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COMPETITION IN THE COMMUNICATIONS MARKETPLACE: HOW TECHNOLOGY IS CHANGING THE STRUCTURE OF THE INDUSTRY

HEARING

BEFORE THE

COMMITTEE ON ENERGY AND COMMERCE
HOUSE OF REPRESENTATIVES

ONE HUNDRED NINTH CONGRESS

FIRST SESSION

MARCH 2, 2005

Serial No. 109–13

Printed for the use of the Committee on Energy and Commerce

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COMPETITION IN THE COMMUNICATIONS MARKETPLACE: HOW TECHNOLOGY IS CHANGING THE STRUCTURE OF THE INDUSTRY

WEDNESDAY, MARCH 2, 2005

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ENERGY AND COMMERCE,
Washington, DC.

The committee met, pursuant to notice, at 10 a.m., in room 2123 of the Rayburn House Office Building, Hon. Joe Barton (chairman) presiding.

Members present: Representatives Barton, Hall, Bilirakis, Upton, Stearns, Deal, Cubin, Shimkus, Wilson, Shadegg, Pickering, Fossella, Buyer, Radanovich, Bass, Pitts, Bono, Walden, Terry, Ferguson, Otter, Myrick, Sullivan, Murphy, Burgess, Blackburn, Dingell, Markey, Boucher, Brown, Rush, Eshoo, Stupak, Engel, Wynn, Green, DeGette, Solis, Gonzalez, Inslee, Baldwin, and Ross.

Staff present: Howard Waltzman, chief counsel; Kelly Cole, majority counsel; Will Nordwind, policy coordinator; Bud Albright, staff director; Andy Black, deputy staff director; Jon Tripp, deputy communications director; Larry Neal, deputy staff director, communications; Anh Nguyen, legislative clerk; Billy Harvard, legislative clerk; Johanna Shelton, minority counsel; Peter Filon, minority counsel; Turney Hall, staff assistant; Voncille Hines, research assistant; and Sharon Davis, minority chief clerk.

Chairman BARTON. The committee will come to order. I would like to welcome our distinguished panel, especially the Texan from Ennis, Texas, my good friend, Ed Whitacre, whose mother is doing well in Ennis.

Today's hearing is entitled Competition in the Communications Marketplace: How Technology is Changing the Structure of the Industry. We have before us today a very distinguished panel of six of the top communication executives in the world. We also have a second panel of representatives from consumer groups, the financial industry, and academia.

Today's hearing will examine how advanced technologies have changed the dynamics of the communication industry by enabling the same suite of voice, video, and data services to be offered over different networks platforms, and also by permitting entry into these markets by virtual operators that use Internet protocol and provide applications such as Voice-over Internet Protocol, or VoIP, to consumers who subscribe to broadband services. These trends have resulted in a hollowing out of some traditional telephone mar-

keting segments, such as residential and enterprise long distance telephone service as well as residential local exchange service. These industry trends have also led service providers with complementary IP and broadband assets to merge.

The communication industry certainly looks very different than it did 10 years ago when this committee debated the legislation that became the 1996 Telecommunications Act. Back then, there were 28 million wireless subscribers. Today, there are over 170 million. Back then, wireless rates were much higher and long distance was not free. Today, wireless rates have plummeted. Long distance is almost entirely free. Consumers are beginning to cut the cord and replace their existing wireline phone service with wireless phone service.

Today, in addition to providing voice services, wireless carriers are now offering data services and beginning to roll out video. Back in 1996, the Internet had not been fully commercialized. Today, there are more than 140 million Internet subscribers in the United States, including 40 million broadband customers. These broadband customers all now have access to innovative new IP services, such as VoIP that can be offered over broadband platforms at rates far below what consumers currently pay for traditional local and long distance packages. And I must tell Mr. Whitacre, that I am about to become a non-subscriber to Southwestern Bell in Ennis, Texas, because I now have Internet, so I will have one hard line, but I am going to save $50 a month on one of my SBC charges. So you will still be getting $50 a month on my—I will have one hard line in my home.

In 1995, cable companies offered cable services. Today, the cable industry leads broadband subscribership in the United States, and cable companies are aggressively deploying VoIP services.

With an industry that has changed so much in 10 years, it should come as little surprise that companies are looking at one another to determine where the partnerships will enable them to be stronger competitors in the new digital world. The combination of Sprint and Nextel will create a broadband giant in the wireless industry that has no affiliation with the Bells. We should not be wary of such a combined entity; we should welcome it. I want to repeat that. The combination of Sprint and Nextel will create a broadband giant in the wireless industry that has no affiliation with the Bells. We should not be wary of such a combined entity; we should welcome it.

And once the unthinkable merger of AT&T and SBC is now very realistic. AT&T is a different company than it was 10 years ago. AT&T and SBC have complementary assets that will create a company with strengths in the residential and enterprise sectors, local and long distance, wireline and wireless, and with the ability to serve as a broadband network provider and an IP application service provider, the same logic applies to the Verizon-MCI deal. And I would want to emphasize here that if you are going to have one merger, you need the other merger so that there really is competition. We still have to have competition in the marketplace.

The United States needs to have a vibrant communications industry with strong national players. I believe the companies before

us today are creating such players and that U.S. economic growth and consumers will benefit as a result.

I look forward to the testimony of our witnesses. I would like to thank them each individually for participating today.

With that, I would like to welcome our distinguished ranking member from Michigan, Mr. Dingell, for an opening statement.

Mr. DINGELL. Mr. Chairman, you are very gracious. Thank you.

I commend you for holding this hearing. It is timely, and it is important. It is very important that we understand the implications of the proposed mergers between SBC-AT&T, Verizon-MCI, and Sprint-Nextel. The scale of these transactions will further transform a rapidly evolving communications industry. So this committee urgently needs to review them carefully. I would note that the world is changing under our feet, and we must change and be prepared for making the actions that this committee must make to address these concerns.

The SBC's proposed acquisition of AT&T could mark the end of the line for a wonderful company, a 130-year-old icon, once the most powerful company in the United States. In its 1984 breakup, AT&T saddled the local Bell companies with significant burdens. The industry was then subjected to a difficult period in which one person controlled its destiny—one person who stifled change and forward movement in the industry. In 1996, Congress freed the industry from this stifling structure, and since then, AT&T managed itself into a meltdown. It failed to understand or embrace the far-changing and far-reaching differences that were taking hold in the industry, including the rise of the Internet and the structural collapse of long distance as a distinct service offering. Some may view SBC's acquisition as offering AT&T a way out of a morass of its own construction.

MCI, on the other hand, began its corporate life as a scrappy competitor, willing to take risks on new technologies. It evolved into the second largest long distance company and the world's largest Internet backbone provider. Unfortunately, Worldcomm's takeover mired the company in risky and inappropriate ventures. The backing of a solidly managed company could offer MCI a renewed opportunity to reshape its future.

The Nextel-Sprint transaction will combine the third and the fifth largest mobile operators into a larger, third-ranked, nationwide competitor, offering Nextel's loyal business customers the benefit of a national IP backbone.

These transactions highlight how technology is spurring a revolution in the way that Americans communicate. We are a long way from the reconstruction of Ma Bell. The modern communications marketplace bears little resemblance to the prior dominance of the single phone company. It is incumbent on regulators to leave the deal of the last century to a bygone era and to put 21st century deals into their proper context.

Today, many rivals challenge traditional phone companies. There are now more cell phones than landline phones. Cable operators provide voice services and have more broadband customers than phone companies. Internet companies are now connecting voice calls. All sectors are moving toward a converged world of voice, video, and data offered across all kinds of platforms. It is this

changed telecommunications landscape that is compelling this committee and, indeed, regulators everywhere to rethink our telecommunications laws.

The government has a responsibility to analyze mergers carefully to be sure that they are in the public interest and not hurtful. I believe four overriding questions here must be answered.

First, how will these transactions affect consumers? Will consumers, both mass market and enterprise, benefit from more choices, better quality, lower prices, and innovative products and services?

Second, how will these mergers affect jobs? Will these transactions support the creations of new jobs for working Americans as these companies handle increasingly complex telecommunications needs?

Third, how will these transactions affect competition in the communications market? Consequences for our independent companies, rural companies, small and mid-sized businesses must be examined closely.

Fourth, how will these transactions affect telecommunications policy? What are the implications of bundling voice, data, wireless, and video? I would note that these transactions could renew efforts to achieve intercarrier compensation reform and the preservation of Federal universal service programs.

I do not make any judgments today on these transactions, but I caution the authorities reviewing these mergers against reverting to an antiquated mindset of compartmentalized, distance-sensitive services and providers. Consumers will benefit from a realistic assessment of what telecommunications means in the 21st century.

It is important for this committee to give affected parties a chance to be heard on whether the public interest lies in any given matter. I thank the CEOs for coming to explain their mergers, and I welcome them today. I look forward to the witnesses on the second panel who offer their own insight. This committee can always benefit from a fully informed debate of the most diverse stakeholders on issues of great importance to the public.

Again, thank you, Mr. Chairman, and gentlemen, our members of the panel, thank you for your presence and your assistance.

Chairman BARTON. Thank you, Mr. Dingell.

We would recognize the distinguished subcommittee chairman, Mr. Upton, to make an opening statement.

Mr. UPTON. Thank you, Mr. Chairman. And I commend you for holding this hearing today and providing us the opportunity to hear from today's distinguished witnesses.

It is a constant refrain of mine, which I will repeat today, that the telecommunications marketplace has evolved dramatically, both in terms of technology and consumer preference from the days when Congress debated and passed the Telecommunications Act of 1996. The mergers which we are examining today are further evidence of this dramatic evolution, and they represent a natural and healthy progression in the marketplace.

These companies seem to be better positioned, combined rather than separate to do battle in a world where the meaningful fight will be amongst intermodal competitors as they aggressively seek to win the hand of residential business, and governmental con-

sumers in the offering of a suite of IP-enabled voice data and video services.

Given the dramatic changes in the communication marketplace over the last 10 years, these mergers are not only logical, but they are integral to ensuring a vibrant and intermodally competitive communications marketplace.

I consider these mergers a necessary tune-up for the telecommunications industry ensuring that the country's economic engine is fully geared up to compete globally. As goes the tech sector, so goes the economy.

And I yield back my time, Mr. Chairman.

Chairman BARTON. We thank the gentleman.

We recognize the distinguished ranking member of the subcommittee, Mr. Markey of Massachusetts, for an opening statement.

Mr. MARKEY. Thank you, Mr. Chairman.

And I want to commend you for holding this hearing today on the telecommunications mergers.

Mr. Chairman, in this month of "March Madness", college basketball teams will compete to reach the "Final Four." In the March telecom mergers, we may also reach a "Final Four." In college basketball, to reach the "Final Four", teams have to compete to defeat their opponents. They don't get to merge with them in order to move on. The Bell companies have employed non-market strategies in the courts, in Congress, and ultimately at the Commission to beat AT&T and MCI and compel them into these mergers. While these were perfectly legal corporate strategies, we shouldn't confuse them with actually winning in the marketplace with consumers.

It was not technological change that brought about the Bell Company mergers before us today. Rather, it was an unwise change in government policy by the Federal Communications Commission, which led to these mergers. We know these mergers were not the first preference of either MCI or AT&T, both of which had earned their pedigrees as competitive entrepreneurial companies. With fewer companies remaining to offering competing, affordable, traditional telephone service to average residential customers, the risk to the consumer is whether the remaining Bell behemoths will raise rates. And in the broadband marketplace, the question will be whether these same companies truly embark upon ruthless, Darwinian, Adam Smith-like telecom wars or whether we see a digital detante. And these mergers merely presage the cozy coalescence of the communications colossi.

Consumers have a lot riding on the answers to these questions.

Thank you, Mr. Chairman, once again for holding this hearing.

Chairman BARTON. I thank you, Mr. Markey.

By the new rule we have adopted, all of the members are going to be allowed 1-minute opening statements, and we will start with the gentleman from Texas, Mr. Hall.

Mr. HALL. Mr. Chairman, I am still trying to figure out what Mr. Markey said. I yield back my time.

Chairman BARTON. And then we would go to the distinguished gentleman from Virginia, Mr. Boucher.

Mr. BOUCHER. Thank you very much, Mr. Chairman.

In my view, the public interest is well served by the mergers which are the subject of today's hearing. The Sprint-Nextel combination creates a strong, national cellular company with a footprint sufficient for vigorous competition with the two largest service providers. The increase in towers will reduce the number of dropped calls to the broad benefit of rural subscribers. The SBC-AT&T and Verizon-MCI mergers will speed the introduction of new services, including VoIP and multi-channel video as an Internet application. And broadband deployment will accelerate as SBC and Verizon use their larger integrated networks as a foundation for the expansion of fiber optics into neighborhoods and then into homes.

I appreciate the chairman assembling this excellent panel and look forward to a detailed explanation from our witnesses of the public benefits that these combinations will bring.

Thank you, Mr. Chairman. I yield back.

Chairman BARTON. Thank you, Congressman Boucher.

The gentleman from Florida, Mr. Bilirakis, the distinguished vice-chair—okay. The gentleman from Ohio, Mr. Brown.

Mr. BROWN. Thank you, Mr. Chairman.

Large-scale mergers in the telecommunications industry have a significant impact not only on the average consumer, also on the economic development of communities around our country. Mergers produce efficiencies that lead to lower prices, however, when large mega-mergers focus on the most profitable customers, they can squeeze smaller players, individual consumers and smaller businesses. If smaller phone companies can't connect to the large companies at an affordable rate, what becomes of the communities that they serve? If our committee wants the market to work, we can't ignore any segment of that market.

Bonding of voice, video, and data services is another example that is bound to price some consumers out of the market. It is not just a consumer access issue. It is an economic development issue. If small business can't access the same breakthrough technologies as larger firms, they lose ground against their competition. Federal, State, and local government must all play a role in preventing lags in access to technology that disadvantage small business and consumers. In that context, it has never been more important to invest in programs like the Universal Service Fund and E-rate, ultimately helping all consumers gain affordable access to existing and new technologies as sound economic policy.

Thank you, Mr. Chairman.

Chairman BARTON. Thank you, Congressman Brown.

Does the gentlelady from New Mexico, Ms. Wilson, wish to make an opening statement?

Ms. WILSON. Thank you, Mr. Chairman.

It strikes me that we are almost at the point where we have gone full circle over the last two decades. We have had two decades of vigorous competition and technological innovation. We have got new technologies at lower costs spurred initially by the breakup of a very large monopoly. And we are now on the cusp of seeing the emergence of a duopoly with, I think two large groups that dominate the market who are highly unlikely to compete with each other on their own home turfs.

It will be interesting to see how this works out in two ways. One is for consumers who I think have benefited tremendously from the vigorous competition and innovation that has taken place over the last two decades and to see whether the pace of this innovation and cost reduction continues. And I have my doubts about that.

And the second is in innovation. Telecommunications innovation has been one of the key components of American growth in productivity over the last two decades. And keeping on the leading edge of that innovation will be important for this country for jobs and for our economy. I have no doubt that the best business course, given the court decisions you all faced, was to pursue these mergers and acquisitions. But I do have doubt as to whether this will benefit the American economy and benefit the American consumer in the long term. And I think that that is an important thing for this committee to explore.

Thank you, Mr. Chairman.

Chairman BARTON. I thank the gentlelady from New Mexico.

We would like to recognize the gentlelady from California for an opening statement, but before we do that, Congressman Engel reminded me, that Congresswoman Eshoo just lost her mother. And all of us who have lost a parent, it is one of the more traumatic things, so we just want to express our condolences to the gentlelady from California and wish her the very best as she gets through that.

The gentlelady from California.

Ms. ESHOO. Thank you, Mr. Chairman, both for holding this hearing and for what you just said. There isn't anything that quite prepares you, regardless of the set of circumstances, when you lose a parent. They stand between us and our own mortality, and I really think I had the best. So thank you for what you said and for all of the wishes of the members of the committee. My family and I appreciate it very, very much.

As I look at the witness table and the impressive lineup of executives who have joined us here today, and I welcome you, I can't help but think of how much bigger the table would have been a few years ago. It is also instructive to think about how small the table might be in the next few years. We might only need a desk. We seem to have gone in one direction, and now we are going in another.

I don't think that all consolidations and mergers are bad, and realignment of a dynamic industry, such as the telecommunications industry, I think is inevitable. But the course of events that has led us here is really distressing to me. As someone that served on the committee when the Telecommunications Act was drawn up and as a conferee on that bill, I was so excited about what had been worked out. I really thought that this was one of the great takeoff points for the industry toward the end of a century that was going to prepare us for a new one.

But most frankly, I think it has been mangled. What we are left with are two large competitors that dominate the communications landscape, the Bells and cable. That is not a good outcome, in my view, but that is where we are. I think the challenge for us will be to ensure that the companies that control last-mile access treat new entrants and competitors fairly. They can put a squeeze on

people every inch of that last mile, and I don't think that is good for consumers and the country, most frankly. So I think we also have to ensure that new technologies that offer other avenues to the consumer are given the opportunity to take root.

So with that, Mr. Chairman, I look forward to hearing from our witnesses. Again, thank you for having this very important hearing and also for the sentiments that you have expressed on behalf of all of the members of the committee.

Chairman BARTON. I want to thank the gentlelady and, you know, we all get elected as Republicans and Democrats, but we are all people, and most—believe it or not, in the audience, we all work together pretty well. But in our offices, you know, if you are a Republican, you have pictures of President Reagan, and you know, President Bush, and if you are Democrat, you have President Carter and President Clinton. Well, I have got one photograph of President Clinton in my office, and it is because Anna Eshoo was in it that I have that photograph. So I really have the most sincere affection and respect for the gentlelady from California.

Does the gentleman from Georgia, Mr. Deal, wish to make an opening statement?

Okay. Does the gentleman from Michigan, Mr. Stupak, wish to make an opening statement?

Mr. STUPAK. Thank you, Mr. Chairman, and thank you for holding this hearing today on the recently announced mergers.

The title of this hearing is how technology is changing the structure of the industry. There is no doubt that technology has greatly impacted the paradigm shift in the telecommunications industry. Voice-over the Internet Protocol and other technologies have opened the door for new competition between wireless, cable, wireline, and even power companies. However, I believe the committee would be remiss not to acknowledge the impact regulatory decisions have had on this industry. Were these mergers inevitable? I believe we are seeing the inevitable consequences of deliberate decisions made by Chairman Powell and backed by the Bush Administration.

As you know, Michigan was one of the States that benefited from competition. I want to assurances that the rewards of competition from which we in Michigan have benefited, lower prices, better service, and more choice, will not diminish. I also want assurances that my very rural District that covers the Upper Peninsula and the northern Lower Peninsula of Michigan will have the resources to invest in infrastructure, including broadband, and that the digital divide will close and not widen as a result of these mergers.

I look forward to hearing from both panels today, and I yield back the balance of my time.

Chairman BARTON. I thank the gentleman.

Does the gentleman from California, Mr. Radanovich, wish to make an opening statement?

Mr. RADANOVICH. No, thank you, Mr. Chairman. I appreciate the opportunity and look forward to the questions.

Chairman BARTON. Okay. The gentleman from New York, Mr. Engel.

Mr. ENGEL. Well, thank you, Mr. Chairman. I want to thank you for holding the hearing today, and I think you touched on why this

committee is so special and so important. We do work well together. I want to welcome the distinguished panelists, especially Ivan Seidenberg, who comes from my hometown. And we always look at Verizon, in New York, as our hometown company.

Mr. Chairman, as Bob Dylan used to sing, the times they are a changing. And how they are changing in this industry. For many years, those of us on the Telecommunications Subcommittee have been foreseeing the end of the long distance companies, and here today, we are seeing that come to pass. We, in our lifetimes, will have experienced telephone service going from a complete monopoly to a radically different, richly competitive industry. I think that things—certain things are inevitable, and I don't think that we need to fear inevitability. I don't fear change. We have to look at what is best for the consumer. I think we make the mistake if we think that once the genie is out of the bottle we should try to push it back in and yearn for the good old days. Someone once said that if you think the good old days were so good, you are deluding yourself. The bottom line is what is good for the consumer. And we have to look in terms of what is best for our country, globally, and as well internally.

