers that port an existing number and "native" VoIP customers.

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[BEGIN PROPRIETARY] [END PROPRIETARY] of cable households in the areas in which CableNet is offered.¹⁷⁰

As the relatively limited nature of MCI's service suggests, numerous other firms are available to VoIP providers to perform wholesale services and would remain so even if the combined entity were to stop providing such services once MCI's existing contracts expire. Indeed, MCI was a late entrant into the wholesale VoIP business. By the time MCI entered the business, Level 3¹⁷¹ and Sprint¹⁷² had already established themselves as significant providers of wholesale services to VoIP providers.¹⁷³ Many other companies now provide wholesale VoIP services, including, but not limited to, AT&T,¹⁷⁴ Volo,¹⁷⁵ RNK Telecom,¹⁷⁶ CommPartners,¹⁷⁷ Teleglobe,¹⁷⁸ Global Crossing,¹⁷⁹ Covad,¹⁸⁰ New Global Telecom,¹⁸¹ Nuvio,¹⁸² Pac-West Telecom,¹⁸³ Symmetric Broadband,¹⁸⁴ WilTel,¹⁸⁵ and Broadvox.¹⁸⁶

¹⁷⁰ CableNet's churn rate averages between [BEGIN PROPRIETARY] [END PROPRIETARY] per week.

¹⁷¹ See Level 3, (3)VoIP Enhanced Local and HomeTone, <http://www.level3.com/3184.html> (last visited July 25, 2005).

¹⁷² See Sprint, VoIP Solutions, <http://www.sprint.com/business/products/products/voiceoverip.jsp> (last visited July 25, 2005).

¹⁷³ See Corporate Strategy - January Update, MCI-DOJ-A0005708 at MCI-DOJ-A0005725.

¹⁷⁴ See AT&T, AT&T Managed Internet Service, <http://www.attalacom.com/business/data/datamis.html> (last visited July 25, 2005).

¹⁷⁵ See Volo Communications, VoiceOne Wholesale Broadband Voice Services for Carriers, <http://www.volocommunications.com/index2.aspx?key=press> (last visited July 25, 2005); Volo Press Release, Volo 'Reigns' on Competitor's Parade with Big Win from VoIP, Inc. (Feb. 10, 2005) http://www.volocommunications.com/pdfs/VoloPress2005-0210_2.pdf (last visited July 25, 2005).

¹⁷⁶ See RNK Telecom, RNKVoIP, <http://www.rnkvoip.com/> (last visited July 25, 2005).

¹⁷⁷ See CommPartners, <http://www.commpartners.us/corp/index.php> (last visited July 25, 2005); NextWeb Chooses CommPartners for Wireless VoIP Services, New Telephony (Apr. 19, 2005).

¹⁷⁸ See Teleglobe Press Release, Netrake Joins Teleglobe VoIPLink Ready Program (Aug. 9, 2004); Teleglobe Press Release, Teleglobe's VoIPLink Service Selected by Skype for International Long Distance (July 23, 2004).

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The wide range of competitive alternatives for wholesale VoIP services is reflected in the range of wholesale providers that retail VoIP carriers have chosen. For example, Charter Communications selected Level 3, Sprint, and Accenture over MCI as its wholesale VoIP provider,¹⁸⁷ Mediacom chose Sprint over MCI,¹⁸⁸ and AOL decided to go with Level 3 just a few months ago.¹⁸⁹ Similarly, Comcast purchases wholesale transport services from Level 3 and Sprint;¹⁹⁰ Adelphia recently announced it would buy wholesale VoIP services from Level 3;¹⁹¹

¹⁷⁹ See Global Crossing, *VoIP Service*, http://www.globalcrossing.com/xml/carrier/car_voice_ip_orig_over.xml (last visited July 25, 2005).

¹⁸⁰ Covad Press Release, *Covad Announces Special Business VoIP Offer for Level 3 VoIP Resellers and Their Customers* (Feb. 8, 2005).

¹⁸¹ New Global Telecom Press Release, *New Global Telecom Rapidly Grows 6DegreesIP Service to 15,000 End-Users* (Apr. 8, 2005).

¹⁸² Nuvio Press Release, *200 Partners and Counting—Nuvio Achieves Milestone for Private-Label Program* (Mar. 14, 2005).

¹⁸³ Pac-West Telecomm Press Release, *Pac-West Telecomm Announces Launch of VoiceSource* (Feb. 14, 2005).

¹⁸⁴ See Symmetric Broadband, <http://www.symmetricbroadband.com/> (last visited July 25, 2005).

¹⁸⁵ See WilTel, http://www.wiltel.com/market_segments/content/carrier.htm (last visited July 25, 2005).

¹⁸⁶ See Broadvox, <http://www.broadvox.net/index.aspx>.

¹⁸⁷ Charter Press Release, *Charter Taps Three Telephony Partners; Level 3, Sprint and Accenture to Enhance, Expedite Charter Telephone* (Aug. 30, 2004).

¹⁸⁸ Sprint Press Release, *Mediacom Communications and Sprint Announce Agreement for Mediacom to Provide Telephony Services* (Aug. 25, 2004).

¹⁸⁹ AOL Press Release, *America Online Introduces AOL Internet Phone Service* (Apr. 7, 2005); see also J. Angwin, C. Rhoads & S. Thurm, *AOL To Launch Net Phone Service, Giving VoIP a Mainstream Name*, Wall St. J., Mar. 9, 2005, at A3.

