

WRITTEN TESTIMONY

OF

BARRY WEST

**CHIEF TECHNOLOGY OFFICER AND PRESIDENT,
4G MOBILE BROADBAND,
SPRINT NEXTEL CORPORATION**

ON

**THE DIGITAL FUTURE OF THE U.S.: PART 3: SPECTRUM
OPPORTUNITIES AND THE FUTURE OF WIRELESS**

**BEFORE THE
HOUSE SUBCOMMITTEE ON
TELECOMMUNICATIONS AND THE INTERNET**

APRIL 19, 2007

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Good Morning Chairman Markey and Members of the Subcommittee. I am Barry West, Chief Technology Officer and President, 4G Mobile Broadband, for Sprint Nextel Corporation. Thank you for the opportunity to appear before you today to address a topic I am passionate about: the future of wireless technology. What we are discussing today is the opportunity to enhance the way customers experience communications. This hearing is about a revolution that promises new freedoms in mobile information access and shared experiences. In my remarks today, I would like to emphasize an issue that is critical to achieving these freedoms: the provision of “special access” services that are a key component in providing wireless broadband and other broadband services.

Sprint Nextel

Sprint Nextel offers a comprehensive range of communications services that bring the freedom of mobility to consumers, businesses and government users. Sprint Nextel is widely recognized for developing and deploying innovative technologies, including two robust wireless networks serving over 53 million customers; industry-leading mobile data services; and instant national and international walkie-talkie capabilities. In a nutshell, we are one of the last strong competitors of the Bell Companies to remain standing.

Wireless Broadband Services Today

The Sprint Nextel vision goes well beyond traditional communications. We offer the most wireless broadband coverage of any carrier today. The Sprint Mobile Broadband Network reaches more than 200 million people nationwide in more than 9,000 communities and allows consumers to access audio, video and data applications with handheld and connection card devices. Sprint Nextel was the first carrier to upgrade its mobile broadband network to the faster EV-DO Revision A technology. “EV-DO Rev. A” offers significantly faster upload speeds and can enable richer applications and services such as high-speed video telephony, music on demand, video messaging, large file uploads and high performance push-to-talk capability. Customers on this upgraded network can expect average download speeds of 600 kbps-1.4 mbps and average upload speeds of 350-500 kbps.

4G Mobile Broadband

We are not resting on our laurels. Sprint Nextel is actively developing and deploying a fourth generation (4G) nationwide broadband mobile network, using our 2.5 GHz spectrum holdings and the mobile WiMAX (Worldwide Interoperability for Microwave Access) IEEE 802.16e-2005 technology standard. Sprint Nextel’s 4G network will be a nationwide mobile data network designed to offer consumers and business customers faster speeds, lower cost, and greater convenience and enhanced multimedia quality.

Sprint Nextel will offer its customers much more than simple wireless connectivity – we will provide a comprehensive Digital Lifestyle through next generation mobile broadband. We see a Digital Life that is simple, instant, enriching and productive

for businesses, governments and consumers. This vision coincides with the increasing prevalence of two powerful forces – *the Internet* and *Mobility*.

Our plan is to enable visually-rich content and bandwidth intensive applications over a diverse array of electronic devices and services for the home, the office, and on the go. These products and services will go well beyond today's data-enabled cell phones and PDAs, which have sparked consumer interest in downloading large files, music and mobile TV through mobile broadband connections. We have our eye on the next frontier – the millions of consumer electronics devices that are without wireless capability or have only tethered access to the Internet. We see a future in which Americans enjoy the benefits of faster networks and higher bandwidth for data-centric applications. We see a future in which consumers, businesses and governments can choose from a range of WiMAX-enabled devices for computing, portable multi-media, interactive and other services.

We have set in motion a plan that is turning our vision into reality. We will launch advanced wireless broadband services in trial markets by the end of 2007. In 2008, we will deploy a network with speeds of 2 to 4 mbps that reaches as many as 100 million people. We intend to expand mobile WiMAX network coverage thereafter. Once in place, our service will enable customers to obtain business information and personal entertainment easily and inexpensively – and in ways that they will one day wonder how they lived without.

An Impediment to Broadband in the U.S.: The Special Access Market Failure

Although Sprint Nextel and others are working hard to bring the next generation of wireless broadband to consumers throughout the country, these efforts are impeded by

a serious failure in the market for “special access services.” Special access is a lynchpin to the success of a vibrant, competitive broadband marketplace, but is currently subject to bottleneck control by just a few Bell Operating Companies (BOCs) who are charging anticompetitive prices for this service.