So I yield back. I look forward to listening to what these gentlemen have to say. And I think that together, as a committee, we ought to not fear the future but move on.

Chairman BARTON. Isn't America a great country? You have somebody from your hometown here, and I have somebody from my hometown here. But your hometown has got about 10 million people, and my hometown has about 10,000 people.

Does the gentleman from Illinois, Mr. Shimkus, wish to make an opening statement?

Mr. SHIMKUS. Yes, Mr. Chairman, just briefly.

As many of you know, I co-chair the E-911 caucus with Anna Eshoo, who has been a great partner in this issue. And as we move forward, there—in current new stories, obviously there is a concern. So in this consolidation debate, it would be helpful for us, especially those who have been watching the public safety aspects of deploying E-911 and Voice-over Internet Protocol program of all 911 calls is will this help us get to that point in time when all consumers can really believe that when they dial 911, wherever they are at, that they will know that the 911 folks will know where they are calling from. And so everybody has their own little niches that they focus on.

What I hope to hear is that yeah, this is going to be helpful. It is going to help us address the shortcomings of where we are at in full 911 deployment, whether it is E-911 identification location or the most recent reported problems of Voice-over Internet Protocol, people calling from Illinois and getting it picked up at a Colorado piece.

So that is my focus. I thank you for your time. I look forward to working with you all, and I yield back, Mr. Chairman.

Chairman BARTON. I thank the gentleman.

I can't see down on—the gentlelady from California, Ms. Solis.

Ms. SOLIS. Thank you, Mr. Chairman, and thank you for calling this hearing and—along with my colleagues here.

As one who has express concern over corporate consolidation and its impact on consumers, I am pleased that our committee today is taking an active role in addressing these numerous issues regarding mergers in the telephone industry. The telecommunications industry looked very different back in 1996. After a series of court decisions and FCC rulings, the reality is an ever-changing communications industry where companies are forced to take measures in order not only to compete but to survive.

One of the issues that continues to concern me is the fact that—in Districts like mine that are working class, low income, while high-speed Internet is available to most of the population, very few subscribers come about in my District. I could even say that about our classrooms. We are not even linked up to the Internet in many of our classrooms in the East Los Angeles area. So I hope that with all of these proposed mergers that we can really look at how we could provide assistance to our consumers and to larger communities that still fail to have access.

So I look forward to hearing from you and also want to thank Chairman Barton for calling this hearing today.

Thank you very much.

Chairman BARTON. I thank the gentlelady.

Does the gentleman from New York, Mr. Fossella——

Mr. FOSSELLA. Thank you.

Chairman BARTON. [continuing] wish to make an opening statement?

Mr. FOSSELLA. Thank you, Mr. Chairman.

And let me welcome the distinguished panel and acknowledge that I know you come as individuals, but you represent tens of thousands of hard working people across this country. And we are here, I think, collectively to ensure that the United States will remain as the No. 1 communications network in the world, and hopefully that is a goal that we can agree to as these mergers come and go. And particularly, let me welcome Ivan Seidenberg, as Eliot Engel just did. Verizon employees about 35,000 people in New York State, good, decent people, and among the largest employers. So we welcome you.

Mr. Donahue from Nextel, I want to compliment you for reaching an agreement to ensure that public safety in this transition to megahertz to ensure that a public safety office is across the country, even in light of the merger with Sprint will ensure themselves and their families and, more importantly, the public at large, that we will have enhanced communications for our public safety offices, so I want to thank you for that.

And just as we question and hear the answers, ensure that our focus remain on the benefits that will come from the investments these individuals and their corporations have made and will continue to be made to that overriding goal of ensuring that this great country have the No. 1 communications network in the world.

So with that, I yield back.

Thank you.

Chairman BARTON. I thank the gentleman from New York.

Does the gentleman from Maryland wish to make an opening statement?

Okay. Does the distinguished chairman of the Veterans Committee, Mr. Buyer of Indiana, wish to make an opening statement?

Mr. BUYER. I thank the gentleman. I am pleased that you are here.

As I listened to my colleague, Ms. Eshoo, I was also a conferee in the 1996 Act, and I wouldn't choose the word "mangled." I would choose—to prefer to accept responsibility, and that is what all of us on that conference should do, because we didn't get it right. And nor did those in the industry get it right. We thought the whole future, when we did that bill, was all about voice, and we got it wrong. It is the convergence of voice, video, and data, in the new world in which we find ourselves.

So in your remarks, I am hopeful that I can hear counsel to us with advice on a rewrite. I am hopeful that you will be able to address this lack of competition of broadband in the rural areas. It is bothersome to many of us as members. And we also will be watchful with regard to cherry picking.

Third, I would like for you to speak to my constituency in Indiana about how robust this competition will be with regard to mergers.

And fourth, I would like to know the effect upon these mergers with national security, not only DOD, but also first responders.

And gentlemen, thank you for your time in being here today. This is very important.

I yield back.

Chairman BARTON. I thank the gentleman.

Does the gentleman from Texas, Mr. Gonzalez, wish to make an opening statement?

Mr. GONZALEZ. Thank you very much, Mr. Chairman. And I would like to welcome Mr. Whitacre, one of my favorite constituents, of course, and a great citizen of San Antonio. And of course, SBC being a great corporate citizen, I pledge to you, Mr. Whitacre, that today I will try to dissuade the chairman from dropping that second SBC line. I will caution him to read the fine print and quality, also.

But I think it really underscores what we are here to talk about today, and that is competition. How will SBC and other similarly situated companies compete in with this modern technology that is out there? There is a reason why the chairman is opting to do what he is doing regarding his own personal choice, and it is something that the consumer is facing every day. But I do believe this, that the notions of fair play in creating a competitive environment transcend all technological advances. And any technology and its success is really more a contingent on wise policy that emanates from Capitol Hill. So hopefully, with your help, we will reach those decisions.

Thanks again.

Chairman BARTON. I thank the gentleman from San Antonio.

The gentleman from Pennsylvania, Mr. Pitts?

Mr. PITTS. No opening statement, Mr. Chairman.

Chairman BARTON. Okay. The gentlelady from Colorado?

Okay. Does the gentleman from New Hampshire, Mr. Bass, wish to make an opening statement? Ms. Bono was getting ready to make an opening statement.

Ms. BONO. Thank you, Mr. Chairman.

I would like to thank you for holding this very important hearing today, and I would just like to point out that the telecommunications landscape has changed dramatically since Congress passed the 1996 Act. Over the course of a decade, we have seen competition in long distance, wireless, and high-speed Internet access. Consumers have been the direct beneficiaries of this competition. In short, I am excited about this competition taking place, but I am also very excited to hear the testimony today about how consumers are going to continue to benefit.

Further, as technologies continue to converge, I am very anxious to hear how copyright and intellectual property rights are treated and respected in this process. I would like to thank the panelists in advance for your participation.

And with that, Mr. Chairman, I yield back.

Chairman BARTON. I thank the gentlelady.

Does Mr. Inslee wish to make an opening statement?

The gentleman, Mr. Otter, wish to make an opening statement?

Mr. OTTER. No, thank you, Mr. Chairman. I will submit mine for the record.

Chairman BARTON. Does Mr. Ross wish to make an opening statement?

Mr. ROSS. Thank you, Mr. Chairman and Ranking Member Dingell, for having the hearing today to discuss how technology has changed and is continuing to change the communications industry.

I represent a rural District, about half of Arkansas, 148 towns and 146 of them are relatively small, and the other two, most of you all in this room would consider small. And I can tell you that many of my constituents, many small businesses, some large, are not receiving many of the products and services that are currently in the market and have been around for quite some time in some of the larger cities across this country.

I just want to impress upon you that it is imperative that as innovative products and services become available, as well as those already on the market, that those of us in rural areas have access to them.

I look forward to hearing the witnesses discuss how rural America will be impacted by these proposed mergers and how they will better serve them.

Chairman BARTON. I thank the gentleman from Arkansas.

The gentlelady from North Carolina, Ms. Myrick.

Ms. MYRICK. No, Mr. Chairman. I am just anxious to hear what the gentlemen have to say.

Chairman BARTON. The gentleman from Oklahoma, Mr. Sullivan.

Mr. SULLIVAN. I waive, Mr. Chairman. I will submit my remarks in writing.

Chairman BARTON. All right.

The gentleman from Pennsylvania, Mr. Murphy.

The gentleman from Texas, Dr. Burgess.

The gentlelady from Tennessee, Ms. Blackburn.

Seeing no other members present, all members not present will have the requisite number of days to put their opening statements in the record.

[Additional statements submitted for the record follow:]

PREPARED STATEMENT OF HON. CLIFF STEARNS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA

Thank you, Mr. Chairman.

We've come a long way since Judge Green's decision in 1984. The telecommunications world is changing in exciting ways and these mergers are the latest indication that these companies are adapting to this ever-changing world.

Despite the excitement and opportunity, there are still many important and complex questions that need to be answered: How many Americans will lose their jobs? How will these mergers impact wholesale telecommunications markets? Will this increase competition? Will these mergers benefit consumers in the long run?

These are issues that we cannot afford to overlook.

Mr. Chairman, competition led to the rapid innovation that brought us the advanced telecommunications services we have today. We need to ensure that these monumental consolidations do not undermine this same innovation.

I look forward to listening to the panelists statements, and I thank you Mr. Chairman for holding this hearing.

PREPARED STATEMENT OF HON. ED WHITFIELD, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF KENTUCKY

Mr. Chairman, I want to thank you for holding this hearing, and I thank our two panels of witnesses for appearing before this Committee to discuss the important changes that are taking place in the telecommunications industry.

Mr. Chairman, the telecommunications landscape has changed markedly since the passage of the Telecommunications Act of 1996. At the time, local and long distance were the dominant communications platforms, and consequently, Congress sought to manage competition between the two. A decade later, however, we see that consumer demand has driven innovation in the industry to the point that much of the Act's regulatory framework has simply become obsolete.

Gone are the days of "plain old telephone service"; today, consumers rely on a vast array of other services for their communications needs, including wireless and Internet-based platforms. Moreover, telecommunications companies no longer compete for customers on a domestic basis—companies now are competing for customers on a truly global scale.

The proposed mergers of SBC and AT&T, Verizon and MCI, and Sprint and Nextel underscore these dramatic shifts and the need for market leaders to keep up with the ever increasing pace of consumer demand. Consolidation among companies with complementary infrastructures will allow them to quickly build out on their existing services. Further, consolidation will provide to the market financially stable firms that will be better positioned to secure the capital critical for the development and deployment of the communications technologies needed for the 21st century.

At the same time, however, we must be careful to ensure that these proposed mergers do not have adverse consequences for individual consumers. Any forthcoming merger must not unduly burden the ability for Americans to communicate effectively and affordably with one another. In addition, consolidation must be consistent with the promise of universal service in providing basic telecommunications services to high-cost, rural areas.

With that said, I look forward to opening the discussion as to the best way to achieve these goals. Thank you, Mr. Chairman.

PREPARED STATEMENT OF HON. BARBARA CUBIN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WYOMING

Thank you, Mr. Chairman.

We are working to build a hearing record on the state of the telecommunications industry and what changes ought to be made to the Telecommunications Act to ensure a reliable and competitive medium. Our hearing today is timely in that there are some major changes on the horizon; mergers between Sprint-Nextel, Alltel-Western Wireless, SBC-AT&T, and either MCI and Verizon or MCI and Qwest. All of these are interesting of themselves and illustrate a mature marketplace, but taken together, they signal a seminal moment in the evolution of telecommunications services.

Frankly, it was hard to imagine this when we passed the '96 Act. But today, these prospective mergers make sense. For it is not just competition among legacy telecommunications providers that is powering this debate forward, but intermodal com-

petition that is the market of the future. All of this is made possible by Internet Protocol. That has made the cable company the phone company and the phone company the cable company.

I think this hearing will help shed light on the needed changes to the '96 Act and illustrate how the economies of scale will help the traditional telecommunications sector compete with wireless and cable for the delivery of voice, video and data. My concern regarding these proposals, like always, is how will this help or hurt Rural America. Often, those of us in less populated areas are on the caboose end of the train when it comes to technological innovation. I don't feel that's the best seat in the house.

I yield back the balance of my time.

PREPARED STATEMENT OF HON. MIKE FERGUSON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY

Chairman Barton, thank you for holding this hearing. As a new member of our telecommunications subcommittee and as a member of Congress who represents a district that includes AT&T's world headquarters and Verizon Wireless, I have a keen interest in the transactions that have recently unfolded.

Thank you to all the CEO's present here today. I look forward to hearing from you regarding the impact and effects of your mergers, in particular how your proposed deals will impact the long term viability of the companies that have been acquired. Additionally, I would like to know how these mergers will affect the telecommunications industry and the engine behind it—the American workforce.

Communications technology is moving at an exciting and rapid pace, from broadband and wireless to Internet Protocol-based services. In many ways, the advent of this technology has dictated the direction of industry, resulting in the mergers that we will examine today. I am eager to hear how these mergers will strengthen the companies and the quality of their services, foster competition, spur domestic economic growth and ultimately, propel America's position as a leader the global communications marketplace. Thank you.

PREPARED STATEMENT OF HON. TIM MURPHY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF PENNSYLVANIA

Thank you Mr. Chairman.

I commend you for holding this hearing today. It's been nearly 10 years since Congress passed the Telecommunications Act of 1996 and we find ourselves witnessing mergers between companies that would have seemed improbable if not impossible at the time of passage. As telecommunication providers have evolved, the market has evolved with it. More importantly, technology has evolved well beyond what anyone could have contemplated a decade ago.

These technological advances now allow service providers to offer a combination of voice, video, and data services over different platforms. Providers can now supply applications such as Voice over IP (VoIP) to consumers who subscribe to broadband services without requiring the same facilities based infrastructure traditionally necessary to offer telephone services. These advances have vastly changed the competitive landscape.

One of the most noticeable changes is the push for providers to merge with former competitors because in many respects they do not compete any longer. Instead they offer different and complementary assets that when merged create more stable and diversified corporate portfolios. These mergers create synergetic economic opportunities for investors and customers alike. However, these circumstances must also be taken with some skepticism too. Will all of these mergers actually stifle competition by creating enormous corporations that gravitate towards market power with no incentive to compete?

This committee will likely have the privilege of updating current telecommunications law to account for the drastic changes we have witnessed in recent years. This industry is vital to our economy as witnessed by how its faltering helped cause an economy wide decline five years ago that we are still recovering from. This country's innovations and ingenuity, especially in the telecommunications industry, will continue to drive the economy of the world. It is vital that we alter our laws and regulations to foster this growth and I look forward to this challenge in the coming months.

I am pleased to have a diversified witness list today. While I am excited to hear from the CEOs of some of the aforementioned merging companies and how their proposed mergers will save consumers money and continue to grow the economy, I

am also interested in hearing from consumer advocates, academics, and market analysts. Their testimony will help as we begin the arduous task of revisiting our telecommunications laws.

PREPARED STATEMENT OF HON. SHERROD BROWN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OHIO

Thank you, Mr. Chairman.

Large-scale mergers in the telecommunications industry will have a significant impact not only on the average consumer, but also on the economic development of communities throughout the nation.

Mergers can produce efficiencies that lead to lower prices. However, when large mega-mergers focus on the most profitable customers, it can squeeze out smaller players, individual consumers and smaller businesses.

If smaller phone companies can't connect to the large companies at an affordable rate, what becomes of the communities they serve? If our committee wants the market to work, we can't ignore any segment of that market.

The bundling of voice, video, and data services is another example. It is bound to price many consumers out of the market.

That's not just a consumer access issue; it's an economic development issue. If small businesses can't access the same breakthrough technologies as larger firms, they lose ground against their competition.

Federal, state and local government must all play a role in preventing lags in access to technology that disadvantage small business and consumers.

In that context, it has never been more important to invest in programs like the Universal Service Fund and E-rate.

Ultimately, helping all consumers gain affordable access to existing and new technologies is sound economic policy.

PREPARED STATEMENT OF HON. JAN SCHAKOWSKY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Thank you, Chairman Barton and Ranking Member Dingell. I would also like to extend a special welcome to one of today's witnesses, Mr. James Speta from Northwestern University's School of Law. Although the law school campus is not "technically" in my district, the main campus of Northwestern is—so I am going to claim you as one of my constituents. Welcome.

I am glad we have an opportunity to discuss the questions that are raised by the overlap of the incredible changes in technology since the 1996 Telecommunications Act and the recent cascade of mergers in the telecom industry have brought us here today, especially as they pertain to consumers and those who work in the telecom industry.

Technological developments have meant more choices for consumers. Industry now offers consumers the choice between landlines, wireless, or Voice-Over-Internet-Protocol phone services, just to name a few. However, as we witness the number of companies offering the services drop significantly because of mergers that create a limited number of mega-corporations, we have to ask if consumers will see better prices, whether there will be more technological innovations, and if service will improve. Before we praise what the mergers will do for big business, we need to consider what they will mean for the consumers. The potential for serious losses are great. Business interests too frequently are not in the consumers' best interest.

We also must consider what mergers mean for the workers. Over the past five years, the telecom industry has seen hundreds of thousands of jobs eliminated. (Remember, this is prior to the mergers.) The pending mergers threaten tens of thousands more positions. The companies readily admit to these "cost savings" cuts. Workers are being talked about as disposable business liabilities rather than the assets they are. We need to be less glib about people's livelihood.

Congress must ask the tough questions and we need answers to our concerns before these mergers are approved. I believe that as the process moves forward, we must not forget those who will feel the likely fallout of the mergers the most—the employees and the consumers. Thank you.

PREPARED STATEMENT OF HON. TAMMY BALDWIN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WISCONSIN

Thank you Mr. Chairman.

Over the last ten years, our telecommunications systems have been radically transformed. We have a dizzying array of new technologies. This innovation is providing new business opportunities and novel ways for Americans to relate to one another.

As I look to the future, my objective is to understand how these services and these technologies impact those I represent. Will my constituents in urban Madison have healthy competition from a variety of providers using different technologies? Will my suburban Sun Prairie constituents have advanced services available at a reasonable cost? Will my rural New Glarus constituents have any broadband service at all?

Our nation's telecommunications policy will be a failure if significant groups of Americans are left in a telecommunications wasteland, unserved or underserved. Our policy will be a failure if it leads to telecommunications redlining.

Our history, and our economic theories, tells us that industry concentration reduces competitive behavior, results in less innovation and leads to higher prices. All bad for the consumer. These mergers raise legitimate concerns and we must examine the potential consequences on competition carefully.

From my two perspectives as a Member of Congress responsible for policy- making, and as a consumer: technological and market change is occurring so rapidly that it is as challenging to judge the potential outcomes of regulatory and policy change as it is to figure out what bundled service works best for me as a consumer at home or at the office.

What I do know is that the American people deserve an innovative, accessible, and affordable telecommunications system that enhances their lives and builds a better future.

Thank you Mr. Chairman.

Chairman BARTON. And we would like to welcome our panel. We are going to start with Mr. Whitacre. We will recognize you—let us give them 7 minutes to summarize your testimony, and then we will just go right down the line. Welcome to the committee.

And you have to push that button to turn it on.

Mr. WHITACRE. Can you hear me?

Chairman BARTON. Yes, sir.

Mr. WHITACRE. Great.