¹⁹⁰ See Sprint News Release, *Sprint Reports Fourth Quarter and Full-Year 2004 Results* (Feb. 3, 2005); Level 3 Press Release, *Level 3 Reports Fourth Quarter Results and Full Year 2004 Results* (Feb. 8, 2005).

¹⁹¹ Level 3 Press Release, *Adelphia Communications Selects Level 3 as its Wholesale VoIP Services Provider for Residential Voice Offering* (Mar. 16, 2005).

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Vonage uses WilTel;¹⁹² Skype purchases wholesale service from Teleglobe;¹⁹³ VoX Communications buys service from Global Crossing;¹⁹⁴ and more than 100 carrier customers around the world use service provided by Broadvox.¹⁹⁵ In addition to the existing alternatives, which will continue to be available after this transaction, other carriers face relatively low barriers to entry in providing wholesale VoIP services. The wholesale business would therefore remain highly competitive even if MCI exited.

In addition to the large number of competitors in the wholesale VoIP services business, a growing number of VoIP providers are using their own broadband network facilities to offer VoIP services. In fact, two of the biggest cable VoIP providers, Cablevision and Cox, trumpet their exclusive reliance on their own facilities as a key selling point to consumers. Cablevision offers its Optimum Voice VoIP service over its own advanced broadband network, rather than connecting VoIP calls via the public Internet.¹⁹⁶ According to Cablevision, reliance on its own broadband networks allows it to “guarantee the quality of the network that carries your voice signal, so you get crisp, clear digital service all the time.”¹⁹⁷ Likewise, Cox Communications

¹⁹² WilTel Press Release, *WilTel Provides Vonage® National Reach With Voice, Data Solution* (Feb. 22, 2005).

¹⁹³ Teleglobe Press Release, *Teleglobe’s VoIPLink Service Selected by Skype for International Long Distance* (July 23, 2004).

¹⁹⁴ Global Crossing Press Release, *VoX Communications Selects Global Crossing for Nationwide VoIP Services* (Jun. 6, 2005).

¹⁹⁵ See Broadvox, <http://www.broadvox.net/index.aspx> (last visited July 15, 2005) (“More than 100 [] communication carriers around the world rely on the Broadvox network to originate and terminate billions of minutes annually.”); see also, Broadvox Press Release, *MetTel Selects Broadvox for its VoIP service* (Jan. 18, 2005) [http://www.broadvox.net/pdfs/MetTel_Press_Release_01182005\(2\).pdf](http://www.broadvox.net/pdfs/MetTel_Press_Release_01182005(2).pdf) (last visited July 25, 2005).

¹⁹⁶ See Cablevision, *Questions & Answers: How is Optimum Voice Different from Standard Telephone Service?*, <http://tinyurl.com/e4h6p> (last visited July 25, 2005).

¹⁹⁷ *Id.*

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touts the fact that, because it “owns and operates its own end-to-end network infrastructure” and uses this network primarily to provide residential VoIP services, it can “manage the complete end-to-end customer experience including sales, provision, transport, billing and quality-of-service.”¹⁹⁸

The ability of VoIP providers to self-provision all needed VoIP network services, and the advantages that stem from such self-provisioning, underscore the fact that wholesale VoIP services may be only a temporary business opportunity. Mediacom, for example, which currently has a wholesale VoIP deal with Sprint, has stated, that it “sees the partnership model as a short-term solution that could well be replaced by a home-grown strategy” once Mediacom has established itself as a VoIP provider.¹⁹⁹ Similarly, both Comcast and Charter are moving in the direction of using their own facilities in place of wholesale services.²⁰⁰ Analysts expect that the move to self-provisioning will result in substantial cost savings for cable VoIP providers.²⁰¹

In short, MCI does not have any unique capabilities that give it an advantage over other providers, or potential providers, of wholesale VoIP services. That is true both nationwide and in any particular cable provider’s footprint because the capabilities that MCI and other wholesale

¹⁹⁸ Cox White Paper, *Voice of Internet Protocol: Ready for Prime Time* at 3 (May 3, 2004), <http://www.cox.com/about/NewsRoom/files/VoIPreadyMay04.pdf> (last visited July 25, 2005).

¹⁹⁹ Kagan, *Future of Cable Telephony* at 92 (2nd. Ed. 2005).

²⁰⁰ Kagan, *Future of Cable Telephony* at 85 (2nd. ed. 2005) (Comcast has “a headstart on launching IP services via the infrastructure created to support the legacy circuit-switched initiatives. Comcast is undertaking new launches without outside help.”); *id.* at 83 (Charter is “equipping markets with its own softswitches and is conducting the handoff of the traffic to the public switched telephone networks in its larger markets”).

²⁰¹ J. Halpern, et al., Bernstein Research Call, Quarterly VoIP Monitor” The ‘Real’ Price Gap for VoIP Driving Rapid Subscriber Growth at 7 (July 15, 2005) (“[O]perating costs could be lowered further as MSOs transition away from using wholesale VoIP services, such as those provided by Sprint and Level3, to an owned-operated model for transport, interconnection and back-office management. Doing so could reduce VoIP operating costs by another 15%.”).