Special access services are “last mile” connections that are essential for broadband and communications services provided by Sprint Nextel and others, including Internet Service Providers, cable companies, long distance carriers, competitive local exchange carriers, and other wireless companies.¹ Special access provides dedicated circuits to link together different parts of a service provider’s network (for example, from our cell sites to our switches) and to link its network to the networks of other carriers. Sprint Nextel and other broadband providers will increasingly rely on special access services in the coming years as we handle even greater volumes of traffic over our cell sites and networks to support rising customer demand for voice, video and other data services.

Unfortunately, the BOCs dominate the market for special access, and are often the only viable providers of this service in many areas. In fact, Sprint Nextel has identified alternative providers of special access services at less than one percent of its cell sites nationwide. In other words, in nearly every case the BOCs are the *only* choice for service in their respective service territories.

Sprint Nextel would very much prefer to have the option of obtaining these dedicated circuits from someone other than the BOCs who, after all, are large, integrated companies that compete with Sprint Nextel in offering wireless and broadband services to

¹ See, e.g., *AT&T Inc. and BellSouth Corporation Application for Transfer of Control*, Memorandum Opinion and Order, WC Docket No. 06-74, FCC 06-189, ¶ 27 (rel. Mar. 26, 2007).

customers. These integrated firms, therefore, have a strong incentive to raise the special access costs of, and thereby disadvantage, Sprint Nextel and other competing providers of retail communications services. And, the BOCs have the ability to act on these incentives given the stranglehold they have on the special access market. Even a decade after passage of the Telecommunications Act of 1996, the competitive availability of special access services, such as DS1 and DS3 services, is woefully limited.

In the Boston, Massachusetts metropolitan area, for example, Sprint Nextel provides wireless service to its subscribers through a sophisticated network with more than 1500 cellular radio towers and five mobile switching offices. To move our traffic from cell sites to our switches, and then ultimately to the Public Switched Telephone Network, we purchase dedicated DS1 and DS3 circuits that interconnect the towers and switches and link our Boston customers to Sprint Nextel's national and international telecommunications network. *Ninety-eight percent* of Sprint Nextel's expense for the hundreds of dedicated special access circuits Sprint Nextel uses in the Boston area is paid to Verizon.

Several other markets tell the same story. In northern New Jersey, Sprint Nextel has over 1000 cell sites, five mobile switching centers, and approximately 3,500 special access pipes connecting those network components. *One hundred percent* of those special access circuits are purchased from Verizon. In Miami, *eighty-eight percent* of Sprint Nextel's expense for 2800 special access pipes, connecting over 1,200 cell sites to four mobile switching centers, is paid to AT&T. In Richmond, Virginia, our network of over 400 cell sites and one mobile switching center is connected by approximately 900 special access connections, with *eighty-five percent* of our expense for those connections

going to Verizon. For our San Francisco network, we purchase *ninety-eight percent* of our special access from AT&T to connect our 2,000-plus cell sites to six mobile switching centers.

To provide just one more example that demonstrates the monopoly market Sprint Nextel and numerous other businesses face for special access services, look to the New York City metropolitan area – an area generally regarded as one of the *most competitive* communications markets in the nation. Prior to its merger with Sprint, Nextel made a concerted effort to reduce its dependence on Verizon special access service, but found that there is almost no alternative. When Nextel sought bids for special access services in the New York metropolitan area, competitors bid to serve *fewer than 3% of the required locations* in one of the most competitive geographic markets in the nation. On a nationwide basis, according to an FCC report, wholesale revenues from the sale of special access by the BOCs and other incumbent local exchange carriers to Sprint Nextel and other carriers amounted to \$10.5 billion, while the wholesale revenues generated by competing providers amounted to \$664 million.² A recent GAO Report, entitled “FCC Needs to Improve Its Ability to Monitor and Determine the Extent of Competition in Dedicated Access Services,” estimated that the BOCs’ revenue from dedicated access services reached \$16 billion in 2005.³

² See Federal Communications Commission, “Telecommunications Industry Revenues: 2004,” at Table 5 (March 2006).

³ United States Government Accountability Office, “Telecommunications: FCC Needs to Improve Its Ability to Monitor and Determine the Extent of Competition in Dedicated Access Services,” Report No. GAO-07-80, at 1 (Nov. 2006) (“GAO Report”).