STATEMENTS OF EDWARD E. WHITACRE, JR., CHAIRMAN AND CHIEF EXECUTIVE OFFICER, SBC COMMUNICATIONS, INC.; DAVID DORMAN, CHAIRMAN AND CHIEF EXECUTIVE OFFICER, AT&T CORPORATION; IVAN G. SEIDENBERG, CHAIRMAN AND CHIEF EXECUTIVE OFFICER, VERIZON COMMUNICATIONS; MICHAEL D. CAPELLAS, PRESIDENT AND CHIEF EXECUTIVE OFFICER, MCI; GARY D. FORSEE, CHAIRMAN AND CEO, SPRINT; AND TIMOTHY DONAHUE, PRESIDENT AND CHIEF EXECUTIVE OFFICER, NEXTEL COMMUNICATIONS

Mr. WHITACRE. Thank you, Chairman Barton and members of the committee. It is good to be here this morning. I am distressed that you are leaving SBC, Mr. Chairman, but we will work on that later.

Chairman BARTON. I still have one hard line wireline that is SBC.

Mr. WHITACRE. Well, that is good to know, because Mr. Seidenberg leaned over after Congressman Engel talked about his service and hometown and said at least I have still got him as a customer. So—but I am glad to be here this morning to talk about the SBC-AT&T merger, which is a very positive development for our customers, for competition, and for America's leadership in the global communications marketplace. The combined AT&T-SBC company will be a flagship of American communications company for the 21st century. We will provide business and residential cus-

tomers alike with complete services over a robust national and international network using the most advanced technology.

That is why more that 250 consumers, businesses, and civic groups, as well as unions and elected officials of both parties have already announced their support for this merger.

Our merger comes as the U.S. telecommunications industry is trying to get up off the mat. For the first time in a long while, we can see some light at the end of the tunnel, but the journey through that tunnel has been pretty hard. Since 2000, telecommunication service providers and equipment manufacturers have lost more than 700,000 jobs. Annual capital investment has declined by more than $70 billion. Companies have lost more than $2 trillion in market capitalization.

Until recently, SBC was losing 60,000 access lines each week. We have toned that down, and we are somewhere between 20,000 and 30,000, but 60,000 per week for years. And in all honesty, adverse regulation has contributed to this downward spiral.

So Wall Street is investing less and less in telecom. Telecom is investing less and less in its products and services. And we can see the consequences. Today, the U.S. is eleventh in the world in broadband deployment.

As a result, this industry needs to restructure, and that is why we decided to do the SBC-AT&T merger. The reasons for combining these two companies are pretty clear, and so are the benefits.

First, while SBC has a strong presence in many local markets, we do not have a national or global network of our own. We lease that network. We rent it, if you will. AT&T has those assets, and they are very good. And it is a good fit for SBC.

Second, the next big thing in communications technology are Internet-based services, such as Voice-over Internet Protocol, or Voice-over IP. IP is changing how people communicate. It will change how this industry provides service. SBC does not have a consumer Voice-over IP service, but AT&T does, and so we can use it to compete in our region, outside our region, and around the world.

The third reason for our merger is the opportunity it creates for competition in the large business customer segment. While SBC has made some progress in this market, it has been really slow going for us. AT&T will give us the ability to compete much more effectively in this space. SBC and AT&T will bring together an outstanding set of networks, innovative advanced products and services, unmatched talent and expertise, and a rich tradition of customer service and reliability. And we will ensure that the company which started it all more than 100 years ago will be part of it for many years to come. AT&T will remain a viable factor in our industry, and its outstanding heritage will remain alive.

That is why this merger is very much in the public interest. This is a natural and healthy evolution of a dynamic, competitive industry that is light years removed from when the last Federal telecom act was enacted in 1996.

Today there are more wireless subscribers in the U.S. than there are traditional telephone lines. Data traffic now exceeds voice traffic by a margin of 11 to 1. Cable companies will offer phone service

to ⅔ of American homes this year. And other competitors using IP-based services continue to grow.

Very little of this was envisioned when the 1996 Act was passed, which is why we need the laws to catch up. Policymakers and those who regulate us have an obligation to keep pace. We need rules that treat new technologies with the lightest touch possible and which allow the competitive marketplace to discipline retail prices.

Chairman BARTON. Is the gentleman——

Mr. WHITACRE. I am not through. Close, though.

Such reform so would spur much-needed innovation, investment, and growth. I am ready to work with members of this committee to make those reforms a reality on behalf of American consumers and businesses.

Thank you very much.

[The prepared statement of Edward E. Whitacre, Jr. follows:]

PREPARED STATEMENT OF EDWARD E. WHITACRE, JR., CHAIRMAN AND CHIEF EXECUTIVE OFFICER, SBC COMMUNICATIONS INC.

Thank you, Chairman Barton, and Members of the Committee.

I am pleased to discuss the SBC-AT&T merger, which is a very positive development for customers, for competition and for America's leadership in the global communications marketplace.

The combined SBC-AT&T will be a flagship American communications company for the 21st century. We will provide business and residential customers alike with the most complete set of services . . . over the most robust national and international networks . . . using the most advanced technology.

That's why more than 250 consumer, business and civic groups, as well as unions and elected officials of both parties . . . have already announced their support for the merger.

The SBC-AT&T merger is in response to market forces that are reshaping the industry landscape.

The environment in which we are operating has shifted dramatically over the last several years.

What used to be a phone call made over a wireline network until recently is now a cell phone call . . . a text message delivered from one cell phone to another . . . an email sent by Blackberry or PC or laptop at a WIFI hotspot . . . or an Internet call provided by a cable company.

Today there are more wireless subscribers in the U.S. than there are traditional phone lines.

Data traffic now exceeds voice traffic by a margin of eleven-to-one.

Cable companies will offer phone service to two-thirds of American homes this year. And other competitors using Voice over Internet Protocol, or IP, continue to grow.

Technology is erasing the distinction between types of services and the companies that provide them. Who can tell the difference anymore between local and long distance service, or interstate and intrastate service, or between voice and data, in an IP world?

Customer demand is changing, too. Consumers want the choice of buying all their communications services . . . voice, data, wireless and video . . . in one bundle. Business customers demand innovation and expertise for managing highly complex communications wherever they do business.

Dealing with rapid technology change and shifting customer demand is challenging enough . . . but it's even tougher because our industry has not been in very good shape for some time, now.

Since 2000, telecommunications service providers and equipment manufacturers have lost more than 700,000 jobs. Annual capital investment has declined by more than $70 billion. Companies have lost more than $2 *trillion* in market capitalization.

And in all honesty, adverse regulation has contributed to this downward spiral as well.

Wall Street is investing less and less in telecom. Telecom is investing less and less in its products and services. We can see the consequences: today, the U.S. is 11th in the world in broadband deployment.

As a result, the industry is restructuring and re-emerging . . . and the SBC-AT&T merger is direct product of those forces of change.

SBC and AT&T will bring together an outstanding set of state-of-the-art networks . . . innovative, advanced products and services' unmatched talent and expertise . . . and a rich tradition of customer service and reliability.

We will build on that foundation to deliver the next generation of Internet-based voice, video and data communications.

And we will ensure that the company which started it all more than one hundred years ago . . . will be part of it all for many years to come. AT&T will remain a viable factor in our industry, and its outstanding heritage will remain alive.

For those reasons and more, this merger is very much in the public interest.

This is a natural and healthy evolution of a dynamic, competitive communications industry. It is in response to a new competitive reality that is light years removed from when the last federal telecom law was enacted.

The forces that are transforming the telecom industry put an equal obligation on policymakers and those who regulate us to keep pace. If the distinctions between services and service providers no longer exist in the marketplace . . . how can we justify the regulatory burdens that remain attached to them?

We need rules that treat new technologies with the lightest touch possible and which allow the competitive marketplace to discipline retail prices.

Doing so would spur much-needed innovation, investment and growth. I am ready to work with members of this Committee to make those reforms a reality on behalf of American consumers and businesses.

Thank you.

Chairman BARTON. We thank the gentleman from Ennis, and we welcome the Chairman of AT&T, Mr. Dorman, for 7 minutes.

Mr. DORMAN. Thank you, Mr. Chairman and members of the committee.

Chairman BARTON. Use that microphone.

STATEMENT OF DAVID DORMAN

Mr. DORMAN. Thank you very much for inviting me to speak with you today about the merger of SBC and AT&T.

There is very much to look forward to and nothing to fear from the joining together of these two companies, which share an ongoing legacy of innovation, integrity, and reliability.

Together, we intend to set the standard for communications for years to come. Together, we create a national flagship carrier that will be a leader in delivering seamless, secure, and cost-effective new communication solutions to our State and Federal customers, to residential customers, and to small and large businesses. Together, AT&T and SBC will be able to bring advanced IP-based broadband services to the market more rapidly, more efficiently, and to a wider range of customers than either company could alone, heightening competition for voice, data, wireless, and video services. Together, AT&T and SBC will ensure the United States retains its traditional role of undisputed leader in global communications with significant benefits to our national economy.

Most of you and your parents and your grandparents have known AT&T primarily as your phone company, serving residential consumers. That is not the AT&T of today. The AT&T of today is a global IP networking provider that enables large businesses, State and Federal agencies, and other customers to deliver applications securely and reliably.

The reason for that transformation are, I think, well known to you.

Telecom competitors have experienced a difficult environment. Admitted fraud, over-investment by many carriers, tremendous

oversupply, a wave of new technologies in an ever-shifting regulatory environment. Our traditional wireline services were being rapidly supplanted by wireless services and Internet-based applications, such as e-mail and instant messaging. And mass-market customers were increasingly demanding bundles of service, including services that we were not well positioned to provide.

We knew we had to change fundamentally and fast, and I am proud that the very difficult transformation that we had to accomplish over the last very short few months, frankly. We determined that we would no longer actively compete in the traditional mass market and that we would focus virtually all of our attention on delivering powerful networks, applications, and capabilities to large business, government, and wholesale customers.

It was a painful choice for us to make, but we are no longer a mass-market company. The combination with SBC will allow AT&T to continue this process of transforming its business in response to market and service developments, enabling it to bring advanced, attractively priced services to market, and to improve what, in our view, is the finest global network in the world. The merger will also ensure that AT&T's strengths in the large business market can be deployed for the benefit of smaller businesses and residential customers.

Indeed, bringing together these two companies will create a world leader in advanced communication services as the new company uses its increased scale and scope and its expertise in local, broadband, wireless, and global networking to speed the transformation of the legacy networks of both AT&T and SBC into an integrated IP-based network. It will achieve efficiencies that reduce our costs, enhance our operations, and allow us to offer better services and better value for our customers. It will allow us to provide our government customers with more reliable, more resilient, and more efficient network capabilities and increase the pace and breadth of the innovations of our renowned AT&T labs with benefits for all types of customers, not just the largest business enterprises on which we now focus.

The combined company will be stronger as a competitor to others, including foreign providers globally, and I believe, that the other Bell companies around the country as well. And the transaction will not harm competition in any market.

In the mass market, SBC is a leading provider of service in its 13-State region, but AT&T is no longer an active mass-market competitor in those States.

The merger will also not impair competition in the provision of services to business customers, given the number and diversity of competitors for businesses, the sophistication of these customers, and their own purchasing practices. Nor is there any serious argument that the merger will diminish competition in wireless, where AT&T is not currently a provider, international, where SBC has a very limited share, or in Internet-backbone services where many large providers compete. Rather, the merger is a step forward in the evolution of this industry, creating a healthy, competitive, and innovative American communications company.

In conclusion, I would like to thank you again for the invitation to speak with you today about the very significant benefits that

this merger will produce, and I would be pleased to answer any questions that you may have.

[The prepared statement of David Dorman follows:]

PREPARED STATEMENT OF DAVID DORMAN, CHAIRMAN AND CHIEF EXECUTIVE OFFICER, AT&T CORP.

Mr. Chairman and Members of the Committee, thank you very much for inviting me to speak with you today regarding the merger of SBC and AT&T, and the enormous benefits that the combination of these companies will bring to consumers and to the nation.

My message to you today is that there is much to look forward to, and nothing to fear, from the joining together of two companies that share an ongoing legacy of innovation, integrity and reliability. Together we intend to set the standard for communications for years to come. Together, we create a national flagship carrier for the 21st century that, from "day one," will be a leader in delivering seamless, secure, and cost-effective new communications solutions to our state and federal government customers, to residential consumers, and to small and large businesses, across the country and around the world.

Together, AT&T and SBC will be able to bring advanced, IP-based broadband services to market more rapidly, more efficiently, and to a wider range of customers than either company could alone, accelerating broadband deployment and heightening competition for voice, data, wireless, and video services. Together, AT&T and SBC can provide the base that will ensure that the United States, in the face of increasing global competition, retains its traditional role of undisputed leader in global communications, and that our national economy obtains all of the benefits that accompany that leadership role. And together AT&T and SBC can ensure that our valued government customers will receive the most advanced, secure, reliable, robust and resilient services and network capabilities.

WHY AT&T HAS AGREED TO THE MERGER

I speak to you today from a unique perspective. When the 1996 Act was passed, I led Pacific Bell, one of the incumbent Bell companies that today is part of SBC. Today, I lead AT&T, where I have been since December 2000. So I am very familiar with the supremely talented and hard-working people, the best in class networks, and the research and innovation know-how of these two great companies. And as I look at the two companies' assets, I see that they complement one another tremendously—two companies with very different focuses today that, when combined, will create a much better whole. And a key part of understanding why I think this combination is so good—both for consumers and for my shareholders—is the remarkable transformation that AT&T has experienced over the last few years.

Most of you, and your parents and grandparents, have always known AT&T primarily as your phone company, a residential consumer-oriented company whose main business for more than a century was providing basic telephone services to the mass market. That is not the AT&T of today. The AT&T of today is a global IP networking provider with a software infrastructure that gives large businesses, state and federal agencies, and other communications providers the flexibility to deliver applications in a secure and reliable way. The reasons for that transformation are, I think, well known to all of you.

AT&T has experienced an environment that has been very difficult for telecommunications companies: fraud and overinvestment, tremendous oversupply and pricing pressures, a wave of technological advances, and a shifting regulatory environment. Our traditional wireline services were being rapidly supplanted by wireless communications and Internet-based applications such as e-mail and instant messaging. Mass market customers were increasingly demanding broad bundles of communications and entertainment services, including services we are not well-positioned to provide. Customers were leaving. Prices were plummeting. Over the last five years, our revenues plunged from $49.6 billion in 1999 to $30.5 billion in 2004. Much of that decline came from our consumer services division.

We knew we had to change, fundamentally and fast. I am proud of the very difficult transformation that we have accomplished. We determined that we would no longer actively compete in the traditional mass market and that we would turn our attention to delivering powerful networks, applications, and capabilities to business customers worldwide and to our valued government and wholesale customers. It is difficult for many to accept—and it was a painful choice for us to make—but we are no longer a residential consumer company. That is simply not a business that makes sense for AT&T today or going forward. I want to assure you that we will,

of course, continue to support and provide first class service to our remaining mass market customers as they migrate to other active mass market providers. And I want to point out that by helping other companies find better ways to do business, AT&T continues to bring great benefits to all consumers nationwide.

The combination with SBC will allow AT&T to continue this process of transforming its business in response to market and service developments. The combination will provide the increased scale and scope that are important to success in transforming our network to implement IP-based technology and in bringing advanced, attractively priced services to market. It will enable us to expand and improve what, in our view, is already the finest global network in the world. It will ensure that AT&T's strengths in the large business customer market can be deployed for the benefit of smaller businesses and residential customers, and that SBC's strengths will enhance our ability to provide new and advanced services to large business customers. The combined company will have the ability and incentive to increase innovation and development of advanced services for the benefit of all customers, in the U.S. and globally.

THE MERGER WILL PROVIDE IMPORTANT PUBLIC BENEFITS

Consumers of all types will benefit from this merger because of what the two companies share and, more importantly, because they have complementary and different strengths.

The two companies share a common past and an ongoing legacy of innovation, integrity, reliability, and customer service.

The two companies also bring together different strengths and product sets, ensuring that the merger will produce a combined company that is more than the sum of its parts. SBC is a provider of voice, data, broadband, and related services to consumers and businesses—especially small businesses— primarily on a local and regional basis in its 13-state region.

AT&T has a different focus. We provide a broad array of voice, data, and IP-based services to customers on our global and national IP-based networks. We provide services to the largest businesses, government agencies, and wholesale customers. AT&T has a presence in more than 50 countries, allowing it to compete for the business of the largest global enterprises. AT&T Labs has ensured that the company has remained a leader in the invention and development of innovative services and advanced network capabilities.

The combined SBC and AT&T will be a stronger and more innovative U.S.-based global competitor than either company could be alone. The merger will produce a flagship U.S. carrier that will offer the most efficient, highest quality capabilities to government, business, and residential customers nationwide and globally. The combined company will continue to provide U.S. government customers with the most advanced and secure services and network capabilities. The combined company will have the resources, expertise, and incentive to adapt the sophisticated products that AT&T has developed for its enterprise customers to the needs of small and medium businesses and consumers, as well as the marketing expertise and infrastructure to reach those customers.

Combining the two companies' core strengths will result in more investment in, and faster deployment of, innovative new technologies and network capabilities that will benefit all customers. The combination of AT&T and SBC will enhance competition, resulting in improved services and lower prices for consumers, and will not impede competition in any market.

Let me elaborate on each of these points:

Global Leadership. The transaction will establish a world leader in advanced communications services, which will provide very significant benefits for all American consumers. The nation's economic growth and ever-improving standard of living have resulted, in substantial part, from the United States' position as an undisputed world leader in communications. Recently, that leadership has been questioned, fairly or not, as European and Asian-Pacific carriers and technology companies have grown rapidly and other markets—different from our own for many and varied reasons—have surpassed the U.S. in broadband penetration.

By combining firms that are recognized leaders in both enterprise and mass market services and in the design and engineering of local, broadband, wireless, and global networks, the merger will create an American carrier that will undoubtedly set the global standard for communications service leadership. The companies' complementary strengths ensure that the combined company can rapidly complete the transformation of legacy networks to IP. These same synergies will drive the achievement of end-to-end service quality standards that previously have been unobtainable and will ensure the United States' preeminence in communications.

Service to Government. Federal government departments and agencies, including those with national security responsibilities and requirements, will directly benefit from the service and network improvements that this merger will enable. Today, AT&T provides advanced services to a broad range of government agencies, including those involved in national defense, intelligence, and homeland security. AT&T's customers include the White House, the State Department, the Department of Homeland Security, the Department of Defense, the Department of Justice, and most branches of the armed forces. AT&T's support of the intelligence and defense communities includes the performance of various classified contracts.

The transaction will enable Government customers to receive the most advanced, improved services and network capabilities. SBC's and AT&T's separate networks will be transformed into a larger and more advanced IP-based network, which will be more reliable, robust, and resilient. As the Defense Department's need for integrated, worldwide networks increases, a combined company will be better positioned than the individual companies to provide these networks on a secure, end-to-end basis.

Increased Innovation. A crucial benefit of this combination for all consumers is greater research, development and innovation—especially for advanced and IP-based services and network capabilities. For customers, this should mean lower costs for existing services, the more rapid development of new services, and the development of services that otherwise would not exist.

The merger will promote and widely distribute the benefits of innovation by enabling the combined entity to take greater advantage of the research and development capabilities of one of AT&T's "crown jewels"—AT&T Labs, which is a direct successor to the Bell Telephone Laboratories. Innovations undertaken by Bell Labs and its successors have launched or proved instrumental to the development of basic innovations that have shaped our daily lives and launched entire industries.

Innovative Mass Market Services. The transaction will increase innovation because the combined company will seek to develop and deploy, for smaller business and residential customers, the storehouse of existing and ongoing innovations produced by AT&T Labs for large enterprise customers. The potential benefits of research and development, however, are not limited to those customers. Breakthroughs that AT&T achieves in research and development aimed at producing new enterprise services, or providing those services more efficiently, often will have relevance to other services that could potentially be offered over the combined company's network facilities, such as mass market services.