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providers offer are basically the same in all metropolitan areas. For example, one of the principal components of wholesale service—long-haul facilities—is available on a commodity basis from a variety of carriers,²⁰² and carriers with long-haul networks are likely to have all the network elements needed to provide these wholesale services. Moreover, these carriers will have strong incentives to do so, much as AT&T did when long distance competition was introduced in order to fill otherwise-unused capacity on their networks with revenue-producing traffic that might otherwise migrate entirely to rival networks.

The ready availability of competitive alternatives, combined with the fact that MCI has no direct relationship with the retail VoIP customers, makes it relatively easy for even MCI's existing cable customers to switch to another provider. The services provided by MCI are fungible with those provided by numerous other competitors, and any change in wholesale providers would be invisible to the end-user consumer. MCI's cable customers could likewise readily elect to internalize these functions, as have numerous other large cable providers. Because Verizon has already committed to honor MCI's CableNet contracts, any MCI customer wishing to effectuate such a switch post-merger would have ample opportunity to make the transition.

²⁰² The industry continues to suffer from a "glut" of fiber. Indeed, one report estimates that less than 5% of the total transmission capacity of fiber lines in the ground is being put to use. Shawn Young, *Why the Glut in Fiber Lines Remains Huge*, Wall Street Journal at B1, May 12, 2005. Carriers entering the wholesale business for the first time might have to enter into interconnection agreements to ensure that traffic can be terminated on local networks, but that should not be difficult – particularly given that MCI and other providers will already have arbitrated the necessary agreements in many jurisdictions.

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Wireless Substitution of Wireline Increases Choice and Competition in Voice Services

Executive Summary

Cellular phone service is a substitute for residential landline (wireline) phone service. Wireless displacement of local and long-distance calling is already substantial and growing rapidly. Broad wireless network coverage, including more than 95% of the US population, ensures that this substitute is available to virtually everybody.

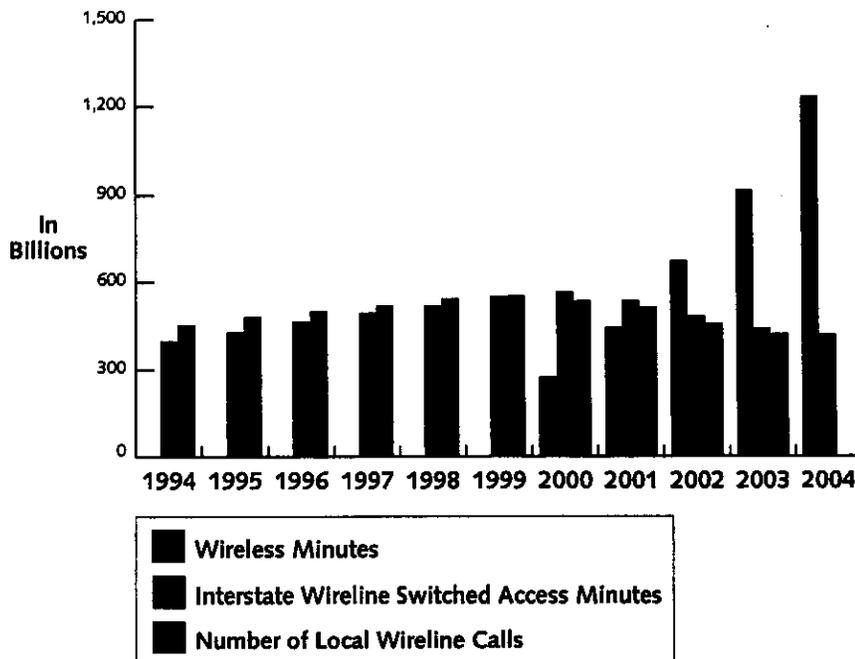
Low prices (including free evenings and weekends), in-network calling and family plans encourage cell phone use at home and time-shifting calls from home to the car and elsewhere when one is available or when it is more convenient. Since 2003, wireless subscribers have used their cell phones more than their residential landlines. The gap is widening, as illustrated in Exhibit 1. By 2005, personal calling on wireless exceeded that on residential landlines—even though 35% of the US population doesn't have wireless. Yankee Group's Technologically Advanced FamilySM (TAF) Survey reveals that cell phones displace 60% of long-distance and 36% of local calling from landlines to wireless at home and away.

YANKEE GROUP REPORT

Exhibit 1.

Wireless Grows with the Decline of Wireline

Source: FCC "Trends in Telephone Service" Report, June 2005, and Yankee Group North America Wireless/Mobile Carrier Tracker



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Many people are "cutting the cord" and some are not taking landline service in the first place, with 10% of wireless users deciding to do without a landline phone. According to Yankee Group's 2005 Mobile User Survey, the proportion of these people is much higher in certain demographics, including young adults ages 18 to 24 (31%), non-whites (13%) and those with incomes less than \$25,000 (19%). Urban dwellers are most likely to cut the cord (15%), but suburban (8%) and even rural (8%) dwellers are significantly inclined to have wireless as their only phone.

Leap Wireless' Cricket service is most successful in substituting wireless for wireline calling and adoption. Its customers displace wireline calling with an average 1,500 minutes per month per subscriber—twice the national average—and Leap claims 52% of its customers have no landline. Based on Leap's market research, it also claims significantly larger proportions of customers versus other wireless brands in the \$15,000 to \$25,000 income (23% versus 9%) and Hispanic (19% versus 5%) segments.