Sprint Nextel is not the only company captive to the BOCs' special access market dominance.⁴ Other companies – including, notably, AT&T and MCI prior to their absorption into the Nation's two largest BOCs – have demonstrated repeatedly that there is a special access market failure. In 2004, MCI (now Verizon) informed the FCC that “[t]he ILECs’ market power over the market for DS1 and DS3 facilities, coupled with the Commission’s decision largely to deregulate the pricing of those facilities, has resulted in prices that are far in excess of cost. The result is that special access has become the ILECs’ most profitable line of business.”⁵

Pre-BOC merger AT&T recognized the need for “re-imposing an annual productivity offset . . . [to] ensure that ratepayers share in the benefits of special access productivity gains, as the Commission originally intended.”⁶ The Ad Hoc Telecommunications Users Committee, an organization of major U.S. businesses, also filed data with the FCC showing that the BOCs remained the sole source of dedicated access at roughly *ninety-eight percent* of all business premises nationwide, even for the

⁴ Other providers appear to have been similarly unsuccessful in obtaining competitively provided dedicated circuits. See AT&T Reply Comments, RM-10593, at 12-16 (Jan. 23, 2003) (“AT&T 2003 Reply Comments”); Economics and Technology, Inc., “Competition in Access Markets: Reality or Illusion, A Proposal for Regulating Uncertain Markets,” at 16-22 (Aug. 2004) (“ETI Report”), appended as Attachment A to Ad Hoc Telecommunications Users Committee Reply Comments, WC Docket No. 05-65 (May 10, 2005) (“Ad Hoc 2005 Reply Comments”). In addition, Ad Hoc’s analysis shows that intermodal technologies do not offer competitive alternatives to high speed special access services. Declaration of Susan M. Gately, appended as Attachment B to Ad Hoc 2005 Reply Comments, ¶¶ 19-25 (“2005 Gately Declaration”). In fact, it appears to be undisputed that competitive alternatives are available only at a “tiny percentage” of commercial buildings. AT&T 2003 Reply Comments at 13 (stating that the BOCs do not dispute the conclusion that competitive alternatives are available only in a small number of buildings).

⁵ MCI Comments, WC Docket No. 04-313, at 156 (Oct. 4, 2004) (“MCI 2004 Comments”).

⁶ AT&T Comments, WC Docket No. 05-25, at 5 (June 13, 2005).

largest corporate users.⁷ The GAO Report found that “dedicated access services to end users . . . does not appear to be extensive” even in the 16 major metropolitan areas it examined.⁸

Will competition develop and correct this market failure? Unfortunately, that is not likely. GAO found that there are a number of barriers to entry preventing competitors from providing alternatives to the BOCs’ special access services, including zoning restrictions and problems with building access.⁹ Moreover, as the FCC itself has noted, the competitive deployment of stand-alone DS1 circuits connecting two points – for just one carrier’s traffic – is rarely if ever an economic possibility. Such circuits require high fixed, sunk costs to serve an individual customer location. No firm can match the scale economies that the BOCs enjoy in furnishing DS1 special access service since they alone had the opportunity to construct a ubiquitous local network over a period of decades while protected against competition.¹⁰ Competitive carriers simply cannot establish a business case to lay a DS1 circuit out to a Sprint Nextel cell site, given the high fixed, sunk costs incurred to construct that circuit. Prior to its mergers with SBC and

⁷ 2005 Gately Declaration ¶ 18.

⁸ GAO Report at 19 (also finding that “moderate levels of competition appear where demand for dedicated access exceeds the DS-3 level.”) Overall, GAO found that less than 6 percent of buildings with demand of DS-1 level or higher are served by a fiber-based competitor, with competition being heaviest for those buildings with the highest levels of demand. *Id.* at 19-20. And, according to GAO, even this modest estimate may overstate the availability of facilities-based competition. *Id.* at 21.

⁹ GAO Report at 13, 26-27. GAO also noted that incumbents may be able to use pricing strategies to discourage deployment of competitive facilities. *See id.* at 18, 26. Similarly, the BOCs may impose terms and conditions – such as revenue guarantees and termination penalties – on the special access customers that limit or inhibit a customer’s ability to switch to a competing provider’s facilities. *Id.* at 30-31.

¹⁰ *Unbundled Access to Network Elements; Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Order on Remand, 20 FCC Rcd 2533, ¶ 166 (2005); *see also* GAO Report at 13.

BellSouth, AT&T echoed this predicament, stating that it and other special access purchasers “generally have *no* alternative suppliers for the bread and butter DS-level services.”¹¹ Thus, for carriers like Sprint Nextel that rely heavily on those circuits, the prospects for obtaining service from competing providers are practically non-existent.