- For example, AT&T is a global leader in the development of text-to-speech engines, synthesized voice capabilities, automatic speech recognition, and natural language speech understanding systems. These technologies have the potential to allow real-time translation services and exceptionally efficient customer care and relationship management capabilities. Accelerated deployment of these capabilities into residential and small business offerings holds the potential for significant public benefits, particularly for visually, hearing, and speech-impaired customers.
- Similarly, AT&T Labs is a leader in the development of network security services for business customers. It is developing capabilities to detect unauthorized use of communications services and customer information. As demand for anti-fraud and security services among mass market and small business customers continues to grow, very significant public interest benefits may be realized by additional innovation the combined company will undertake to meet that demand.
- AT&T Labs continues to develop advanced e-commerce support and enhancement capabilities. Translating these ongoing innovations from large business-focused services to services designed to meet the needs of smaller businesses and residential customers is another source of significant public interest benefits.
- And AT&T Labs is developing an IP environment that can support a broad range of communications services, including video services. AT&T has also developed a number of innovations to make the delivery and use of video services far more effective than is achievable today, with clear benefits for smaller business and residential customers.

Innovative Network Capabilities. In addition, combining the two companies creates scale and brings together complementary strengths that will lower the costs and increase the benefits of pursuing research and development initiatives—and thus increase the pace and breadth of innovation. AT&T's unmatched research and development capabilities will be combined with SBC's financial strength, capacity to capitalize on transformative opportunities, and its local network expertise.

The merger will enable a more rapid transformation of the companies' networks, which meet current needs efficiently, to a unified, IP-based service platform, with numerous advanced capabilities that will benefit customers. Developing these ad-

vanced network capabilities lies at the heart of AT&T's and AT&T Labs' core missions and expertise. Through the merger, SBC will bring to the combined entity the scale, greater financial strength, and network capabilities that ensure that the combined entity will have an increased incentive and ability to develop advanced network capabilities and related services and can do so much faster than AT&T would on its own. The resulting advanced networks can provide consumers of all types with the ability to choose, provision, change, and maintain their services with an almost unimaginably greater degree of speed, efficiency, and efficacy.

THE MERGER WILL ENHANCE RATHER THAN IMPEDE COMPETITION

I believe that this transaction will only enhance competition in communications markets.

The important network and service benefits I've described above reflect improvements in competition. The improved ability of the combined company to bring innovative and advanced services to market, for a broader range of customers, will expand customer choice and offer improved alternatives that competitors of all types will be forced to match. This includes cable, VoIP, and wireless competitors in SBC's traditional local service region.

I also believe that the transaction will inevitably lead to greater competition between the Bell companies themselves. The Bells today already compete against one another for wireless services. With this merger, the combined company will be competing for large business customers across the nation and very much in the local service territories of the other Bell companies. They will have to improve their services, both in their incumbent regions and beyond, if they are to remain competitive. And the combined company will continue to develop AT&T's VoIP service, which is designed for residential customers throughout the nation in direct competition with the Bells' local service offerings.

For the reasons I've outlined above, the merger also will produce a more capable global competitor with a broader geographic scope of service and a broader line of more advanced services and network capabilities. This will benefit U.S. companies as they compete overseas and will benefit all communications customers as other global service providers must improve their offerings to compete effectively with the combined company.

Nor will the transaction harm competition in any market, principally because the two companies' businesses are largely complementary. In the mass market, SBC is a leading provider of service in its 13-state region, but AT&T is no longer an active mass market competitor in those states. AT&T's earlier irreversible decision to stop actively marketing to such customers for either local or long distance wireline telephone service means that it is no longer a substantial competitor in mass market services. Removing AT&T as a separate service provider thus could not harm competition in the provision of those services to residential and small business customers.

The merger will also not impair competition in the provision of services to business customers. The market for services to these customers is exceptionally competitive and will not be impaired by this transaction. Suppliers include interexchange carriers, systems integrators, equipment vendors and value-added service providers, other network providers, foreign carriers, CLECs, cable operators, and other ILECs. Moreover, because large business customers are highly sophisticated, have widely varied needs, and rely on complicated and detailed bidding procedures, providers cannot successfully engage in anticompetitive conduct. Given the number and diversity of competitors offering services and products to businesses and the sophistication of customers and the purchasing practices they employ, the marketplace will undoubtedly continue to be vigorously competitive after the merger is concluded. In these circumstances, the transaction cannot reduce competition for the business of these large customers.

Nor is there any serious argument that the merger will diminish competition in wireless, international or Internet backbone services. SBC has a majority ownership interest in Cingular Wireless, but AT&T long ago divested itself of its interest in AT&T Wireless, its cellular service operation. Combining these companies results in the loss of no significant competitor.

So, too, with international services. AT&T has an extensive global presence, especially for large business customers, but SBC provides only a very limited share of international communications. Provision of these services is, in any event, highly competitive and will remain unaffected by the merger.

And while AT&T is one of the largest providers of Internet backbone services, SBC's network is much smaller. AT&T—but not SBC—is a Tier 1 provider of Inter-

net backbone services. Following the merger, at least five other Tier 1 providers will remain to provide robust competition in that market.

In conclusion, I would like to thank you again for the invitation to speak with you about the very significant consumer and public benefits that this merger will produce. This transaction will create an American global communications company for the 21st century—a company capable of delivering advanced services to customers of all types throughout America and around the world. And it will do so by increasing, rather than by posing a threat to, competition.

I would be pleased to answer any questions that you may have.

Chairman BARTON. We thank the gentleman.

We now recognize the Chairman and Chief Executive Officer of Verizon, from Eliot Engel's and Vito Fossella's hometown of New York, Mr. Ivan Seidenberg.

STATEMENT OF IVAN G. SEIDENBERG

Mr. SEIDENBERG. Mr. Chairman, Congressman Dingell, thank you very much for giving us the chance to address you directly about our proposed transaction this morning.

As you all know, MCI and Verizon have complementary assets and capabilities. Verizon has strong local assets and a solid presence among local and regional customers. MCI has strong IP networks and products and a solid base of national and global customers. Together, we will create a strong, new competitor with the products, network reach, and capital capacity required to succeed in this market.

As I have heard from many of you this morning, technology is the sole driving reason for this transaction. We feel we need to do this to stay apace with the changes that are occurring in our industry.

This acquisition does not alter the dynamics that are reshaping the consumer market. Long distance and local as a standalone business are really on their way to obsolescence, with or without this transaction. However, if we look at this in terms of the future, it is apparent that customers in all segments of the communications market will benefit.

Not at this table are all of the cable, ISP, Internet, and VoIP providers that also provide—I thought they were calling Congressman Markey out.

Chairman BARTON. It is just a reminder for me to pick up my laundry.

Mr. SEIDENBERG. There is your chance.

Okay. Well, anyway.

Businesses will also benefit because we will be a strong, stable, and secure supplier of advanced communication services. In our merger announcement, our acquisition announcement with MCI, we indicated, of course, there would be savings, based on combining the companies, but we also indicated that we would invest an additional $2 billion to take advantage of growing the platforms that exist between the two companies.

Federal and State government customers will also benefit because we will be able to invest in the networks that are critical to their public mission. National security will benefit, because we will continue to strengthen the infrastructure that is a critical component of government communication systems, including those used by the Departments of Defense and Homeland Security.

And the U.S. economy will benefit, because we will invest in the new technologies so critical to job creation and leadership in the global marketplace.

We believe that among the places that innovation occurs, innovation is also driven by the capital formation that is required to invest in these new technologies. And certainly a company like Verizon combined with MCI will have the financial resources to significantly invest in new technologies.

So to us, this transaction is all about the future. Verizon and MCI will be a national, full service company with the technology and financial strength to deliver the broadband future and create economic growth for America.

Thank you very much.

[The prepared statement of Ivan G. Seidenberg follows:]

PREPARED STATEMENT OF IVAN SEIDENBERG, CHAIRMAN AND CHIEF EXECUTIVE OFFICER, VERIZON COMMUNICATIONS

Mr. Chairman and members of the Committee, thank you for the opportunity to be part of this discussion of the restructuring communications industry.

We are here today because of the announcements of three fairly sizable deals over the past several weeks, one of which is Verizon's intention to acquire MCI. This recent wave of mergers and acquisitions is simply the latest phase of a process that began several years ago: the restructuring of communications around new technologies and new markets.

It should be evident to anyone with a cell phone or an e-mail account that the old distinction between local and long distance is obsolete, as is the need for separate companies to provide them. Competing technologies—cable, wireless, satellite, IP, and wireline—now offer consumers a wide range of choices for voice, data and, increasingly, video. And the pace of technological change is accelerating, which makes these markets more dynamic and competitive with each passing day.

What may *not* be as apparent is that the same forces are transforming the large-business marketplace. Traditional voice services make up a smaller and smaller piece of the pie. Instead, these large, technologically sophisticated customers are demanding a much wider range of services, platforms and applications from a growing universe of suppliers—not just "telephone" companies, but systems integrators, software providers, equipment makers and wireless companies. These companies include some of the biggest names in industry, such as Cisco, IBM, EDS and British Telecom.

Since our formation five years ago, Verizon's overriding imperative has been to build a company capable of competing in this technology- and market-driven environment. For us, this has meant gaining scale in the growth segments of the marketplace, such as wireless and broadband; reinventing our networks around new digital and fiber technologies; and equipping ourselves to compete as other technology companies do, through investment and innovation.

I stress "investment" because it has been Verizon's willingness to put substantial risk capital into our networks that has differentiated our company and provided more value and choice for customers. We have indicated our intention to invest substantially in MCI's infrastructure once this transaction closes. It is this ability and willingness to invest in our future that moves the industry forward and strengthens this country's communications assets.

We have followed this path in the *wireless* business, where we put together a national network and invested in spectrum, digital capabilities and, now, broadband technologies to expand the market and grow through innovation.

We are following this path in the *consumer wireline* business, where we are transforming our *telephone* network into a *broadband* network by deploying DSL and fiber-to-the-premises, over which we are providing voice, data and—as we move forward—video services.

Verizon's acquisition of MCI represents the next logical step in this process, as we transform ourselves around the evolving needs of *the large-business, or "enterprise" market.*

We have always viewed the large-business marketplace as one of the keys to our long-term growth strategy. As in all network-centric businesses, scale is important in this segment, and while we have a solid presence among local and regional customers, we have no significant market share among national and global customers.

So we knew we needed to add substantially to our product set and network reach to be able to compete for these customers, and we have been investing in these capabilities steadily over the years.

The MCI acquisition accelerates that effort substantially. One of MCI's core strengths is its network assets, including its leading role in IP-based technologies. By bringing our companies together, we will create a strong *new* competitor in the enterprise space—one with the advanced products, network reach and capital capacity required to invest in these assets and compete in this technology-intensive and highly competitive market.

I understand that some have questioned how this latest phase of restructuring in the communications industry will affect consumers. Let me be very clear. Verizon's acquisition of MCI does not alter the dynamics that are reshaping the consumer market.

Long distance and local as stand-alone businesses are on their way to obsolescence, with or without this transaction. Competition from wireless, cable telephony, e-mail, Instant Messaging and VOIP will continue to drive pricing, with or without this transaction. And in any meaningful sense of the word, the consumer marketplace will continue to become less concentrated over time—with or without this transaction—as new platforms and providers vie for the broadband household.

My message to this committee, then, is that to view this deal in terms of the communications business of the *past* 20 years is to miss the benefits that will accrue in the *next* 20 years.

Consumers will benefit because MCI's IP network and products, combined with our deployment of fiber directly to homes and business, will be the most advanced broadband platform in the country, capable of delivering next-generation multimedia services in markets across the U.S.

Enterprise customers will benefit because we will create a strong, stable and secure strategic partner for national and global businesses as they prepare for the broadband future.

Federal and state government customers will benefit because they will have a choice of financially stable players that can stay current in technology and invest in the networks that are critical to their public mission.

National security will benefit because we will continue to invest in and strengthen the national and international communications infrastructure that is a critical component of government communications systems, including those used by the Departments of Defense and Homeland Security.

And the U.S. economy will benefit because we are creating a strong, U.S.-based company capable of investing in the new technologies so critical to job creation and leadership in the global marketplace.

This transaction is about the future. Verizon and MCI will be a national, full-service company with the financial strength and technology resources to deliver the broadband, multimedia world of tomorrow to customers and create economic growth for America today.

Thank you. I look forward to your questions.

Chairman BARTON. Thank you, sir.

We would now like to welcome the Chief Executive Officer of MCI, Mr. Michael Capellas.

STATEMENT OF MICHAEL D. CAPELLAS

Mr. CAPELLAS. Thank you, Mr. Chairman, and members of the committee for giving us the opportunity to testify today.

While I think, as everyone has already agreed, over the past 5 years, the industry has undergone a series of quite fundamental technological shifts. And I think the potential of the Internet and really the things we have not yet seen guarantees that this pace of change is not actually at its end, but it is probably at its acceleration point. We have yet to see the incredible potential of what integrated communications and the extension can do in areas such as healthcare or even in the revolution of education.

And while I have been the CEO of MCI for the past 2½ years, I actually spent the past 30 years in the computing industry, and so most of my professional career has actually been as a customer

of telecommunication services and as a developer of what applications can do when merged with the power of a global network to actually fuel innovation.

I actually believe in the power of technology and in the entire infrastructure that the extension of the telecommunications industry is actually important to that development. I always liked to say there has actually been a computer on both ends of a network for a very, very long time.

Most of the changes that we are now seeing in the telecommunication industry are actually being driven by a much broader movement across information technology.

First of all, there is actually a tendency toward standardization of virtually everything in the computing world. Basic computing building blocks, such as servers or storage and microprocessors are actually becoming standard devices that are attached to a network that are—have an address on the Internet and can actually reside everywhere.

The second is the rise of the Internet commerce—it has actually accelerated the adoption of a set of software standards that enable different systems to talk to each other. At the same time, new tools like web services are allowing developers to write applications that go across all different platforms.

Today, communications travel over a network in what we call "packets." There is no difference between a voice or a data packet over the network. And whether you are making a phone call or purchasing an MP3 file for music, it is the same. A packet is a packet is a packet on the network.

The Internet-driven standards that allow systems to talk to each other have also redefined network requirements. Formerly, local, long distance, and data traveled across separate network paths. Now there is a need for vertically integrated intelligent paths which can carry voice data or streamed video without the developer or end user needing to know or care how that path is developed.

One does not need to be a computer scientist to actually think about this. A "blackberry", which virtually everybody has, is a great example of a simple device that can do instant messaging, make a phone call, get news, get sports, or stream a video. And that is just a classic example of what we call integrated communications.

Today, MCI is a leading global communications provider and operates one of the industry's largest global IP backbones, and we serve the most demanding applications in the world. We serve financial institutions, complex engineering and manufacturing centers, and provide complex solutions to over 75 government agencies.

Many of these customers are the early adopters of this technology; where they are using their computing infrastructures, but also needs new forms of networking. The customers all have a fairly similar set of requirements. They need high reliability and security. They need the capability to be end-to-end in global delivery. They need a new network that allows for ease of adoption of new applications, which drives innovation across all sectors, and they need low-cost infrastructure.

Across all of these requirements, there is a need to mesh local access and wireless capabilities with a core backbone. The core technology in the backbone of the future was actually partially incubated at MCI through the legendary pioneer of Vint Cerf, a 15-year MCI employee. It is known as the Internet Protocol, or IP. In the simplest terms, IP allows applications from wireless or video streaming to be rolled out without understanding the changing core network elements that are underneath it.

So where does MCI fit in this sort of perfect storm of IP convergence, market evolution, and regulatory change?

We recognize that it would be virtually impossible to sustain our traditional voice business. And as a result, we have de-emphasized our consumer business and refocused on large business and government customers. Our plan is to leverage our IP and expand the network management, web hosting, and network security.

The second thing we have done is to align ourselves with Verizon to provide significant strength in facilities and networks that are complementary. MCI owns a state-of-the-art backbone network but no significant "first mile" facilities or wireless. Verizon has extensive "first mile" facilities, state-of-the-art broadband, and wireless. MCI has a large enterprise and government customer base that has remained loyal, because we provide world-class service. Verizon provides local access to many of the same customers.

The combined company will deliver end-to-end network capability that will permit innovation of the next generation of applications.

In conclusion, technological advances and changing customer requirements are the driving force behind the industry restructuring. Traditional models of competition and traditional notions of "long distance companies" or "local companies" no longer apply. The combination of MCI and Verizon is a reflection of the broad-based changes and the right path to meet evolving customer requirements. At the end of the day, technology will march on. But it is not only innovation, but also the speed of adoption that is important, and we believe this restructuring adds to both.

Thank you very much.

[The prepared statement of Michael D. Capellas follows:]

PREPARED STATEMENT OF MICHAEL D. CAPELLAS, PRESIDENT AND CHIEF EXECUTIVE OFFICER, MCI, INC.

Good morning. My name is Michael Capellas. I am the President and CEO of MCI. Thank you, Mr. Chairman and Members of the Committee, for giving me the opportunity to testify today about the changing structure of the telecommunications industry. Over the past five years, our industry has undergone a series of fundamental technology shifts. The as-yet untapped potential of the Internet guarantees even greater change in the future.

While I have been CEO of MCI for roughly the past two and a half years, I'd like to start by saying that I bring a different perspective to this discussion, having spent the past 30 years of my career in the computing industry before I arrived at MCI. I was previously CIO for two global Fortune 50 companies and CEO of Compaq and President of HP.

My life's projects include designing and developing systems, from using supercomputers to solve complex human genome problems to utilizing web analytics to better understand consumers and their online buying patterns. Why is this relevant to the telecommunications industry? As I like to say, there has been a computer on both ends of the communications network for a very long time.

I have spent my professional career as a customer of telecommunications services, as a developer who used the power of global networks to fuel innovation and productivity and I believe in the power and promise of technology.

How is computing leading the structural changes within telecommunications?

First of all, there is a movement within computing towards standardization. Basic computer building blocks such as servers, storage and microprocessors are standard devices that are addresses on a network and can reside anywhere. Second, the rise of Internet commerce accelerated the adoption of software standards that enable different systems to talk to each other. At the same time, new tools like web services are allowing developers to write applications across different platforms.

Today, communications travel over the network in what we call "packets." There is no difference between a voice or data packet over the network. Whether you are making a voice call or purchasing an MP3 music file, it is all the same—a packet is a packet.

The Internet-driven standards that allow systems to talk to each other have redefined network requirements. Formerly, local, long distance and data traveled separate network paths. Now, there's a need for vertically integrated intelligent paths which can carry voice, data and streamed video without the developer or end-user needing to know or care how the path is developed.

One does not need to be a computer scientist to see this in everyday life. A "Blackberry" is a great example of a simple device that can instant message, make a phone call, get news or sports, stream a video or send a phone a call. It is called integrated communications. In more technical terms, we call it wireless broadband to an IP network. This ability to do integrated communications is becoming commonplace around the world and the path for future technology is clear. The only question is the pace of adoption and we may be behind the curve in this country.

Today, MCI is a leading global communications provider and operates the industry's most expansive global IP backbone. MCI develops the converged communications products and services that are the foundation for some of the most demanding applications in the world. We service major financial institutions, complex engineering and manufacturing centers, and provide complex solutions to more than seventy-five government agencies.

Many of these customers are the early adopters of new computing infrastructures and are led by the best and brightest technologists. These customers have some common requirements:

1. High reliability and security;
2. End-to-end global delivery;
3. Ease of adopting new applications; and
4. Low cost infrastructures.

At the heart of these requirements is the need to mesh local access with wireless capabilities and the core backbone networks. The core technology of the backbone of the future was largely incubated at MCI, in part to the vision of the legendary Internet pioneer Vint Cerf. It is known as Internet Protocol—or IP. In its simplest terms, IP allows applications from wireless email to video streaming to be rolled out without understanding or changing the core network elements underneath.

BROADBAND AND INTERNET ADOPTION ARE DRIVING TECHNOLOGICAL CHANGE

The momentum is clear: wireless and broadband connecting to IP is the wave of the future. On the broadband side, cable modem service and DSL offerings are beginning to be rolled out more widely. Some companies have started to rollout "next generation" broadband. Public and private entities are starting to deploy wireless "WiFi" networks. Newer and better wireless broadband technologies, such as "WiMax," offer great potential down the road.