The alternative of using wireless instead of wireline is widely and competitively available to rural and urban subscribers alike. In addition to wireline telephone services, five nationwide wireless carriers provide services to more than 90% of the population. There are still more than 80 local and regional carriers in operation. According to the FCC's CMRS report, more than 94% of consumers nationwide have the choice of at least three wireless carriers.

Wireless services are also having a profound impact on the business market, including small and medium businesses. Most of the nation's 50 million mobile workers are liberated by their cell phones from the need to find pay phones or visit the office to keep in touch with colleagues, customers and suppliers. For example, with more than 90% of its customers using its phones for business purposes, Nextel has been very successful by focusing on small businesses and workgroups within larger organizations.

This report is based on research and analysis already published in Yankee Group's Decision Services during the past few years for its 450 clients, including pre-existing published opinions of its author, Keith Mallinson, who heads the firm's wireless research team.

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I. Introduction

This special edition Yankee Group report, produced at the request of Verizon Communications, assesses the extent to which cellular services are expanding customer choice by competing with and displacing landline (wireline) voice telephone services in the United States.

Conclusions and opinions are entirely my own, as already published in Yankee Group reports and audio conferences during the last few years. This report is based upon pre-existing Yankee Group published data and it includes a review of predictions and forecasts in my September 2002 report, *Mobile Market Cries Out for Consolidation Despite High Growth in Wireline Replacement*.

II. Cellular's Advance

Cellular adoption and usage patterns, including personal communications services (PCS), have changed dramatically during the last two decades, from the preserve of business executives and the affluent to very close substitutes for wirelines with comparable costs and quality.

Cellular minutes of use (MoUs) per subscriber have grown enormously during this period, as shown in Exhibit 2, which was derived from Cellular Telecommunications & Internet Association (CTIA) data. Yankee Group has tracked the marketplace since 2000 with MoUs increasing to 678 in the second quarter of 2005 and an 8.1 cent effective price per minute (average price for minutes actually used including monthly recurring charges and usage charges). This growth is remarkable given that the subscriber base has also grown rapidly to a penetration level of 65.4% by the second quarter of 2005.

- Minutes displaced while at home: By 2003, the 50% of the population with cell phones used wireless more for personal calling than residential landlines. Voice MoUs per landline (i.e., excluding fax and internet access) at 1,300, still significantly exceeded those on cell phones. But with around 2.4 people per household, MoUs per capita on landlines were exceeded by wireless minutes at close to 500 minutes. *Mobile User Survey* respondents in 2005 stated that 36% of their residential *landline* usage has been displaced by wireless. Exhibit 3 shows the increasing wireless minutes of use in all domains including at home (24% of usage).
- Substitution occurs in several different ways. Broad wireless network coverage and low prices (including free evenings and weekends), in-network calling and family plans substitute wireless for wireline as follows:

III. How Substitution Occurs

The availability and adoption of wireless service has stimulated incremental calling—including fixed-to-mobile, mobile-to-fixed and mobile-to-mobile—by making it possible to initiate and receive calls at times and in places not possible without a cell phone. In recent years, cellular growth has arisen in part by significantly displacing landline service with a cheap and widely available alternative.

FCC data indicates that by year-end 2004, US wireless subscribers outnumbered the nation's 178 million switched access lines, including 132.1 million in residential and small businesses.

Exhibit 2. MoUs Increase Dramatically as Prices Plunge with Competition
 Source: CTIA's Wireless Industry Indices: Semi-Annual Data Survey Results