In the case of wireless carriers in particular, the possibility of a competitive market for these circuits is even more doubtful because, for zoning and other reasons, cell sites frequently are located in out-of-the way locations, such as along roadsides or atop surrounding hills. In the Boston metropolitan area, for example, seventy-five percent of Sprint Nextel’s cellular radio towers are located outside of the core urban area, in the areas least likely to attract competitive offerings. Furthermore, alternative technologies, such as fixed wireless or a cable-provided circuit, rarely meet Sprint Nextel’s service requirements.¹²

Deregulation in the Face of Market Failure Has Led to Anticompetitive Rates

Despite the lack of competition for special access, even in places like metropolitan New York, *the FCC deregulated the rates* for these last mile special access circuits in many metropolitan areas around the country. The result of deregulation in the face of a market failure has been predictable (and, frankly, perfectly rational from the BOCs’ point of view): astounding rates of return and, as a result, harm to the promise of wireless, mobile broadband.

Pre-merger MCI noted to the FCC that between 1996 and 2003, “the BOCs as a group enjoyed an almost six-fold increase in the rate of return for interstate special access

¹¹ AT&T 2003 Reply Comments at 11 (emphasis in original).

¹² See, e.g., ETI Report at 22-24.

(from 7.6 % to 43.7 %), with three BOCs reaping returns in excess of 60% in 2003.”¹³

More recent data *that the BOCs themselves filed* with the FCC show that they have continued to earn exorbitant profits from special access. For example, the average rate of return for all BOCs in 2005 was nearly 68%; AT&T/SBC earned a rate of return of 92% on its special access services; BellSouth earned over 98%.¹⁴ Even Verizon, which historically has lagged behind the other BOCs, reported a return of 42%.¹⁵ In 2006, based on reports submitted earlier this month, BOC special access profits increased even further: AT&T reported a 100% rate of return and Verizon reported 51%. To put these earnings levels in perspective, the FCC’s authorized rate of return is 11.25% – AT&T’s 2006 rate of return for special access is nearly nine times, and Verizon’s 2006 rate of return for special access is more than four and one-half times, the FCC’s authorized level.

These returns are not a one-year aberration – special access rates of return (or, their after-tax profits) have grown steadily over the past five years. Indeed, SBC’s rate of return rose by more than 120% from 2001 to 2005, and the rates of return for the rest of the BOCs increased by more than 167% for BellSouth and 175% for Verizon.¹⁶

Moreover, one study has suggested that even these astronomical returns may *understate* the BOCs’ earnings; the costs of other services may have been misallocated to the special

¹³ MCI 2004 Comments at 158.

¹⁴ These returns are computed from data the BOCs filed with the FCC in their annual ARMIS 43-01 reports. *See also* Ad Hoc Telecommunications Users Committee Reply Comments, WC Docket 06-74, at ii, 9 (June 20, 2006); *id.* at Attachment B, Reply Declaration of Susan M. Gately, ¶ 10 (June 20, 2006) (“2006 Gately Declaration”).

¹⁵ These returns are computed from data the BOCs filed with the FCC in their annual ARMIS 43-01 reports. *See* 2006 Gately Declaration ¶ 10.

¹⁶ These returns are computed from data the BOCs filed with the FCC in their annual ARMIS 43-01 reports.

access category, thereby overstating the BOCs' special access costs and understating their rates of return.¹⁷ These high BOC returns are evidence of a market failure: the lack of competition for special access has allowed the BOCs to charge exorbitant prices without restraint.

As the GAO recently found, “without more complete and reliable measures of competition, FCC is unable to determine whether its deregulatory policies are achieving their goals.”¹⁸ The FCC's deregulation was predicated on proxies and predictions, but the fact is competitive alternatives have *declined*.¹⁹

Without effective rules or meaningful competition, the BOCs' special access overcharges are likely to grow at an even faster pace in the future – a future in which special access will become even more critical to the telecom marketplace as more and more capacity will be required to support burgeoning customer demand for broadband.

¹⁷ See ETI Report at 33-34 (noting that the net investment allocated to the special access category is “completely disproportionate” to the number of special access loops as a percentage of loops in service, raising “suspicions that costs are being *overallocated* to the special access category”) (emphasis in original); 2006 Gately Declaration ¶¶ 15-17.

¹⁸ GAO Report at 15.

¹⁹ GAO Report at 42.

Congress Should Require the FCC to Act

What is the solution to the special access market failure and rate gouging?