Hand-in-hand with broadband is the move to IP. IP technology has led to a convergence of computing and communications, of voice and data, the first manifestation of which is Voice over IP technology ("VoIP"). The introduction of VoIP has lead to the emergence of new and non-traditional providers of voice applications, such as the cable companies and VoIP providers such as Vonage. Peer-to-peer providers, such as Skype, have also started to provide voice applications.

But VoIP is only the tip of the digital iceberg, a precursor to what I call "Everything over IP," or "EoIP." Think of a future where you communicate not just with your voice over a telephone, but with new applications such as video e-mail and the realization of decades-old promise of "picture-phones." In short, IP makes old voice telephony seem as archaic as the telegraph. The rapid convergence of computing and communications has been remarkable.

THE TELECOMMUNICATIONS MARKETPLACE HAS CHANGED DRAMATICALLY

As the technology changes, customer expectations and acceptance of that technology changes. On the market front, we are already seeing a revolution in how we communicate. Wireless service has become a true substitute for traditional landline

long distance service. Today, more than half of all long distance calls are made via wireless devices. The traditional distinctions between local and long distance have blurred considerably as providers offer products that give consumers "buckets" of minutes or unlimited local and long distance calling.

A small, but growing number of consumers are abandoning traditional wireline companies altogether, in favor of wireless or cable companies or other non-traditional providers. This market trend toward new, non-traditional means of communication becomes more pronounced as the new generation becomes on-line. E-mail and "instant messaging" have become significant substitutes for voice traffic. If you have ever watched a teenager do instant messaging, you can assume we are not far from peer-to-peer video as a way of life. Those who grew up on wireless phones and Internet-based access to music, movies and other forms of content will have little trouble moving away from traditional phone companies and purchasing communications applications from a host of new companies.

LEGAL AND REGULATORY CHANGES ARE CAUSING INDUSTRY RESTRUCTURING

Lastly, changes driven by Do Not Call legislation, judicial decisions, specifically the recent decision of the D.C. Circuit in the *Triennial Review Order* case, and by federal regulations have had a major impact on the industry. In a series of recent decisions, the Federal Communications Commission (FCC) has significantly restricted so-called "intramodal" competition, the ability of companies to lease the facilities of other companies via "unbundled network elements." While MCI has disagreed with the Court and the FCC on these matters, these decisions have forced the industry to re-examine how they provide service to customers and the types of markets they address. As important, the decisions highlight the importance of in*ter*modal competition, and the need to promote facilities-based investment, particularly in "first mile" facilities, those that reach from the customer's premise to the network.

We are already seeing this in*ter*modal competition take place with cable companies investing heavily in their networks. Wireless companies, such as Sprint and Nextel, are moving to provide wireless broadband services. Power utilities are moving to provide facilities-based broadband in some localities. The use of licensed and unlicensed spectrum to provide new, wireless broadband networks will be an area of great significance in the coming years.

MCI'S CHALLENGE

So where is MCI in this "perfect storm" of IP convergence, market evolution, and regulatory changes?

One of the first things MCI recognized was that, given all of these changes, it would be virtually impossible to sustain its traditional voice business, especially in the consumer market. As a result, we sought to de-emphasize the importance of our consumer business and refocus the company on next-generation services for large business and government customers. As we transition away from our role in the consumer long distance business, our plan is to build on and leverage the strength of our IP network. In executing that plan, we have moved recently to expand our ability to provide network management and web hosting services, as well as network security applications.

The second thing MCI has done is to align itself with Verizon to provide significant strength in facilities and networks that are complementary to our own:

- MCI owns a state-of-the-art IP backbone network, but no significant "first mile" facilities or wireless. Verizon has extensive "first mile" facilities and is upgrading those facilities with state-of-the-art broadband technology. Verizon also owns an interest in Verizon Wireless.
- MCI has a large enterprise and government customer base that has remained loyal to us because we provide them with world-class products and service quality. Verizon, in contrast, has a much smaller presence in the enterprise markets but is very well-positioned in the consumer market.

The combined company will own a powerful end-to-end network that will permit it to launch a whole suite of next-generation applications that will benefit residential, business and governmental customers.

CONCLUSION

Technological, marketplace and regulatory changes are the driving forces behind industry restructuring. Traditional models of competition and traditional notions of "long distance companies" or "local companies" are out-of-date. The combination of MCI and Verizon is a reflection of the changes we must adapt to and a necessity

if we are to meet and surpass our customers' expectations. It is a beginning, an important part of a new and exciting era of competition in an expanding and converging "communications" world.

Thank you very much.

Chairman BARTON. I thank the gentleman.

Now I wish to recognize the Chairman and CEO of Sprint, Mr. Gary Forsee.

STATEMENT OF GARY D. FORSEE

Mr. FORSEE. Good morning, Mr. Chairman and members of the committee. I would like to thank you for the opportunity to discuss with you today competition and the ongoing technological changes in the communications marketplace. The two matters are obviously very closely related.

Sprint has a proud history dating back to 1899 as an innovative competitive company driving technology and bringing to the marketplace products and services that have transformed how people live and work. Today, Sprint is a global communications company providing wireless, long distance, and local communication services. Sprint built and operates this country's first nationwide all-digital, fiber optic network, which includes a global IP data backbone network as well.

In addition, Sprint built and continues to deploy the first all-digital PCS nationwide wireless network from the ground up. Together with our affiliates and roaming partners, we offer wireless services in all 50 States, including both voice and data services. And today, we are further investing in our network to launch a third-generation wireless data network that will enhance capacity and provide an order of magnitude increase in data speeds.

I am pleased to have the opportunity to discuss with you the pending merger of the Sprint Corporation and Nextel Communications. It is a merger that would create a robust, wireless-focused company that will be positioned to compete, innovate, and change communications in our Nation for the better. Upon receipt of the necessary approvals, the combined company will have the opportunity to effectively expand deployment of wireless voice and data services, as well as high-speed technologies. Once necessary approvals are obtained, we also anticipate spinning off Sprint's incumbent local telephone assets comprising approximately 7.7 million access lines as a strong independent telecommunications company.

The merger will create a Fortune 50 company that will bring significant technological competitive benefits to our consumers. Sprint and Nextel combined will have net operating revenues of approximately $34 billion and a market cap, in today's terms, of $68 billion. The two customer bases will comprise over 40 million wireless subscribers. As a result of the combination, Sprint Nextel will be a predominately wireless company able to provide consumers better services and more choices while they are on the go, at work, or at home. With the combined capabilities of Sprint's nationwide CDMA network, the Nextel's nationwide iDEN network, the new company will have the most robust wireless network capabilities and sufficient spectrum to provide the dynamic network services and data offerings demanded by our customers.

In addition, continued competition in the wireless marketplace will drive additional investment in research and development, ensuring that it will result in cutting-edge, multimedia products and services that will generate economic growth and bring tremendous innovation and value to our customers.

Sprint and Nextel both have distinguished histories of innovation. Sprint has been the industry leader in developing wireless data services, and Nextel has a proven differentiating feature in its direct-connect service.

The companies' combined operations make possible an even richer set of products and services and features all under one roof.

The mobile telephone business is in a transformational stage: one where our customers not only expect extensive coverage for their voice calls, but are demanding the availability of e-mail, Internet service, and other data service applications as well wherever they are.

Sprint has begun launching its next-generation network to provide these services and plans to make it available to over 130 million people by the end of this year and coverage extended to all of our network by the end of 2006. The merger will ensure that Nextel's customers have access to this industry-leading broadband network.

Moreover, the merger is expected to deliver operating and capital investment synergies with an estimated net present value of more than $12 billion. Savings come from the efficiency gained by combining our customer bases and by combining our network and other assets. For example, the merged company will realize economies of scale in connection with acquisition network equipment and consolidation opportunities as we rationalize our other assets. These economies will reduce costs and improve the competitive posture of a converged company to the benefit of consumers.

The improved wireless network that will result from the combination of Sprint and Nextel's wireless assets not only will benefit consumers but also for public safety as well. Sprint and Nextel have been dedicated to providing advanced communication systems to the public safety community, and a combined Sprint Nextel will move forward with an even stronger effort to develop wireless products and services that public safety officials can utilize to make America more secure than it is today.

Fundamentally, this merger is about growth. It is about improving service, driving innovation, and establishing a wireless communication company that can more effectively compete with other communications companies. Verizon wireless and Cingular each have a greater subscriber share in many geographic areas. Cingular will have more spectrum than Sprint Nextel will have in many areas. After closing, Sprint Nextel will derive more than 80 percent of our combined revenues from wireless services and will have a greater ability to compete with these and other firms than either company would have been able to do separately.

Competition in the mobile industry will continue to develop, and it is a vigorous and dynamic marketplace that will remain so after Sprint and Nextel are combined. With increased scale, complementary wireless, and IP network assets and the independence to take on the biggest phone companies, Sprint Nextel will be in a position

to compete effectively with both wireless and wireline companies. And because Sprint and Nextel intend that the merged company will spin off Sprint's incumbent local phone assets, the combined company will have an unmatched incentive to pursue a wireless feature, such that wireless and wireline services increasingly compete for customers, and like other large wireless players that are today primarily owned by the Bell operating companies.

In conclusion, the merger will not change Sprint's relative market share and market position. Sprint is currently the third largest wireless carrier, and as a result of the merger, the combined company will still hold the No. 3 position, albeit in a stronger position.

Thank you, Mr. Chairman. I will be glad to respond to any questions from the committee.

[The prepared statement of Gary D. Forsee follows:]

PREPARED STATEMENT OF GARY D. FORSEE, CHAIRMAN AND CEO, SPRINT CORPORATION

Good morning Mr. Chairman and members of the Committee. Thank you for the opportunity to discuss with you today competition and the ongoing technological changes in the communications marketplace. The two matters are closely related.

Sprint has a proud history dating back to 1899 as an innovative, competitive company driving technology and bringing to the marketplace products and services that have transformed how people live and work. Today, Sprint is a global communications company providing wireless, long distance, and local communications services. Sprint built and operates the United States' first nationwide all-digital, fiber optic network. With this network, which includes a global Tier 1 IP backbone, we provide a broad suite of voice and data services to domestic and global customers.

Sprint built, and continues to deploy, the first all-digital, all-PCS nationwide wireless network from the ground up, currently serving more than 24 million wireless customers in more than 350 Metropolitan Statistical Areas. Sprint has been a leader in advanced wireless technology and was the first carrier to deploy a CDMA network. Sprint then launched 1XRTT voice and data service, expanding voice capacity and providing end users wireless access to Internet and other data services. Sprint's CDMA network covers 99% of major metropolitan areas, airports, and highways in 48 states, the U.S. Virgin Islands, and Puerto Rico. Together with its affiliates and roaming partners, Sprint offers wireless service in all 50 states. Sprint offers both voice and data services (with data speeds averaging 50 to 70 kbps) on its wireless network.

Sprint has also built one of the largest fiber optic networks in the U.S. This network has significant operational advantages, including the ability to seamlessly interconnect a variety of technologies, accommodate diverse standards and protocols, and provide secure communications. Sprint's wireline network is extensive and robust. Its U.S. network consists of more than 34,000 physical route miles of fiber optic cable. Its global network consists of over 75,000 route miles of fiber, including an ownership stake in major undersea cable systems.

I am pleased to have the opportunity to discuss with you the pending merger of Sprint Corporation and Nextel Communications, Inc. It is a merger that will create a robust, wireless-focused company that will be positioned to compete, innovate and change communications in our nation for the better. Upon receipt of the necessary approvals, the combined company will have the opportunity to effectively expand deployment of wireless voice and data services, as well as high-speed technologies. Once necessary approvals are obtained, we also anticipate spinning off Sprint's incumbent local telephone assets—comprising approximately 7.7 million access lines—as a strong independent telecommunications company.

Sprint and Nextel combined have net operating revenue of approximately $34 billion and a market cap of more than $68 billion. The two customer bases combined have over 40 million wireless subscribers (35 million direct and 5 million through affiliates and partners). The merger will create a Fortune 50 company that will bring significant technological and competitive benefits to consumers. As a result of the combination, capital originally intended to build duplicate networks will become available. The merged company will be able to deploy that capital to provide consumers better services and more choices while they are on the go, at work or at home.

With the combined capabilities of Sprint's nationwide CDMA network and Nextel's nationwide iDEN network, the new company will have robust wireless network capabilities and sufficient spectrum to provide the dynamic network services and data offerings demanded by our customers today. In addition, continued competition in the wireless market will necessitate additional investment in research and development in order to develop competitive cutting-edge, multimedia products and services that will generate economic growth and bring tremendous innovation and value to consumers. This will be a function both of the company's own research and development activities and of the vendor research and development activities that our increased scale and scope will induce. Sprint and Nextel both have distinguished histories of innovation. Sprint has been the industry leader in wireless data services, and Nextel has a proven differentiating feature in its Direct Connect walkie-talkie feature. Sprint Nextel plans to build on these strengths using a next-generation wireless broadband network to provide new communications solutions and more choice for consumers.

Fundamentally, this merger is about growth. It is about improving service, driving innovation, and establishing a predominately wireless communications company that can more effectively compete with other communications companies. In particular, the merger will create a robust wireless competitor that will be able to compete very effectively for a broad range of customers in the mobile telephony industry. Verizon Wireless and Cingular each has greater subscriber share and, in many geographic areas, Cingular will have more spectrum than Sprint Nextel will have. After closing, Sprint Nextel will derive more than 80% of its revenues from wireless service and will have a greater ability to compete with these and the other firms than either company would have separately.

The merger is expected to deliver operating and capital investment synergies with an estimated net present value of more than $12 billion. Such savings come from the efficiencies gained by combining our customer bases—both current and potential—and by combining our networks and other assets. For example, the merged company will realize economies of scale in connection with the acquisition of network equipment and handsets and other terminal devices. These economies will reduce costs and improve the competitive posture of the merged company, to the benefit of consumers.

IMPROVING WIRELESS SERVICES FOR CONSUMERS

Sprint and Nextel, along with other companies that provide either Sprint or Nextel-branded service, operate networks that directly cover nearly 262 million people across the country. The combined company will noticeably improve wireless service coverage, capacity, and quality by allowing cost-effective optimization of the Sprint and Nextel cell sites, spectrum, networks, and operations, resulting in increased signal strength, fewer dropped calls and greater geographic coverage. As a result of the merger, consumers will gain access to the industry's leading broadband offerings and push to talk features, all from one carrier, and the companies' combined operations will make possible a richer set of products, services, and features.

Following the proposed merger, Sprint Nextel will be a predominantly wireless company operating both Sprint's current CDMA network and Nextel's iDEN network, and prospective customers who visit Sprint Nextel retailers after the merger will be able to ascertain which network and functionalities most efficiently, effectively, and economically address their needs. Customers who prefer wireless broadband capabilities will be more interested in CDMA service, currently available on Sprint's network and handsets. Customers who prefer the robust, instant-communication push-to-talk functionality available on Nextel's network will be more attracted to the iDEN network and handsets. The merger will allow Sprint and Nextel to avoid costly duplication in their development and deployment of new technologies, and, with a larger customer base, they will be able to undertake projects that would have been uneconomical (i.e., unprofitable) for either to pursue alone. In short, both current and future Sprint Nextel customers will have a broader array of services and features to choose from than either company provides today or would be likely to provide in the future on a stand-alone basis.

The improved wireless network that will result from the combination of Sprint's and Nextel's wireless assets not only will benefit consumers, but also will be a boon for public safety. Sprint and Nextel have been dedicated to providing advanced communications systems to the public safety community, and a combined Sprint Nextel will move forward with an even stronger effort to develop wireless products and services that public safety officials can utilize to make America more secure. Sprint and Nextel are committed to addressing communications problems for first responders and, as a merged entity, we will continue to work with the public safety commu-

nity to ensure that their communications needs are met. The combined company will offer first responders and other public safety organizations a wide range of products and services designed to meet their unique needs, including Wireless Priority Service, Priority Connect, Emergency Group Connect, Emergency Response Team, Interoperability Directory, Collaboration Solutions and Emergency Preparedness Services. And, as the companies have made clear since announcing their intent to merge, Sprint Nextel will continue to move forward expeditiously with the implementation of the FCC's 800 MHz band reconfiguration process.

Sprint Nextel will also build on each company's leadership position in providing innovative communications solutions for persons with disabilities. Sprint is the nation's largest provider of wireline telecommunications relay service (TRS) to the deaf and hard of hearing, with innovative services like Internet Relay, Video Relay and CapTel. For wireless users with speech and hearing disabilities, Sprint offers a wide range of handsets that are TTY compatible as well as a suite of mobile messaging services including text messaging, instant messaging and e-mail. For wireless users that are blind or visually impaired, Sprint offers a number of handsets with voice input/output technology as well as robust Voice Command service that provides voice access to dialing and information services. Sprint offers its blind, visually impaired and physically disabled customers free Voice Command service along with 10 free directory assistance calls per month. A combined Sprint Nextel is committed to making innovative and useful services available to persons with disabilities.

DRIVING INNOVATION

Sprint Nextel will be committed to advancing its industry-leading broadband offerings as it transitions to new third-generation ("3G") and other advanced technology platforms. Without question, the mobile telephone business is in a transformational stage, one where our customers not only expect extensive coverage for their voice calls, but are demanding the availability of e-mail and internet access wherever they are. Consumer demand for wireless data services is growing tremendously, as demonstrated in part by Sprint's successes. Millions of Sprint's current customers subscribe to data services. At the end of 2004, there were nearly 7.7 million direct wireless data subscribers, including 6.2 million Sprint PCS Vision customers. Sprint Nextel's deployment of a 3G platform promises to accelerate these trends.

In June 2004, Sprint announced adoption of a 3G platform to enhance the PCS Vision network's data rate and capacity. This platform provides an order-of-magnitude increase in data rates. The platform is expected to provide a peak downlink data rate of 3.1 mbps, with an anticipated average data rate of 400-600 kbps. Uplink data rates peak at 1.8 mbps, with average user data rates in the 300-500 kbps range. Sprint has begun launching this service and plans to make it available to 129 million people in 39 major cities this year; coverage will be extended to the vast majority of its licensed markets by year-end 2006.

The merger will ensure that Nextel's customers have access to this industry-leading broadband network. At the same time, it will obviate the need for a multi-billion dollar investment by Nextel in new advanced network facilities that would offer services that Sprint is already in the process of deploying.

Looking to the future, the companies expect to make key investments in broadband technology research and development to deliver more advanced offerings across all of their spectrum holdings. Combining Sprint's and Nextel's assets provides the financial flexibility to pursue opportunities that could have been prohibitively costly or risky for each company individually. Although there will be challenges, the new company's goal will be to go beyond 3G capabilities to provide customers with a complete interactive multimedia experience. The company expects to deploy bandwidth-intensive applications that incorporate devices, applications, and smart network technologies into an intuitive, easy-to-use service that will enable applications like video-on-demand, document collaboration and video conferencing over wireless networks. Sprint and Nextel intend to provide this advanced service to a nearly nationwide footprint, including many rural areas, and would offer high-speed, low-latency access to high-quality multimedia content at reasonable prices. Without doubt, the deployment of new wireless, interactive multimedia services has the potential not only to enrich the lives of millions of Americans through an enhanced, visual end-user experience, but also to increase productivity and reduce costs by providing the ability to access more information and more images on the go than ever before.

CREATING A STRONGER WIRELESS COMMUNICATIONS COMPETITOR

Competition in the mobile telephony industry in the United States is vigorous and dynamic and will remain so after Sprint and Nextel merge. With increased scale, complementary wireless and IP network assets, and the independence to take on the biggest phone companies, Sprint Nextel will be in a position to compete effectively with both wireless and wireline companies. And because Sprint and Nextel intend that the merged company will spin off Sprint's incumbent local phone assets, the combined company will have an unmatched incentive to pursue a wireless future such that wireless and wireline services increasingly compete for customers, unlike other large wireless providers that are primarily owned by Bell company parents. The merger will not change Sprint's relative market position. Sprint is currently the third largest wireless carrier, and as a result of merger, the combined company will still hold the number three position. Sprint and Nextel today have a combined customer base of approximately 40 million wireless subscribers, compared to 49.1 million at Cingular and 43.8 million at Verizon Wireless. T-Mobile and regional wireless players also are key players and compete vigorously in the marketplace.