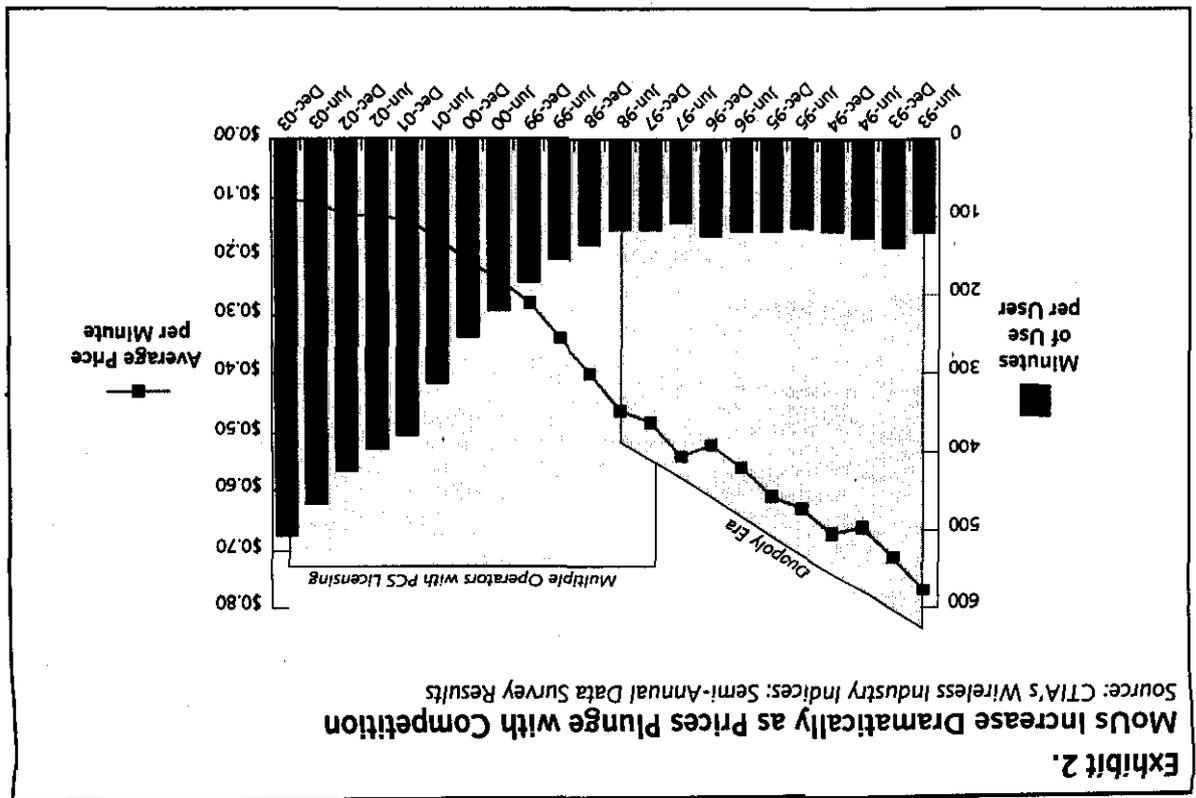
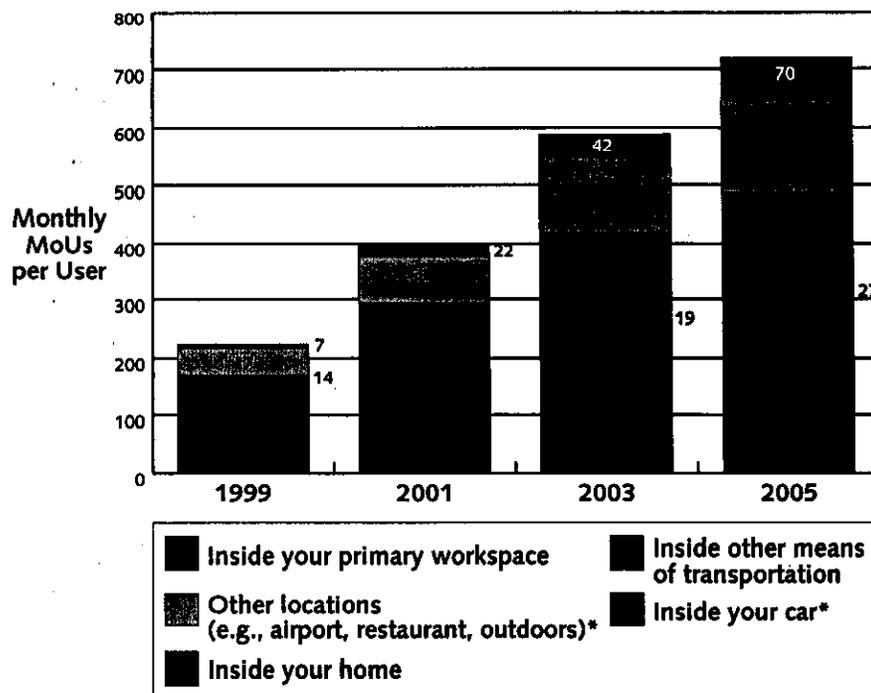


Exhibit 3.

Where Wireless Usage Occurs

Source: Yankee Group 1999 to 2005 Mobile User Surveys



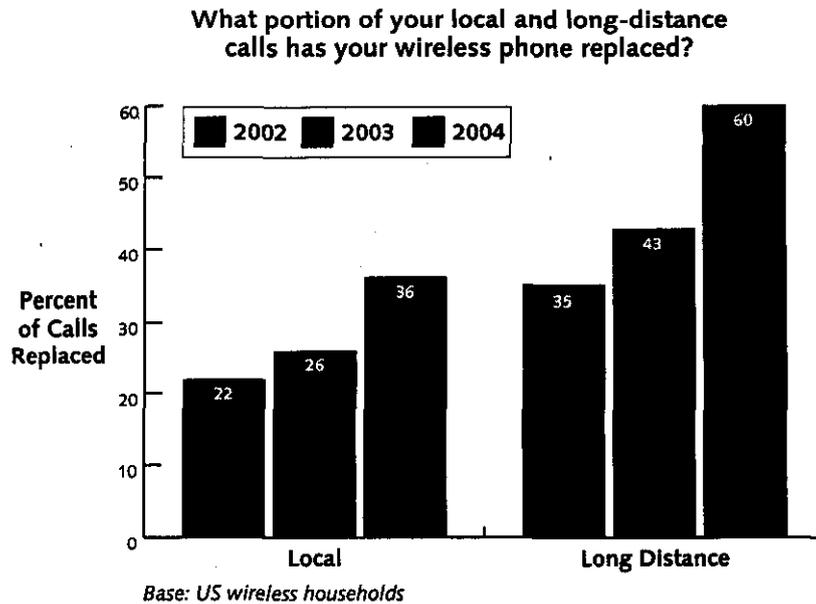
* Prior to 2001, this category included all means of transportation.