Congress needs to mandate that the FCC rollback its premature deregulation of special access services and implement the pricing discipline that the marketplace has failed to provide. *Let me be clear: failure to do so will impede broadband deployment in the United States.*

The 700 MHz Spectrum Policies and Rules: Important and Complex

The future of wireless communications in the United States will also be affected by the FCC's policy decisions about the 700 MHz spectrum band. The Commission has before it a complex set of inter-related rulemaking proceedings addressing a large swath of spectrum in the 700 MHz band. This valuable spectrum is available for new uses because Congress wisely decided to require incumbent TV stations to vacate TV channels 52 to 69 when the digital television transition ends in February 2009. The 700 MHz spectrum band holds great potential. It is critical for public safety and other communications that the FCC makes the right decisions about this spectrum.

Before the FCC begins to auction and assign the 700 MHz spectrum, it needs to resolve a multitude of thorny technical and policy issues, including: whether to allocate more spectrum to public safety communications, how to enable or encourage interoperability among public safety agencies, whether or how public safety and commercial entities might use spectrum jointly, whether or how to change the use of the guardbands, the size of the spectrum blocks (how many megahertz per block), the geographic areas of the spectrum blocks (*e.g.*, large regional licenses or smaller license

areas), the construction benchmarks, the power limits and other service rules needed to minimize interference, how much spectrum should be devoted to narrowband, wideband, and broadband services, the type of auction to be held (*e.g.*, open or “blind,” simple or combinatorial bidding), and the rules that apply to small businesses that want to participate as “designated entities.”

In fact, the open issues are so numerous and so complex that the Commission now has pending before it multiple incomplete 700 MHz rulemaking proceedings:

- A Notice of Proposed Rulemaking regarding the service rules for commercial licensees in the 700 MHz band (WT Docket No. 06-150),
- Both the Eighth *and* Ninth Notices of Proposed Rulemaking regarding how to promote public safety wireless broadband (PS Docket No. 06-229 and WT Docket No. 96-86), and
- A Notice of Proposed Rulemaking concerning the guard band spectrum in the Upper 700 MHz block (WT Docket No. 06-169).

Given the importance of the 700 MHz band to the future of wireless and broadband in our country, Sprint Nextel would like to offer a few recommendations and observations. First, it is critically important that the Commission protect the allocation of spectrum to public safety communications. First responders who go into a burning and bombed building, as they did twelve years ago today in Oklahoma City, must have radios that enable them to communicate reliably. Second, we recommend that the Commission proceed judiciously to address the many open rulemaking issues rather than racing to a hasty hash of rules for one of the most significant spectrum bands available. The availability of this spectrum is a unique opportunity and it is essential that the FCC not “rush to judgment.” Sprint Nextel is engaged today in a partnership with public safety to remedy spectrum allocation decisions that jeopardized reliable communications in the

800 MHz band; the Commission must ensure that its 700 MHz decisions do not repeat such errors.

Third, we recommend that the Commission consider carefully the ramifications of the size of the geographic license areas. If it establishes license areas that are too large, it may unfairly tip the 700 MHz auction in favor of well-heeled incumbents who may not have the same incentives to put this prime spectrum to good use as more entrepreneurial startups.

Fourth, it is important for policy makers to understand that the 24 MHz of spectrum allocated for public safety services in the 700 MHz band is allocated for state and local public safety entities. This spectrum is not allocated for federal use, but the discussions about interoperability have missed or glossed over this point. A fifth suggestion is those policymakers who are intrigued by proposals to allow commercial and public safety entities to use the same spectrum block jointly should understand that such joint use could be achieved in other spectrum bands, that is, they need not be limited to the 700 MHz band.

Conclusion

Chairman Markey and Members of the Subcommittee, you have demonstrated a forward looking and insightful approach by holding this hearing today. America has the opportunity to foster a revolutionary change in communications with the marriage of Mobility and the Internet in wireless broadband. Let's do all we can to achieve that goal. Let's not allow the special access gatekeepers to rob the nation of this opportunity.

Thank you.

Barry West

Chief Technology Officer and President, 4G Mobile Broadband Sprint Nextel

Barry West is chief technology officer and president of 4G mobile broadband for Sprint Nextel. He previously served as executive vice president and chief technology officer for Nextel Communications Inc. Mr. West joined Nextel in 1996 and is the chief architect in creating the iDEN wireless technology platform with partner Motorola.

Prior to joining Nextel, Mr. West led many successful engineering and marketing initiatives during more than 35 years for British Telecom including overseeing the rollout of a GSM digital cellular network that covered more than 90 percent of the United Kingdom population in only nine months. Mr. West also served as director of value-added services and corporate marketing at Cellnet, the pioneer of cellular communications in the United Kingdom.