As a combined entity, Sprint Nextel will enjoy economies of scale and scope that are expected to improve service quality and reduce the cost of serving an additional wireless customer and providing an additional minute of wireless service. As a result, the merger will yield a stronger and more efficient wireless competitor.

After accounting for the costs of integrating the two companies as well as other merger-related costs, it is estimated that the Sprint Nextel merger will result in total net synergies of approximately $12 billion on an after tax, net present value basis. These synergies will be realized through numerous cost savings, including, but not limited to,

- sharing future costs of undertaking research and development efforts and deploying innovations to the networks
- sharing the expense of implementing improvements to information technology and billing, customer care, and sales and marketing systems
- sharing each other's network coverage in geographic areas where the other is not as developed, thereby avoiding the cost of duplicating cell sites in those areas
- sharing facilities to collocate a significant number of existing and planned cell sites which will reduce the cost of cell site deployment and ongoing cell site expenses (as well as improve coverage).

These cost reductions and improvements in quality and technology will enable Sprint Nextel to be more competitive in the future and will benefit consumers by improving the coverage, quality and scope of the services we offer them. The cost savings will also allow us to establish new services that are more favorable—in terms of value, quality and/or features—than would be available from either company absent the merger.

The combined company will be able to offer the benefits of Sprint's wireline network solutions to Nextel's business and consumer customers. Sprint has one of the largest fiber networks in the United States. This network has significant operational advantages, including the ability to seamlessly interconnect a variety of technologies, accommodate diverse standards and protocols, and provide secure communications. Sprint's wireline network is extensive and robust. As noted above, its U.S. network consists of more than 34,000 physical route miles of fiber optic cable. Its global network consists of over 75,000 route miles of fiber, including an ownership stake in major undersea cable systems. As a result of the merger, Nextel's customers will receive access to Sprint's suite of voice, data and IP products and integrated solutions provided over Sprint's extensive wireline network.

It is worth noting that Sprint has been a leader in providing other firms with "second brand" opportunities. Under such arrangements, firms use Sprint's wireless and wireline networks to provide service to consumers under their own brand names (i.e., "second brands"). These second branding opportunities allow companies like Virgin Mobile and ESPN to provide wireless services without the time delay and expense of first replicating Sprint's wireless network. These companies leverage their marketing capabilities to become nationwide wireless competitors on their first day of service. And they do this by utilizing the Sprint network facilities, which allows us to make more efficient use of our network and fixed operational costs. The merger will advance the availability of wireless service from MVNOs by including advanced services and functionality in their retail product offerings.

Sprint Nextel will be a formidable competitive force with every incentive to optimize the wireless future. Nextel and Sprint are industry-leading companies in technological innovations and data solutions. These differentiating characteristics will position the combined company as a strong and innovative competitor. Following the intended spin-off of Sprint's ILEC operations, the combined company will lack any

material incumbent LEC wireline business restraint on its competitive strategy, and, with its wireless focus, Sprint Nextel will be a true competitive alternative to wireline local telephony. I expect, therefore, that this merger will accelerate the increasing substitution of wireless-based services for wireline-based services, thereby creating growth in the wireless industry.

In closing, I wish to emphasize my view that Sprint Nextel will be the premier communication solutions provider by providing its customers with an unmatched portfolio of communications services. Whether it is wireless, IP, data or multimedia, Sprint Nextel will provide robust integrated wireless and IP-based wireline solutions to businesses and consumers.

Thank you. I would be happy to respond to any questions that Members of the Committee may have.

Chairman BARTON. We thank you.

And last, but not least, the Chairman and CEO of Nextel, Mr. Tim Donahue.

STATEMENT OF TIMOTHY DONAHUE

Mr. DONAHUE. Thank you, Mr. Chairman, and thanks to the members of the committee.

I appreciate the opportunity to be a part of today's hearing on the communications industry and how technology is driving change in the marketplace. It is a theme that captures the entrepreneurial spirit of our company and speaks directly to Nextel's founding.

Since 1987, Nextel has been a pioneering, customer-focused competitor with differentiating technology. Nextel is currently the fifth largest wireless service provider in the United States with a team of 19,000 dedicated employees serving more than 16 million customers. Nextel provides a wide range of digital, wireless, voice, and data communications services over its all-digital packet data iDEN technology network. Nextel's differentiating direct-connect walkie-talkie feature is a significant and innovative advancement in wireless communications that expands typical dispatch service coverage areas using the spectrum more efficiently and provides extra security to important customers, such as public safety and government users.

The communications industry, and particularly wireless, is one of the most competitive, dynamic, and fastest growing industries in the U.S. This is an industry that is characterized by robust competition and innovation. According to CTIA, The Wireless Association, wireless subscribers grew from slightly more than 97 million in 2000 to more than 169 million as of June 2004. Total industry revenues for 2004 are expected to tally more than $100 billion, approximately double the industry revenue in 2000. Customer minutes of use have increased coverage and service has improved, and innovative new services are introduced every month. Yet the average monthly consumer bill has increased less than 10 percent over the past 5 years, and the price per minute of use has dropped by an overwhelming 81 percent to under 10 cents in June of 2004.

I am thrilled to be a part of the proposed merger with Sprint, as this new company will not only accelerate these trends but also enable the new company to compete more effectively with large industry leaders. While the proposed combination of Nextel and Sprint will result in a communications company with more than 40 million customers and networks that cover over 262 million people, Sprint Nextel will still be only the third largest carrier in terms of subscribers.

Sprint Nextel will be well positioned in the most dynamic areas of the industry, including mobile data and push-to-talk features, where Sprint and Nextel are innovators in the technology. This focus, coupled with Sprint's global Internet network will enable the new company to provide differentiated communications solutions through integrated applications for business and government and new broadband wireless services for consumers. We will be the only full service communications provider not affiliated or owned by a Bell operating company.

Following the close of the merger, Sprint Nextel intends to separate Sprint's local telecommunications business, including consumer business and wholesale operations from its other businesses and then spin this separated company off to Sprint Nextel shareholders in 2006. This is a pro-competitive combination that will provide business and consumers with real and compelling product and service choices.

For business customers, Sprint Nextel will be able to provide robust, integrated wireless and IP-based wireline solutions. We will be able to invest in next-generation wireless data services, bringing new and compelling products to market, including wireless, multimedia, web browsing, messaging, gaming, and music on the go. And importantly, for all customers, Sprint Nextel will be able to cost-effectively invest to improve wireless network quality and coverage.

Sprint Nextel will have a clear technology migration path. The new company will have robust wireless network capabilities, including a nationwide 800 megahertz iDEN network and a Nation 1.9 gigahertz CDMA network, which will enhance—would be enhanced to include nationwide cutting-edge EV-DO Rev.A, high-speed data services. Sprint Nextel will also have the capability to deploy new wireless interactive multimedia services on the two companies' 2.5 gigahertz combined spectrum holdings.

Combining these wireless assets with Sprint's nationwide global IP backbone, Sprint Nextel will be positioned as a key partner for large content providers, system integrators, mobile virtual network operators, and other new telecommunication entrants. By partnering with content providers and entrepreneurs, Sprint Nextel will be able to offer a full portfolio of services, voice, data, video, wireline, and wireless as well as customized enterprise applications and integrated business solutions.

Nextel has a long and proud history of working closely with the public safety community. We support their efforts with products and services and work closely with them in designing communication tools that make us all more secure. Sprint and Nextel have agreed that the combined company will assume and honor all obligations that Nextel has accepted in the Federal Communications Commission's 800 megahertz proceeding, "Improving Public Safety in the 800 Megahertz Band." Going into our merger discussions with Sprint, honoring Nextel's 800 megahertz obligations was a non-negotiable item for Nextel, and it was also one of the easiest ones to resolve. Sprint and Nextel are committed to supporting the public safety community and its unique communications needs.

Mr. Chairman, if I had to describe in one word why this proposed merger makes sense and should be approved, it is growth. Sprint

and Nextel share compatible cultures built on a tradition of innovations and competitiveness. Together, Sprint and Nextel will have the resources to develop and deploy compelling differentiated services by unleashing the combined strengths of the two companies, each of which is recognized as a product and network innovator. This growth through the merger of equals will enable Sprint Nextel to be a strong competitor and industry leader that drives innovation, technology, and ultimately benefits American consumers.

Thank you again for the opportunity to share my perspectives on our pending merger with Sprint. I will be pleased to answer any questions.

[The prepared statement of Timothy Donahue follows:]

PREPARED STATEMENT OF TIMOTHY DONAHUE, PRESIDENT AND CHIEF EXECUTIVE OFFICER, NEXTEL COMMUNICATIONS, INC.

INTRODUCTION

Mr. Chairman and Members of the Committee, my name is Tim Donahue, and I am president and chief executive officer of Nextel Communications, Inc. I appreciate the opportunity to be a part of today's hearing on the role of technology in mergers within the telecommunications industry. It is a theme that captures the entrepreneurial spirit of our company and speaks directly to its founding.

Since 1987, Nextel has been a pioneering, customer-focused competitor with important differentiating technology. This customer focus and product innovation has resulted in Nextel having some of the most loyal customers in the industry. Nextel realizes by far the highest average revenue per unit and has one of the lowest churn rates in the industry. Our customers like our products and services and they tend to use them more heavily than the typical wireless customer.

Nextel is currently the fifth largest wireless service provider in the United States, with a team of 19,000 dedicated employees serving more than 16 million customers. Nextel provides its innovative all-digital wireless services in 202 of the largest 300 markets in the U.S. where nearly 217 million people live or work. Together with Nextel Partners, Inc., we serve 297 of the top 300 U.S. markets where approximately 261 million people live or work.

Nextel provides a wide range of digital wireless voice and data communications services over its all-digital, packet data network based on integrated Digital Enhanced Network, or *i*DEN®, wireless technology developed in conjunction with Motorola, Inc. Operating on licenses in the 800 MHz and 900 MHz bands, Nextel's iDEN network provides a comprehensive suite of advanced wireless services and features, including digital wireless mobile telephone service, Nationwide Direct Connect® and International Direct Connect℠ walkie-talkie feature and such wireless data services as Internet access and short messaging. In particular, Nextel's Direct Connect® walkie-talkie feature is a significant and innovative advancement over traditional analog dispatch services, augmenting critical communications systems for the public safety community. More specifically, the Direct Connect walkie-talkie feature expands the typical dispatch service coverage area, uses the spectrum more efficiently, and provides extra security through digital multiplexing technology.

THE WIRELESS INDUSTRY TODAY

The wireless industry today is one of the most competitive, dynamic and fastest growing industries in our country and is critical to the nation's GDP. From the workplace to the classroom and to the home, wireless devices and their applications play an expanding role in our everyday lives. According to CTIA—The Wireless Association, wireless subscribers grew from slightly more than 97 million in 2000 to more than 169 million as of June 2004. Total industry revenues for 2004 are expected to tally more than $100 billion, as compared to approximately $50 billion in 2000. Customer minutes of use have increased, coverage and service has improved and innovative new services have been made available. Yet the average monthly consumer bill has increased less than 10 percent over the past five years and the price per minute of use has dropped by an overwhelming 81 percent to under 10 cents in June 2004. This is an industry that is characterized by robust competition and innovation, and it is an exciting time to be in it.

SPRINT/NEXTEL MERGER

On December 15, 2004, Nextel and Sprint announced their intention to merge, with the new company to be called Sprint Nextel. Sprint and Nextel are being valued as equal partners in the merger where shareholders will own 50.1 percent and 49.9 percent, respectively. A highly experienced management team will lead Sprint Nextel, combining the expertise of both companies. Gary D. Forsee, currently chairman and chief executive officer of Sprint, will become president and chief executive officer of Sprint Nextel, and I will become chairman of the new company. Together we have a proven track record of leadership and nearly six decades of industry experience. Further, the Sprint Nextel Board will consist of 12 directors, six from each company, including two co-lead independent directors.

Following the close of the merger, Sprint Nextel intends to separate Sprint's local telecommunications business, including consumer, business and wholesale operations from its other businesses and then spin this separated company off to the Sprint Nextel shareholders sometime in 2006, pending customary regulatory approvals.

The combination of Nextel and Sprint will result in a wireless company with more than 40 million customers (35 million direct and 5 million through affiliates and partners), a strong growth profile, a strong spectrum position, the most valuable customers and networks that directly cover nearly 262 million people, more of the U.S. population than any other carrier; yet Sprint Nextel will be only the third largest carrier in terms of subscribers. Sprint Nextel will have a balanced mix of consumer, business and government customers, and the ability to meet the communications needs of a broader range of customers than either company on its own. We will be the only full service communications provider not affiliated with or owned by a Bell operating company.

Sprint Nextel will be well positioned in the fastest growing areas of the telecommunications industry, including mobile data and push-to-talk features, where Sprint and Nextel are innovators in technology. With Sprint's global Internet network, the new company will be positioned to provide differentiated communications solutions through integrated applications for business and government and new broadband wireless services for consumers. Without this merger, neither Nextel nor Sprint would independently achieve all the technical innovations, additional coverage and capacity that I discuss later in my testimony today.

Mr. Chairman, if I had to describe in one word why this proposed merger makes sense and should be approved, it is "growth." I am confident that Sprint Nextel will generate efficiencies that will benefit customers, shareholders and employees and will allow the new company to invest in innovative new services that each company would have found to be more difficult and expensive on its own. The new company will capitalize on its leadership position in key growth areas, unmatched asset mix, clear technology migration path, brand strength, innovative products and services and talented employees. We share compatible cultures built on traditions of innovation and competitiveness. We will have the resources to develop and deploy compelling, differentiated services by unleashing the combined strengths of the two companies, each of which is recognized as a product and network innovator.

The Sprint Nextel merger is a pro-competitive combination that will provide customers with real and compelling product and service choices, including wireless multi-media, web browsing, messaging, gaming and music on the go. For business customers, we will be able to provide more robust integrated wireless and IP-based wireline solutions. We will be able to deploy next-generation wireless data services, bringing new and compelling products to market to benefit consumers and businesses, including a potential third new platform to the home. And importantly, for all customers, we will be able to cost effectively invest to improve wireless network quality and coverage.

There are technology synergies between Sprint and Nextel that make this merger unique. Sprint Nextel will have a clear technology migration path and valuable and extensive network and spectrum assets. The new company will have robust wireless network capabilities, including a nationwide 800 MHz iDEN network and a national 1.9 GHz CDMA network, which it will enhance to include nationwide cutting-edge EV-DO Rev.A, high-speed data services. We will deploy a high performance push-to-talk feature on the CDMA network and create interoperable gateways between the iDEN and CDMA networks, thereby enabling our current and future customers to select the services that most effectively meet their wireless communications needs. Sprint Nextel will also have the capability to deploy new wireless interactive multimedia services on the two companies' 2.5 GHz combined spectrum holdings that together can reach 85 percent of the households in the top 100 markets.

Sprint Nextel will also use Sprint's nationwide backbone wireline (long distance) network that includes 30 Sprint-owned metropolitan area networks in the U.S. as well as 37 international fiber points of presence. These combined capabilities are expected to make Sprint Nextel a key partner for the largest content providers, systems integrators, mobile virtual network operators and other new telecommunications entrants. By partnering with content providers and entrepreneurs, Sprint Nextel will offer the full portfolio of consumer services - voice, data, video, wireline and wireless—as well as customized enterprise applications and integrated business solutions.

As with any merger, there also will be opportunities for savings through synergies. The combined Sprint Nextel is expected to deliver operating cost and capital investment synergies with an estimated net present value of more than $12 billion, over 37 percent of which is expected to come from the avoided network capital costs of building a separate Nextel next-generation network. These synergies will also include reduced network operating expenses; reduced network capital costs resulting from sharing cell site locations and facilities; lower access costs as a result of migrating Nextel backhaul and other telecommunications traffic to Sprint's long haul infrastructure; reduced network capital expense after the merger by building a true IP-based multimedia network; and reduced expenses due to economies of scale in the combined companies' sales, marketing, general and administrative and IT costs.

PUBLIC SAFETY

Nextel has a long and proud history of working closely with police, fire, emergency communications officials and the rest of the public safety community. We support their efforts with our products and services and work closely with them in designing communications tools that make us all more secure. Sprint and Nextel have agreed that the combined company will assume and honor all obligations that Nextel has accepted in the Federal Communications Commission's 800 MHz proceeding, Improving Public Safety in the 800 MHz Band. Going into our merger discussions with Sprint, honoring Nextel's 800 MHz obligations was a non-negotiable issue for Nextel, and it also was the easiest issue to resolve. Sprint and Nextel are committed to supporting the public safety community and its unique communications needs.

After years of fighting for a comprehensive solution to public safety interference in the 800 MHz band, Nextel is proud of the role it played in helping to bring about a solution to this important public safety issue. I want to thank members of this committee, including Chairman Barton, Chairman Upton, Representative Dingell, Representative Markey, and Representative Rogers, as well as our partners in the public safety community and the many others that supported us in seeking a fair, timely and complete solution to the critical issue of public safety communications interference. As many of you know, on February 7th 2005, Nextel accepted the terms of the Commission's order and we have already begun work on this critical project. We intend to move as quickly as possible to implement the FCC's decision. Our nation's first responders deserve no less from us.

CONCLUSION

Thank you again for the opportunity to discuss our pending merger with Sprint. This merger makes sense for our customers, our employees and our shareholders. It will result in a more formidable communications competitor and will accelerate the introduction of the new products and services our customers demand. I would be pleased to answer any questions you might have.

Chairman BARTON. We thank you, Mr. Donahue.

The Chair recognizes himself for the first 5-minute questioning period.

My first question is to Mr. Whitacre, and it is really a statement and a question. You know, I joked in my opening that I had just decided to drop one of my SBC lines at my home in Ennis, but I think it shows what is going on. I have had two telephone lines there, because one was a—was called a dial-less line that allowed a dial-up modem for Internet, and the other is the traditional phone line that is in the phone book that we have always had. But we always had a—but I also had a cable outlet for TV. Well, the cable provides broadband, as does SBC, and so we decided to go to

broadband on the cable, and once we got that, you don't need that second line to have the dial-up modem. But the second phone line was costing $50. The addition to the cable bill was only $30, so you save $20. Now that doesn't sound like a lot, but that is what is going on all over America as people see that there are competitions. So Congresswoman Eshoo was talking about you are going to have less competition, but in a way, you are really going to have more competition because there are so many different ways to get into the home. So you know, when you said that you are losing 60,000 phone lines a day—did you say a day or a week?

Mr. WHITACRE. A week.

Chairman BARTON. A week, that shows that the marketplace is changing, and that is why you need this merger. Did you want to comment on that at all?

Mr. WHITACRE. Well, I would like to comment on that. I think that is exactly right. It wasn't many years ago that there was only one way into the house for voice. If you remember, I don't think the Internet was even mentioned in the 1996 Telecommunications Act. If it was, it was in passing. Wireless was not contemplated. We now have so much competition from cable companies, from wireless companies, and from traditional companies like SBC, that there are many ways for a customer to get service, not only voice service, but long distance service, broadband service, all kinds of services now. So it has changed a great deal since 1996, and that is really why we are here today. This has to be changed. It is just not working as it is today.

Chairman BARTON. But your competitors are less and less another phone company as it is an information provider company.

Mr. WHITACRE. Well, that is true, I guess. Some of the so-called c-lex have gone out of business, although there are many still in business. But the cable companies we would view as our primary competitor in the future are offering this broadband path, if you would, which can handle voice and data and Voice-over IP doing everything. So there is a tremendous amount of competition now for customers out there.