- Time-shifted calling:** People are increasingly making calls during the drive time available during commutes and other journeys. It is also practical to use waiting time at airports, mass-transit stations and elsewhere to keep in touch, rather than waiting to get home. Similarly, as cell phones become the standard and most reliable way of reaching people on the first or second call attempt, users are increasingly receiving calls on their cell phones as well. According to Yankee Group's *Technologically Advanced Family Survey*, with a representative US sample of 2,000 respondents, in households using wireless, 60% of long-distance and 36% of local calls are now displaced by wireless, as illustrated in Exhibit 4.
- Cord cutting, fewer lines or no lines adopted:** Many households are willing to use fewer landlines or do without them altogether. Yankee Group's annual *Mobile User Survey*, with a representative group of 5,200 US respondents in 2005, indicates that many people are cutting the cord, including those not subscribing to landline service in the first place. Ten percent of wireless users have decided not to have a landline phone at all. The proportion of people without a landline is much higher in certain demographics, including young adults ages 18 to 24 (31%), non-whites (13%) and those with incomes less than \$25,000 (19%). Urban dwellers are most likely to cut the cord (15%), but suburban (8%) and even rural (8%) dwellers are also significantly inclined to have a wireless phone as their only phone.

Exhibit 4.

Proportion of Calls over Wireless

Source: Yankee Group 2002, 2003 and 2004 Technologically Advanced Family Surveys



All wireless services compete directly with and are significantly displacing wireline calling and access line adoption. However, substitution is most significant with respect to minutes of use because it affects virtually everyone and shifts in calling are very significant. As the proportion of cord cutters rises beyond the current minority—weighted toward certain demographic groups—the impact will be increasingly profound in terms of social and competitive consequences.

Leap Wireless' Cricket service is the most significant example of wireless substitution. The behavior and attitudes of its 1.6 million subscribers project how the entire wireless and telecom market may develop. Subscribers in households that have not yet cut the cord are heavy users who have significantly displaced their wireline use. Average MoUs are 1,500—twice the national average. Leap Wireless also boasts that 52% of its customers have no landline. Based on its own research, it claims in comparison to other wireless brands that it has a significantly larger proportion of customers in the \$15,000 to \$25,000 income (23% versus 9%) and Hispanic (19% versus 5%) segments.

Cricket offers flat-rate calling including its currently available unlimited local and long-distance for \$45 per month. Based on company surveys, 93% of Cricket customers reported their Cricket phone was their primary phone, compared to 49% of traditional wireless customers. MetroPCS, with 1.5 million customers, is pursuing a similar business model to Leap Wireless with flat-rate unlimited calling plans from \$35.

IV. Why People Choose Wireless

In my September 2002 report, I observed that habit and convenience have increasingly stimulated wireless use and the displacement of wireline for the following reasons:

- *Wirelines are for places, but mobiles are for individuals. Which number is most likely to reach Fred at this or any other time?*
- *Mobile use becomes self-reinforcing once people recognize that mobiles more reliably reach an individual regardless of time of day, and with the uncertainty of location. Dialing the mobile first becomes a habit aided by use of speed dials and one-click return calling.*
- *Called parties respond by keeping their mobiles on and at hand more of the time—in the office and even around the house.*
- *Mobiles are private. Who wants to deal with everyone else's calls or take their messages, and who wants roommates or Mom listening to their messages on the answering machine?*
- *Mobiles make ideal second and third lines. They allow the fixed line to become the public family access with a family directory listing or fallback to be used for PC internet access at PSTN or DSL speeds.*
- *Mobile phones make great personal phone directories. Many households have several phones, but how many of these have all the family's friends, relatives and colleagues programmed into the speed dials?*
- *Mobile phones and mobile services are rich in enhanced capabilities, such as caller-ID display and call waiting, that are not always available on domestic phones.*
- *Mobile phones are, for the time being, fairly free of unsolicited telemarketing calls. Cutting the cord will banish these propagators of audio spam.*

In addition, cellular substitution is particularly attractive to low income and young people:

- **If you can only afford one phone, it is the cell phone that is indispensable.** A cell phone does so much more than a landline including increasingly popular, low-cost text messaging—so it's the landline that goes.
- **Cellular calling "bucket" plans have zero cost per incremental minute for users who stay within their plan.** Free evening and weekends, in-network calling plans and family plans provide unlimited calling within the monthly recurring charge.
- **Wireless prepaid plans require no identification, credit check, address declaration or contract—**just a modest upfront payment of \$50 to \$150 depending upon the wireless carrier and type of calling plan. In fact, TracFone currently offers a low startup cost option including a phone and 40 minutes of airtime for less than \$20.
- **Cell phones are more secure from unauthorized or unaccountable use than a wireline phone in a shared location such as an apartment.**
- **You can take a cell phone with you when you move to a new house or dorm, without the hassle of de-subscribing and re-subscribing.** This benefit is particularly attractive to students and young adults. Wireline subscription rates on college campuses are less than half of what they were 5 years ago.

Wireless services also have a profound impact on the business market, including small and medium businesses. By calling from their cell phones, most of the nation's 50 million mobile workers are liberated from the need to find payphones or visit the office to keep in touch with colleagues, customers and suppliers. For example, with more than 90% of its customers using its phones for business purposes, Nextel has been very successful by focusing on small businesses and workgroups within larger organizations.