Chairman BARTON. My next question is to both Mr. Dorman and to Mr. Capellas who represent AT&T and MCI. Is there any danger, as we go through these mergers, that what we call the long distance segment of the market becomes non-competitive as you merge with SBC and as you merge? Do we get to a situation where we have again created a monopoly of the long distance service and that raises prices? Would you two gentlemen like to comment on that?

Mr. DORMAN. Sure. I think there has been a profound change in how long distance is provided. In fact, the wireless industry today probably is originating as much long distance in the traditional sense as the wireline, and that shift has been going on dramatically in the last 5 years as more and more consumers select wireless as their principle tool for communicating and therefore get long distance service included. I also believe that the number of competitors in the wireless base, you know, there are at least, what, five national competitors in wireless, even after the mergers have taken place, along with the ongoing competition, as Ed mentioned, from cable as well as the incumbent telephone company is

going to provide a range of choices in long distance that will be superior.

Chairman BARTON. Mr. Capellas?

Mr. CAPELLAS. Well, I mean, I think we have already heard somebody say unfortunately, you know, long distance is almost now perceived to be free. So if you really look at what people purchase, I mean, you—how many teenagers now growing up will actually never own a landline? They will simply go to wireless. So if you think about what will happen in the future, the concept of long distance as a product will cease to exist, whether that is in the consumer market or, frankly, in the business market. Nobody builds an IP network just to put voice on it. Voice simply becomes a feature on an advanced network. And that is even before we start to see, for example, Microsoft fully enabling telephony on the desktop. So one has to think about long distance as a feature on a network and telecommunications as an integrated provider of different services, and the technology blends it all together that you can't separate them apart. So even the notion of long distance, I think, is something that is rapidly fading from the vocabulary.

Chairman BARTON. Right. I am old enough to remember when somebody said you are getting a long distance phone call, that was a big deal, because it was very expensive. And they were charging you $1 a minute. So if they said long distance, you ran to the phone, because it was important. Somebody had died or somebody had had a baby or something. I mean, it wasn't a call that happened every day, so——

Mr. CAPELLAS. And the $1 a minute I can assure you is no longer——

Chairman BARTON. Yeah. My last question, and my time is expired, but I want to ask Mr. Forsee a question that I asked in my office to him yesterday. We are going to a marketplace, and again, we are very interested in the business—the commercial aspects of this, but all of us, you know, are retail congressmen. We all get elected by people. And right now, it is—the market, you have got—you have broadband connection through the phone line. You have broadband connection through the cable. At what point do you get the ability for wireless to go head-to-head into the home with some sort of a broadband capability so that consumers in their homes not—have just two choices, but three choices?

Mr. FORSEE. I think—Mr. Chairman, I think those choices are coming very quickly as we continue to deploy data services into the traditional voice wireless networks. Those choices are being made as we speak. We estimate as many as 8 to 10 percent of customers have already cut the cord for basic voice services, and you could also assume over time that customers will want the flexibility associated with wireless data to become untethered from their DSL service or from their cable modem. Sprint Nextel will have the opportunity. As I indicated, we are deploying now our third generation wireless data network. And as Tim indicated, as we then have the opportunity with our 2.5-gigahertz spectrum to consider deploying a nationwide 2.5 spectrum network, which will really be the fourth generation. At that point in time, I think you have a potential viable alternative to fixed data, and at that point in time, customers truly will have a choice.

Chairman BARTON. So although we are going to have fewer companies than we are familiar with, very soon we are going to have actually more competition, is that safe to say?

Mr. FORSEE. That is the case.

Chairman BARTON. Okay.

My time is expired.

I recognize the ranking member of the subcommittee, Mr. Markey, for 5 minutes.

Mr. MARKEY. I thank you, Mr. Chairman.

Mr. Whitacre and Mr. Seidenberg, you are both acquiring companies that, under different circumstances might have competed against you for wireline residential customers. When the government created its wireless policy, it created a third, fourth, and fifth license that was not owned by the two incumbents, and that led to a plummeting of cell phone bills. The same thing happened when AT&T was broken up by the government. We saw a plummeting of long distance rates. Will each of you pledge that residential consumers will not see an increase in their phone service bills as a result of these mergers?

Mr. WHITACRE. Do you want me to take that one, Ivan?

You know, this merger with AT&T, Congressman Markey, they are leaving, and announced last July that they are not in the consumer markets, so this is—this merger is going to have no impact on the consumer marketplace. They are not.

Mr. MARKEY. So you aren't saying it will not result in an increase——

Mr. WHITACRE. No.

Mr. MARKEY. [continuing] in residential rates? So you are saying that?

Mr. WHITACRE. They will not. They are not in the business. We are not acquiring a company that is in the consumer mass market business.

Mr. MARKEY. So do you pledge not to increase rates to residential——

Mr. WHITACRE. I can't pledge that forever, but I don't see anything that would impact that in the, you know, foreseeable future.

Mr. MARKEY. How long is the foreseeable future, in your mind? How long could you make a pledge for that residential rates would not go up?

Mr. WHITACRE. Well, you know, I can't make a pledge for any specific length of time, but I don't foresee that happening. There are still many competitors. There is the wireless company——

Mr. MARKEY. No, I understand that.

Mr. WHITACRE. But I can't tell you a specific number of days or months.

Mr. MARKEY. You—and again, looking——

Mr. WHITACRE. But I don't foresee——

Mr. MARKEY. We are looking for years, not days or months.

Mr. WHITACRE. I don't foresee it in years. I really don't foresee it. I think the market forces are such, and there are so many people in the business, it probably won't happen.

Mr. MARKEY. Mr. Seidenberg, would—can you make a pledge that there will not be an increase in costs for residential consumers?

Mr. SEIDENBERG. No, sir; but what I can do is be—is tell—explain the record. In the past 15 years, consumer prices, as far as we are concerned, have gone down. Technology has driven them down, and competition has driven them down. If you want to ask that question, then we need the cable companies at the table. We need everybody who is providing these services. And I think the bottom line is we are getting so much innovation in the space, unit costs are going down and prices have been falling.

Mr. MARKEY. So are you pledging that prices will go down for consumers, given your analysis of what is happening?

Mr. SEIDENBERG. We are going to pledge to be the best competitor we can, provide the best value to customers, and the market will take care of the answer, as it has for the past 15 years.

Mr. MARKEY. Well, the best value for consumers is always the lower price, from the consumer's perspective. That has happened in wireless. It has happened in long distance. And it has happened in residential, and we just don't want to see, as these two competitors leave the marketplace, that there is an increase.

Mr. SEIDENBERG. That is a fair point, but now if I can address that, these two competitors or let us say—just let me mention Michael, in the consumer space, they have decided to get out of the business not because of us. It was because of the Internet and——

Mr. MARKEY. No, they have decided to exit because of an FCC decision that was a petition from the Bells to the FCC. That is why they are out of the business. They would still be in the business, and that is the only reason they are leaving this business, from their earlier testimony before the FCC.

Let me ask a question of Mr. Whitacre and Mr. Seidenberg. I am going to read to you testimony from another witness before the committee and ask whether you agree or disagree.

"The open access and interconnection requirements placed on telephone companies should also be applied to the cable industry. Furthermore, open interconnection can help ensure that competition can still thrive, even before customers have access to at least two ubiquitous competing broadband networks. As the Nation makes the transition to a system of multiple broadband networks, competition can be safeguarded if all information providers are guaranteed access." Do you each agree with that statement?

Mr. WHITACRE. No, I don't agree with it.

Mr. MARKEY. Do you agree with that statement, Mr. Seidenberg?

Mr. SEIDENBERG. Well, I agree with Ed.

Mr. MARKEY. You agree with——

Mr. SEIDENBERG. Ed, yes.

Mr. MARKEY. —Mr. Whitacre? Okay.

Well, can you guess who that witness was and the year? It was Dick Notabart, the CEO of Ameritech, February 9, 1994, before this committee, representing the Bells in terms of their view of broadband networks. That was a hearing. That bill was about broadband networks. On the same day, Mr. Seidenberg, you testified that "all providers of similar services should be treated alike. Regulations should be based on the service provided, not on the identity or parentage of the entity providing it." Do you still agree with that?

Mr. SEIDENBERG. That is a very smart statement. That is a very smart statement.

Mr. MARKEY. Absolutely. Would it differ whether the service was voice or video?

Mr. SEIDENBERG. Well, you know, I have been testifying before this committee and you, sir, a long time, and I have always felt that regulation has focused on the facilities in the physical plant, and it shouldn't. It should focus on the service. And in my view, we should be moving toward treating services provided by different carriers the same way.

Mr. MARKEY. So let me just conclude, if I may. In my view, asymmetrical regulation for similar providers is unfair, but we must keep consumer interests first and foremost, and that means fostering direly needed competition while assuring effective consumer protection. That will be the test of this committee over the next year.

And I thank the witnesses.

Mr. UPTON. We recognize co-chairman of the full committee, Mr. Bilirakis from Florida.

Mr. BILIRAKIS. Thank you, Mr. Chairman.

I have, I guess, the same question to both Mr. Dorman and Mr. Capellas. Mr. Dorman, what if the deal with SBC did not happen? Can you tell us what AT&T's future would be in a year and in 3 years?

Mr. DORMAN. I think that it has been clear of the—our focus on the business market was one that we believe that we could continue to be successful in. While I remain concerned about how the industry would evolve, we believe that AT&T, after making the decision to exit the consumer market, could serve business customers globally as a competitor. We didn't see ourselves going out of business, certainly.

Mr. BILIRAKIS. And that would be the case for the foreseeable future?

Mr. DORMAN. That is what we believe, yes.

Mr. BILIRAKIS. Mr. Capellas, the same question, really. If the deal—if MCI was not going to be acquired this year, what would MCI's future be in a year and then 3 years?

Mr. CAPELLAS. Well, it is really the same answer and a pretty much similar business model. I mean, the decision to exit the consumer business, that is one we had made a year ago that was clear. We were in the process of transforming the company to service large enterprise and government agencies. We would have technologically consolidated to a common IP core and then started to offer other services. And the question that we would have faced is how do we vertically integrate the different services in order to service our customers, and that would have had to have been done with different relationships and partnerships, but the answer is quite similar.

Mr. BILIRAKIS. All right. Thank you.

A question for Mr. Whitacre and Mr. Seidenberg. In his prepared testimony for today's second panel, Mr. Halpern from Sanford Bernstein makes the following statement. "Absent consolidation, the four remaining regional Bells would need to spend between $5 billion and $7 billion in operating and capital expenses over the

next 5 years to build their credibility and competency serving the enterprise market." Do you agree with Mr. Halpern's assessment, Mr. Whitacre?

Mr. WHITACRE. Congressman, I do agree with that. In fact, we have announced for SBC alone those kinds of expenditures. We are just not in that business to get in it as a huge undertaking. We are in the process of just beginning that. I must admit not doing extremely well. So it would take those kind of numbers, if not more.

Mr. BILIRAKIS. Mr. Dorman? I mean, Mr. Seidenberg?

Mr. SEIDENBERG. And I agree with that. The cost for us to enter the market would be pretty high.

Mr. BILIRAKIS. Okay. Mr. Whitacre, in the public interest showing filed by SBC and AT&T with the FCC, your company states that the existence of separate local and long distance companies no longer benefits consumers, so I think that sort of reflects, I guess, the bottom line of everything we are doing here. Can you elaborate on why that is the case?

Mr. WHITACRE. Well, I think probably the clearest example is if you are a wireless company subscriber, it makes no difference whether you are local or long distance. A call is a call. Long distance is essentially free. So it is not differentiated at all if you are a wireless customer. The revenues from our long distance customers, which we finally got in in the last year and a half, 2, 3, or 4 cents a minute. So it is essentially not a cost anymore. It is not, as the chairman said, not what it used to be. So long distance and local, there is no difference, and the cost is the same.

Mr. BILIRAKIS. Thank you.

Mr. Chairman, I yield back.

Mr. UPTON. Thank you.

We recognize Mr. Boucher for questions.

Mr. BOUCHER. Well, thank you very much, Mr. Chairman.

And I would like to join with you in thanking these witnesses for their excellent testimony today.

As Mr. Whitacre noted in his testimony, the United States is lagging much of the developed world in terms of broadband deployment. When you look at the percent of the Internet-using population that employs broadband, we are number 11, and we can do far better.

Can we anticipate that these mergers will give you a financial incentive to accelerate the deployment of broadband over landlines and perhaps over your wireless networks as well by utilizing 3G technologies more rapidly than you would in the absence of these mergers? Mr. Seidenberg, Mr. Whitacre, and Mr. Forsee.

Mr. WHITACRE. Well, I can go first.

You know, the—broadband has been held back by uncertain regulations. What did it mean? Did we have to build a network and then sell it to somebody else at below our cost? Just what were the rules surrounding it? It is really based on business decisions. Some of that has been clarified recently, and SBC pronounced—for example, has announced Project Light Speed, which puts fiber further into the network, which enables broadband. But today, we are able to reach, I believe, about 80 percent of our customers with broadband, those not out in the rural. Wireless is certainly going

to take care of that, as Mr. Forsee said earlier, because we are right on the cusp of using wireless broadband deployment. You know, even late this year or early next year, I think you will see that go out and go big time. Cable companies are also in broadband, so I think we are going to move forward rapidly on broadband. And I think these mergers will help that a great deal.

Mr. BOUCHER. Mr. Seidenberg?

Mr. SEIDENBERG. Yes, Congressman. As most people know, we already have a very aggressive program to deploy broadband, both in our land-based business and in our wireless business. What this transaction will help us do is take further inefficiencies out of building advanced platforms, having that traffic and those savings run over to the rest of our business and give us even more financial strength. So in the long term, what I think this transaction will do is make our network investment-based activity more robust in the long term.

Mr. BOUCHER. Thank you.

Mr. Forsee, do you anticipate your merger with Nextel as having the effect of encouraging the deployment and perhaps making more rapid the deployment of 3G technology over your wireless network?

Mr. FORSEE. Congressman, I think that is absolutely the case. Both Sprint and Nextel have been very aggressive in looking at our network deployment plans, and this combination will allow the Nextel users to migrate over time to the CDMA network, and as we do that, we will be putting in, as I indicated earlier, our third generation—our DO network. That will move to DO Rev.A, which will allow the features and function that is on the Nextel network to be compatible with our CDMA network. And as we do that, customers will begin to have choices. Customers will have the choice. If they want the portable service in their home, whether it is on 802-11 or Y-fi or the benefit of true mobility. With the networks that we are deploying, customers will be able to make those choices. And as we indicated, customers are doing that today.

Mr. BOUCHER. Okay. Thank you very much.

Contrary to what some have suggested, it appears to me that you are going to have the capability to compete with each other out of region should you choose to do so. And the arrival of Voice over Internet Protocol clearly creates a national market that can be exploited for the delivery of voice-based telephone service, using the Internet as the delivery mechanism. Could you, Mr. Seidenberg and Mr. Whitacre, comment on the extent to which you anticipate offering a national VoIP service and therefore competing with each other in voice traffic?

Mr. SEIDENBERG. Well, on this point, I would make the comment we vigorously compete with both Sprint, Nextel and Cingular today, so it is—shouldn't surprise anybody that our businesses have a history in the wireless side of vigorous competition.

In the enterprise market, which is the one we are talking about this morning, we already compete. We operate in 80 of the top 125 MSOs around the country, and we are competing as others around the table are doing the same with use. We have a VoIP service that we have offered. It is available to customers anywhere in the country. And I think that my comment on this is that we will pursue what makes sense in the marketplace as we go forward, but the

transaction will open our eyes and give us capabilities we never had before. And once we get the transaction completed, we will be in a better position to see how quickly we can move in some of these areas.

Mr. BOUCHER. Thank you.

Mr. Whitacre, any comment?

Mr. WHITACRE. I would have the same answer. We compete vigorously now on the wireless side. Ivan and I compete vigorously on the business side and the Voice-over IP space at the present time. I am in New York and Boston, and he is in Dallas. He is in San Antonio, so he is everywhere. He is in too many places, but he is everywhere. And I think that is—what we are going to see is a natural extension of that into the consumer-type markets. I don't think there is any question there will be more competition, not less.

Mr. BOUCHER. Thank you very much, gentlemen.

Thank you, Mr. Chairman.

Mr. UPTON. Thank you.

And I will now recognize myself for 5 minutes.

I appreciate, again, all of your testimony, and I, in reading the full testimony, Mr. Whitacre, you indicated that the teleco industry has been critical for domestic economic growth. It amounts to about 3 percent of the U.S. GDP. I noticed in Comm Daily last month, it says the U.S. telecom industry turned the corner in 2004. Spending grew from 7.9 percent to $784 billion according to TIA's 2005 telecom market review and forecast. It said that there was a significant improvement from gains of 3.6 percent in 2003, 1.9 percent in 2002. It goes on to further say that equipment spending saw its first gain after 3 years of decline, TIA said. Total equipment and software revenue grew 5.2 percent in 2004 compared to cumulative declines the previous couple of years.

I am interested in everyone's thoughts. Where are things going to go with these three mergers if they come about?

Mr. WHITACRE. Well, to preface that, SBC, which is the only one I can speak for, has been in a revenue decline, earnings per share decline, been pretty miserable for Wall Street for 4 or 5 years, losing those kind of customers, obviously. There were some regulatory changes affecting items. New technology has some impact on this, but for the last quarter of last year, our revenues were actually slightly positive for the first time in 4 years. That spending, in my judgment, will continue to—it has turned positive. It will go up. For example, we are spending a lot in the fiber markets to build Project Light Speed. There has been some work in Voice-over IP, so I think in general, maybe the economy, the technology, and some of these changes in regulation have had an impact, beginning late last year, and I think we are going to see a slight upturn in going forward.

Mr. UPTON. Mr. Dorman, did you want to comment?

Mr. DORMAN. I think the boom and bust cycle that we have witnessed have certainly impacted the total capital spending in certain areas, the deployment of national fiber. Networks exceeded all forecasts of demand. On the other hand, wireless technology deployment has grown at pace. Where capital budgets in wireless have actually expanded, new technologies that Mr. Forsee talked about, taking on new demands. Those equipment providers in the wireless

base have actually prospered and grown. In our world today, AT&T is deploying most of its new capital in the IP area. So we are adding capabilities to go from the traditional circuit-switch networks of the past, the so-called legacy networks, to the IP networks of the future, and that is both at a local level for the, if you will, on and off ramps to the network, as well as in the backbone and globally. So most of our spending, in terms of new spending, is focused in that area.

Mr. UPTON. Mr. Seidenberg?

Mr. SEIDENBERG. Yes. I—just to make sure I got the question, this was a—how much money we will spend on technology?

Mr. UPTON. Yeah, well, it is just—the industry itself——

Mr. SEIDENBERG. Right.

Mr. UPTON. [continuing] has finally turned the corner, so are we going to continue the upward drift?

Mr. SEIDENBERG. We are big believers in investing in our network. Our wireless company is investing—last year, it invested $5.5 billion in the business. Our telecom invested over $7 billion. We are very comfortable with that. I happen to believe that the more that regulation shapes around the market, the more you will see more investment. I think the places where we haven't invested is where we think regulation has lagged and created, I think, disincentives for investment. I think the events of the last 6 months give me great hope that, if we are allowed to chase the market, we are willing to take the risks to make the investments.

Mr. UPTON. Mr. Capellas?

Mr. CAPELLAS. Well, I don't think there is any question that, you know, if we just sort of look at the traditional world, virtually all of the testimony said the traditional world will decline. That is a fact. We understand it. The more interesting question is, as we have now set a foundation of all of this IP and technology in the ground, is the next generation comes, what do we put on top of it? I mean, one of the things that is powerful about the combinations we are doing here, we now can offer new kinds of services to the customers. For example, nocontent delivery systems that are entirely on the network that allow you to move voice or video around. If you ever watched teenagers do instant messaging, the next generation of, you know, pure peer-to-peer video and what could that do for an investment. So I think it is a classic case of the traditional will decline, the IP and the capability of broadband allows us to build new services, and now the question is the innovation of what we build on top of that. So I think you will probably see investment increase, but it is going to be in spaces we have never been before. And this new integrated service is why we need to have some of these combinations happen so that we can go to the next stage.