V. Wireless Creates Competition and Choice

By November 2004, immediately prior to Cingular's acquisition of AT&T Wireless, six operators each offered nationwide services to more than 90% of the population. In addition to the nationwide operators, there are still more than 80 local and regional carriers in operation.

Most consumers have a choice of at least six wireless carriers serving the area where they live. For example, a would-be wireless subscriber in most major cities can choose among Verizon Wireless, Cingular, Sprint PCS, Nextel or T-Mobile USA, in addition to other providers, resellers and mobile virtual network operators (MVNOs) such as Virgin Mobile. A similar menu of choices is available throughout most of the country. More than 94% of consumers nationwide have the choice of at least three carriers. Roaming arrangements enable customers of all major carriers and many minor carriers to continue to receive service even when they travel into less populated areas with just two or three carriers.

The United States leads the world in providing a competitive choice to wireline. Other developed nations have a more limited choice among wireless carriers. According to the FCC's ninth CMRS report, the United States has "6+ players," followed by Hong Kong with 6; the United Kingdom with 5; Canada, Germany, Italy and Australia with 4; and Singapore, France, Spain, Finland, Japan and South Korea with 3.

Wireless has been particularly effective in competing with and displacing wireline long-distance service providers including AT&T, MCI and resellers. Displacement of local wireline service is also increasing. Where wireline is retained, according to the Yankee Group *2005 Mobile User Survey*, it is mostly for the benefit of others in the household (25% of respondents) who may not yet have a cell phone or because the access line is perceived to be more reliable for access to emergency services (27%). As wireless penetration increases and as network availability improves, these barriers will diminish.

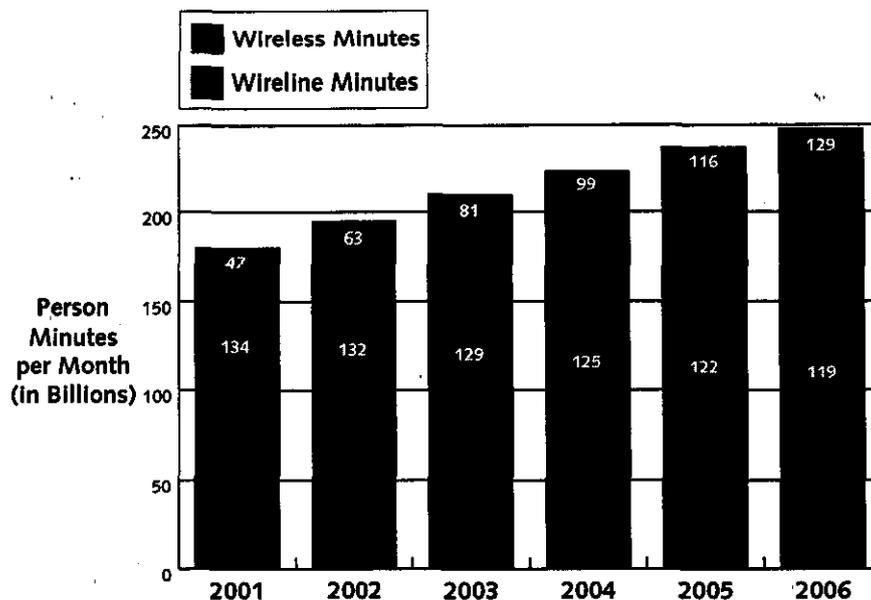
VI. Outlook and Forecasts

The preceding sections of this report are based on historical facts and figures, and rely mostly on material already published by Yankee Group. Trend lines with significant year-on-year growth rates for wireless with declines in wireline imply, by extrapolation, that significant further displacement is likely.

Yankee Group produces a variety of forecasts and predictions in its published services. My published forecasts and predictions have conservatively understated the extent of wireless substitution. I have reviewed accuracy of the forecasts and predictions published in the September 2002 report on this topic. Exhibit 5 presents the forecast.

Exhibit 5.**Personal Voice Calling in the United States: 2002 Forecast Understated Actual Substitution**

Source: Yankee Group Report and Audio Conference, September/October 2002



Note: Includes business calls on mobile phones and business calls at home.
All network minutes were counted twice, once for each person on the call.

In my analysis, I correctly predicted that mobile calling growth would continue to be a major trend. I also correctly anticipated that pure substitution would be far more prevalent than integrated services and bundling of wireless with wireline service. I also predicted that the combination of mobile subscriber growth and increasing minutes per-user would:

- *Raise mobile calling from 25% of all personal calling in 2001 to 52% by 2006: Long distance will continue to be the main casualty, with most personal long-distance calls made from mobiles.*
- *Begin to plateau from 2006, with at least 40% of personal calling and more than 65% of in-home calls remaining on wirelines due to wireless coverage and voice quality deficiencies, the embedded base of wired and cordless phones, and other factors.*

I also stated that:

On the other hand, the proportion of households that actually cut the cord completely is unlikely to rise above 10% this decade, but perhaps as many as 20% may effectively never use their wireline or cable connection for voice, while they will retain it almost exclusively for internet access at PSTN, cable modem or DSL speeds.

The above understates the pace of substitution. By early 2005—1 year earlier than I predicted—total wireless personal calling (with 116 billion minutes per month according to Yankee Group's quarterly *Wireless/Mobile Carrier Tracker*) exceeds that of wireline even though 35% of the US population has no cell phone. Key factors and figures affecting the accuracy of my 2002 forecast are:

- Underlying wireless subscriber penetration within a few percent of actual figures in 2003 and 2004, as published in the Yankee Group *Wireless/Mobile Carrier Tracker* and with expected 2005 figures
- Wireless MoUs underestimated somewhat, with 495 and 561 predicted averages for 2003 and 2004, versus actual figures of 557 and 662 for each year, respectively, as published in the Yankee Group *Wireless/Mobile Carrier Tracker*
- Wireline MoUs, including local and long-distance calling, predicted to fall at 3% per year, whereas a 6% decline is occurring

Only halfway through the decade, 10% of wireless users are already without a landline. Within a few years, it is most likely the proportion of households without a landline will also pass the 10% threshold. Among other factors, the introduction of portability among wireless and wireline numbers has accelerated this transition by enabling people to port their residential phone number to a cell phone before terminating their landline subscription.

Cellular networks are unlikely ever to have sufficient radio network coverage for complete substitution, but hybrid networks can complete coverage in the home. People will continue to find themselves living in places with poor or non-existent cellular coverage—particularly in their basements. However, technological innovation during the last few years is making it likely that cellular networks will be extended into the home using local-area wireless technologies and dual-mode phones with Bluetooth or Wi-Fi as well as cellular technology. This approach is already in commercial deployment in the United Kingdom. In the United States, cable TV companies are seeking to partner with wireless operators to integrate a home-based wireless hub with a cellular network through cable access. This is an additional direct competitive challenge to the wireline incumbent telephone companies.

These developments will counter the main reasons cited for not cutting the cord. Twenty-seven percent of our *2005 Mobile User Survey* respondents cited concerns about reliable access to public safety organizations in case of emergency ahead of other issues including the need for internet access (21%), coverage (10%) and sound quality (9%). Unlike other competitors to traditional landline service, including some voice-over-IP services, all cellular services already connect to 911. The introduction of E911 is supplementing this by providing location information to the public safety organizations. With the dual-mode capabilities described above, all the major barriers to cord cutting will be significantly overcome by ensuring high-quality and reliable connections with the location firmly registered when at home.

VII. About Yankee Group

In business more than 35 years, Yankee Group delivers value through authoritative, independent, innovative and flexible research products and consulting services. Whether challenges are rooted in planning, executing or optimizing the use of technology, Yankee Group's world-renowned analysts transform market intelligence and practical, real-world experience into valuable decision support.

Yankee Group publishes research for its base of more than 450 clients worldwide. Research products include DecisionNotesSM, analytical reports, market surveys and quantitative Decision Instruments including market trackers and forecasts.

Headquartered in Boston, Yankee Group research and sales staff are located around the world, including North America, Europe, the Middle East, Africa, Latin America and Asia-Pacific.

VIII. About the Report's Author

Keith Mallinson heads Yankee Group's global telecom and wireless team. He has led the firm's Wireless/Mobile research and consulting practice since 2000. His groups are leading the company's transformation to provide clients with quantitative Decision Instruments—including market forecasts, trackers and financial tools—in addition to qualitative research services.

Mallinson's career at Yankee Group spans 12 years and has included a wide variety of responsibilities and successes, starting as an analyst and then as director of the company's European research programs in London. In 1995, he became managing director of Yankee Group's European operations and drove record growth for the region by managing all operations including research, sales and events. Mallinson demonstrated his versatility by adding his current Wireless/Mobile responsibilities in 2000 and taking leadership of the company's consumer internet, media and entertainment programs upon his arrival in Boston in 2001.

In addition to his managerial role—with many new strategic initiatives, product launches and successful events to his credit—Mallinson continues to write Yankee Group research publications, serve as a keynote speaker at major industry events and lead consulting assignments. Throughout his time at Yankee Group, he has published and been quoted in the media on many topics in wireline, wireless and satellite communications. His analyst skills are broad, encompassing technology assessments and consumer market research.

Mallinson has worked in telecommunications and information technology industry research and business consulting for 20 years. He also spent 3 years in technology startup venture capital. Between his undergraduate engineering and postgraduate business degree studies at London University's Imperial College and the London Business School, Mallinson worked as an electronic design engineer, a systems engineer and a project manager in the military communications and electronic security industries.

Mallinson has had his testimony as an expert wireless telecom witness accepted on the following cases:

- **Peltz vs. Hatten**, 279 B.R. 710, 2002 US Dist LEXIS 10282 (D.Del June5, 2002), Judge McKelvie, expert witness for the defendant: Mallinson wrote an expert report and rebuttal report, was deposed and testified in court. The court judgment was in favor of his client.
- **Omnipoint Communications Inc. vs. the City of White Plains**, 01 Civ, 3285 (GAY) United States District Court, Southern District of New York, judgment May 6, 2004, expert witness for the plaintiff: Mallinson wrote an expert report with damages claim computations and testified in court. The court judgment was in favor of his client.
- **Class action against defendants Verizon Wireless, Sprint PCS, Cingular, AT&T Wireless and T-Mobile** in 02 Civ 2637, regarding wireless telephone services antitrust litigation: Mallinson wrote an expert report and was deposed. The case is still pending.

IX. References

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