Mr. FORSEE. Yes, I agree with Mr. Capellas. I think what we have had the confidence to do is to continue, excuse me, to deploy network capital, because at the same time, we are investing in applications and content to ride on those networks. If you only invested with your know-how in building networks but don't invest in innovation to create application to customers where they want to use the network for, then that path won't work over time economically for investors. So we are very confident in our plans, as

Sprint and Nextel come together, that that is the path that will work for us as we invest both in networks but also in applications that can make those networks work better for consumers and for business customers.

Mr. UPTON. Mr. Donahue?

Mr. DONAHUE. Mr. Chairman, I don't think there is any question about the fact that capital spending in the wireless space, especially when Sprint and Nextel get together, is going to continue to increase. If you just look at Nextel, for example, this year, this is the largest program that we have had since our inception, yet we are in the process of putting together a merger where we are to get some capital efficiencies. But the demand is so great that we will spend $2.6 billion this year alone on expanding the footprint and expanding just to make sure we have quality for the customer.

In addition to that, if you take a look at fourth generation technologies, which we are very interested in, you are looking at new network builds on our 2.5, for example. So my view of the world is going to meet the demands of the customers, and they are significant in the wireless world.

Mr. UPTON. Well, I wish I could go on further. My time has expired. But I appreciate your answers.

I yield to Mr. Engel.

Mr. ENGEL. Thank you very much, Mr. Chairman.

Mr. Seidenberg, I want to read part of your testimony, because I want to highlight it, because I couldn't agree with it more when you say that the recent wave of mergers and acquisitions is simply the latest phase of a process that began several years ago, the restructuring of communications around new technologies and new markets. And then you continued by saying, "It should be evident to anyone with a cell phone or an e-mail account that the old distinction between local and long distance is obsolete, as is the need for separate companies to provide them. Competing technologies, cable, wireless, satellite, IP, and wireline, now offer consumers a wide range of choices for voice, data, and increasingly video." And I think that my colleagues should really bear that in mind. There are a lot of things that we didn't foresee under the Telecommunications Act of 1996. Technology created new competition that we didn't contemplate. No one thought of VoIP then. That eliminated a lot of barriers. Long distance is certainly cheaper now than it was many, many years ago.

So I know you had mentioned some of this before, and by the way, I also agree with your statement if we want to discuss competition, then cable and wireless should really be at the table as well. Can you tell us, Mr. Seidenberg, the impact of the Verizon purchase of MCI, what it will be on consumer prices? I know that Mr. Markey had sort of asked the question, but I am wondering if you care to elaborate on it.

Mr. SEIDENBERG. Thank you, Congressman.

Look, I think the result of all of this competition and consolidation has been a restructuring of the industry and a reduction in prices. When we are asked for a pledge, it is hard to pledge, but the fact is that the practice in the marketplace is prices have been coming down. And I am sure, as many members have been sitting here using their e-mails, no one has sent a local e-mail or a long-

distance e-mail. You send an e-mail. And so we have an industry that we can't spend money to build a business around a local e-mail or a local—or a long-distance e-mail. So we need to integrate it. So I think when you build these advanced platforms, just like you reference and my colleagues here have referenced, you lower the cost of these services and, in return, you pass that on to consumers in the form of lower prices.

I need to make just one last comment on this.

I don't think it is—anybody, even the consumer groups, have any complaint about unit costs going down and the pricing of services going down. What we shouldn't confuse is the fact that people use this a lot more than they did in the past, and so it is possible that usage is up, but in terms of unit pricing, it is way down from what—from any historical levels that we have ever seen.

Mr. ENGEL. Thank you.

Mr. Whitacre, would you agree with Mr. Seidenberg's in the terms of your own merger with AT&T? And I might also add, thank you for pointing out in your testimony that Mr. Seidenberg still has me as a customer.

Mr. SEIDENBERG. I would agree with what Ivan said. I think he is right on target.

Mr. ENGEL. Let me ask you another question, Mr. Seidenberg.

MCI has one of the most important backbones for the Internet in the world today, and not only do millions of consumers use it every minute, but the Federal Government relies on it greatly. I am wondering if you could tell us Verizon's plans to maintain and upgrade the MCI infrastructure.

Mr. SEIDENBERG. Well, in our merger agreement, our document, we have talked about what we need to do to add some capabilities, and we have indicated we will do that. Now beyond that, to be perfectly honest about it, we haven't sat down and planned through this. Until we go through the early stages of the merger approval process and the DOJ, we will probably pick that up later on. But one of the most important attractions to us of the entire MCI company was the exquisite relationships and network they have been building and the services they have been providing to the Federal Government for a long time. So it is a very important part of where we are heading. But we don't have a specific plan laid out yet.

Mr. ENGEL. Thank you.

Mr. Whitacre, could you answer the same question for SBC and AT&T's networks?

Mr. WHITACRE. Well, both have an important part of the Internet backbone. But that is not all. There are many companies that have part of the Internet backbone, and my recollection is 5 or 6. And you would know those names, but nobody has a controlling piece or even a piece over 10 or 15 percent. But we are certainly not going to do anything to impact that. We would be looking at it with an eye to improve it and use it going forward for our business purposes for SBC.

Mr. ENGEL. Thank you.

I see my time is up, Mr. Chairman. Thank you.

Mr. UPTON. Ms. Wilson.

Ms. WILSON. Thank you, Mr. Chairman. I also appreciate your having this hearing this morning.

I wanted to start out with a question, if I could, to Mr. Seidenberg. I saw something, and I know all of us here know that we only—we don't believe much of what is reported. I—but I did see something reported that a member of your company called into question, and I know—and I also know that folks say things when merger talks are going on and competing bids that maybe they shouldn't have said, but the comment was made that the potential of a Quest merger with MCI raised national security concerns. And I wonder if you would elaborate on that or if that was just an error.

Mr. SEIDENBERG. Well, I think that one of our executives did mention that, and with respect to the capital that is required to sustain investment going forward, we felt that the Verizon-MCI transaction would offer superior financing and capital capacity over a long period of time. So in that context, that is probably what you are referring to.

Ms. WILSON. Well, I heard financial concerns, but where does national security come into this, and I—or is that just a—probably shouldn't have put it that way?

Mr. SEIDENBERG. Like I said, I don't know the exact quote that you are talking about, but I—in my view, it is national concern, national security is all part of the mix of services that MCI provides. Michael is right here. He can help me with that. But the issue is I think one of the driving factors in our transaction has been Verizon's financial capability to continue sustained investment in the network, including national security services.

Ms. WILSON. If there is something more than this that we need to talk about off-line, I would certainly like to hear about it, and I—and both in this capacity on this committee and in other responsibilities that I have. So I don't know what you are referring to, and if there is something we need to know, I would like to know about it, but I don't see a national security issue here, and I would like to know about it if there is. And if we need to do that in another place, then we certainly can do so.

I also wanted to ask, concerning the—if I look at where we are going in consumer wireline as well as the business government market, it looks to me as though this combination of SBC-AT&T, Verizon and MCI together, these two new companies will control about 70 percent of the consumer wireline market and nearly 80 percent of the business government market. So what can we do to make sure that companies and the—and future users of Internet Protocol have access to the broadband infrastructure that those companies now control?

Mr. SEIDENBERG. Well, maybe we could exchange information. I don't know those numbers you just mentioned. There is no way the two of us control 70 percent of the consumer wireline and 80 percent of the other, so——

Mr. WHITACRE. I agree with that.

Mr. SEIDENBERG. I mean, it is not even close.

Mr. WHITACRE. Those numbers can't be correct.

Mr. SEIDENBERG. Right. Right. The—I am sure—Mr. Dorman and Mr. Capellas are here. They may be able to answer what percentage the two of them control of the business market, which I don't even think comes to half that. But Congresswoman, I think the point that I would make is that in the enterprise space, our

view is there are multiple providers that, even with these two transactions, these two new companies are still not a dominant part of the enterprise space.

Ms. WILSON. Does anybody else have an answer that you would like to share on access to the broadband infrastructure?

I think that is going to be a major issue that Congress may ultimately get involved in. Just for the record, the—this is the data that I am looking at, and the source of the data is Bernstein research, January 21, 2005. And it is business long-distance, voice, and data by revenues. And maybe their data is wrong.

Mr. SEIDENBERG. Yeah. They are also recommending the Quest-MCI deal, also.

Ms. WILSON. I am sorry?

Mr. SEIDENBERG. They are also recommending the Quest-MCI deal, also.

Ms. WILSON. Well——

Mr. SEIDENBERG. So the data might be suspect. Yeah.

Ms. WILSON. You may want to question their data, but you asked what the source of it was, and that is the source of it.

Thank you, Mr. Chairman.

Chairman BARTON. I thank the gentlelady.

And the gentleman from Texas, Mr. Gonzalez, is recognized for 5 minutes.

Mr. GONZALEZ. Thank you very much, Mr. Chairman.

And the first question would go to Mr. Whitacre. There are, of course, some citizens back in San Antonio and elsewhere and some of my colleagues, when they hear the word "merger", they really believe that is anti-competition, because, by its very nature, if you merge something and you have less—or fewer a number of competitors out there. How do you respond to that general mindset that some people have?

Mr. WHITACRE. Well, in this case, I think it is very clear, in our acquisition of AT&T, they are not in the business we are in, so it is not a merger of us buying a business they are in or doing the same business. We are in totally different businesses. We are acquiring AT&T because we don't have a network, they do, a global, international network. We don't have a Voice-over IP platform. They do. We don't have a big base in enterprise customers. They do. So we are not acquiring something that we both already do. We are getting new skills from them in an effort to change this industry going forward and make some financial sense out of it. So it is not getting the same skills.

Mr. GONZALEZ. One thing that we don't talk about, and I know we talk about things in a domestic sense, domestic markets, and again, this question is to Mr. Whitacre, regarding your merger and any other mergers that you foresee or contemplate regarding international competition.

Mr. WHITACRE. Well, America needs, I believe, a flagship carrier that can operate internationally. Nobody does that at this point in time. We have some interest in Mexico. AT&T is in some places, but this country certainly needs a global flagship communications carrier that can operate all over the world. And I think this gives us the ability to do that. We do not have that now.

Mr. GONZALEZ. Thank you, Mr. Whitacre.

Mr. Seidenberg, I—because I have almost 3 minutes, but I had a question for you, because you had indicated—I am new on the committee, and I know one thing that we have always struggled with is how we define things and whether the Telecommunications Act—since it did mention the Internet, but you still have the service that is being provided, a rose by any other name would smell just as sweet, and I think that is what they are saying. It is the nature of the service that is provided. But let me ask you, Mr. Barton has already indicated that he is basically going to go with cable because it provides certain advantages, obviously how they bundle certain services. What do you foresee in the near future regarding mergers or otherwise that will allow Mr. Barton, our chairman, to have some choice as to who provides that bundled service to him? What can we do or what do you see the industry doing?

Mr. SEIDENBERG. Well, okay—well, thank you for the question. I think the—assuming Mr. Barton were a customer that we served, I think that we would be doing a lot of the same things that Southwestern Bell is doing, which is providing advanced DSL services and eventually fiber-based services and offering a choice. I think one of the—probably the unspoken implications of where the industry is heading is that while we were—while Congressman Markey was seeking some cap on prices that we would control, cable companies are raising prices. And I think if we invest in these advanced networks, I think the choice that Chairman Barton would get would be the fact that we would offer broadband services through DSL, DSL-like, and fiber-based services over time. We would also do the same thing—we are doing this. Today, we have a nationwide wireless broadband service that we call EV-DO, which is advanced generation, which offers customers up to 700 kilobits of speed in terms of their services.

So I think all of this technology is leading to choice in the marketplace.

If I just may make one last point.

Mr. GONZALEZ. Go right ahead.

Mr. SEIDENBERG. Your point about mergers, I think the public, our surveys would tell us this, is skeptical of mergers until after they see what companies do. Verizon Wireless is made up of 21 companies that were merged into Verizon Wireless. We have a great network, national reach. Some of our services are on the podium. And if customers see low-price, high-quality, they like the merger. And I think our record, across our industry, has been we have done mergers very well.

Mr. GONZALEZ. Thank you.

I yield back.

Chairman BARTON. I thank the gentleman.

And we go to the other gentleman from Texas, Dr. Burgess.

Mr. BURGESS. I thank the chairman, and I thank the panel members for being at this hearing. I won't ask you to take any pledges.

Mr. Seidenberg, I am privileged to represent the town of Keller, Texas in the 26th Congressional District, and I am very pleased about the fiber to premises technology project that Verizon has undertaken in this community. In Keller, Verizon has already rolled out this technology, and it has been very well received. Can you tell

me about how this purchase of MCI will expand the deployment of your new fiber technology?

Mr. SEIDENBERG. Well, it is a—thank you, sir. And we are very excited about the activity in Keller, Texas. And in that case, we are competing directly with Charter Communication, who is the cable company there. It is an indirect benefit. This transaction will strengthen our approach in the enterprise market. We will get synergies and savings across our national backbone network. As Ed said, we will avoid having to spend money to build our way into the enterprise market, and therefore, we will have more resources available to us to do the kind of thing we are doing in Keller.

Mr. BURGESS. Thank you.

One of the critical benefits of the transaction of the proposed merger between yourself and MCI remains—that MCI remain a stable provider of the telecommunication services. Being concerned about MCI's ability to continue to provide services to the government, can you elaborate—and perhaps Mr. Capellas can also weigh in on this, can you elaborate on how this transaction helps the government as a consumer of telecommunication services?

Mr. SEIDENBERG. May I defer to Michael on this one?

Mr. BURGESS. Yes, sir.

Mr. CAPELLAS. There are a couple of things that, you know, you sort of—at—when we look at the merger, I always like to start; what are the customer requirements, because then it helps to suit customer requirements. Over the coming period of the last two major bids we have seen from large government enterprises, and the next three that we are coming up, they are demanding that wireless be part of the overall bid. Wireless, whether it is the delivery of a handset or whether it is the delivery of broadband wireless to be able to do the application, the end customer doesn't want to stitch together an IP network, a wireless strategy, wireless handsets, wireless broadband, and local access. To the end customer, they can't tell it apart, and so we are now seeing, as a requirement of most big bids, to be able to do bid wireless with it. We don't have a wireless capability. So in order to bid those, we would either have to stitch together a partnership or not bid. So quite frankly, when we look at what our customers are asking for, they are asking embed the local, make it transparent, include wireless, do end-to-end security. For example, on an integrated network, you can trace security all of the way from the point of entry all of the way through, which is hugely important for customers like DOD and certain agencies. So it makes a more secure network, allows us to bundle wireless, allows us to integrate local with the IP backbone, and allows us to put on the next generation application. So at the end of the day, you know, if you look at government requirements, it is the natural definition of why we are doing this.

Mr. BURGESS. Thank you.

Mr. Forsee, if I could, I get a question from constituents all of the time, and I don't have an answer for it. But why is it that it is so hard to text message on Sprint equipment? I have a Sprint phone myself that I use, and my son can text message me. I am amazed that youngsters today can carry on a conversation with you face to face and at the same time be typing in a text message with their thumb. They are truly taking multi-tasking to the next level.

But I can not communicate with my child, because I have a Sprint phone and he has a Verizon phone.

Mr. FORSEE. It should be getting better and better all of the time, Mr. Congressman. We, obviously, over time, have picked our spots in terms of where we made our technology investment in the devices and in the applications. Text message is one that, in the past 6 months, we have come up with some new capabilities that we have put into our newer devices. And so again, that service is one that is very important to us. We certainly have seen the trends develop in this country and around the world, and have been on top of that issue in terms of—related to what our customers want. That service is getting better as we speak.

Mr. BURGESS. Thank you.

In my remaining time, Mr. Capellas, I just—it is not really a question. It is more of a comment. I—taking off from what you said from point-to-point security, I am excited by that. I think that is so important. I, of course, carry a Verizon blackberry device with me wherever I go and can be instantly notified if a chairman is having an event later in the day that I probably ought to attend. But as a former physician, I can't help but think that heart failure patients could be wired in—their scales could be wired into their blackberry so when their weight went up on Thursday afternoon, they could be called into their doctor's office for an adjustment of medication rather than an emergency room visit on Friday night and admission to the ICU. So it is tremendously powerful technology, and if we can ensure the security so that people can be confident about it, I think that is a—the potential for saving money down the road is almost limitless.

Mr. CAPELLAS. And it would be interesting if we have this conversation in 5 years and we think about communications. We will be talking about sensors and their relationship, sensors you will either wear or the different sensors that will be in the car. We will actually be talking about the relationship of how the sensors pass data seamlessly to a core engine. And so we may be having a completely different discussion, but you know, it is rethinking what communications is and why I think we are all here today.

Mr. BURGESS. That is correct. Our belts that we wear may say "Intel inside" in the future.

I will yield back.

Mr. PICKERING [presiding]. Ms. Eshoo.

Ms. ESHOO. Thank you, Mr. Chairman.

I want to thank all of the witnesses for really being outstanding. I think that this has been an enlightening hearing, which is what hearings are supposed to be all about. And Mr. Capellas, I think that you could offer a very successful class on Telecommunications 101 for all Members of Congress. So maybe we could sign you up for that in the future.

I just want to touch on two questions. I am going to read my questions and then have you respond to them.

Many of the intermodal competitors that are being touted depend on access to the Internet backbones over which you now have substantial control. This is to SBC and Verizon. How can we ensure that these competitors are not excluded or given inferior access to this critical infrastructure? And I ask this because my recollection

is that SBC opposed the MCI Worldcomm and Sprint Worldcomm mergers on this basis.

And my second question: SBC has successfully partnered with Yahoo to offer DSL service, and Verizon has a similar arrangement with Microsoft. As the number of broadband and DSL providers diminish, how do we protect the open nature of the Internet and ensure that smaller providers of Internet content and web services are not blocked out of the market?

Mr. WHITACRE. Well, I will try those two.

Your first one, I think, is how can you be assured that intermodal competition will remain where nobody is blocked from access to the network. I think it is pretty plain that that is not going to happen. First of all, if SBC is successful in this acquisition, and I suspect this is true for Verizon, there are many other providers, but we are not going to do that. I mean, the law is pretty clear on access. It is pretty clear that people can have access to it and under what conditions. Plus, there are many other providers. And in California, for example, we have competitors like Cox Cable, who have been hugely successful against us and done very well. There is no chance they will be blocked from the network. They have many alternate ways to go. There are many providers of that service. I think the laws are pretty clear, and so they are not going to be denied that. That is not going to happen. It is not even a factor.

The second thing is, on Yahoo, for example, and thank you for recognizing that, it has been very successful—there are ways and there will be ways, and I think that is covered today and covered very well about what is required to have access to that for ISPs or whoever wants to be accessed or have access on the Internet, and that is not going to change either. Nobody is going to be denied a path on the Internet.

Mr. SEIDENBERG. Given that Ed is the—I would never say anything different. I will agree. Just let me add two quick things.

On the first point, remember, we are one of the biggest users of Internet traffic on their network. So if you want a policeman to worry about if he is going to stay in line, it is us.

Ms. ESHOO. Good.

Mr. SEIDENBERG. And he is the same way with us. So I don't think there is any issue with respect to this Internet traffic issue, because I know it is couched in terms of big and little, but everybody uses the Internet in the same way, and so there is a clear benchmark to make sure that there is open access on the things that you mentioned.

With respect to the other question, maybe I didn't understand it, but I think it is the marketplace reaction will be just the opposite. The more we put fiber-based solutions and increase the bandwidth, the more content providers are going to be able to provide services and applications over a network, and we see this in wireless. We have over 500 application providers providing content over our network. And as the experience that SBC has with Yahoo and we have with Microsoft, we even build greater bandwidth. And then you will see IP TV, and you will see all sorts of other kinds of things. So I think the more bandwidth, you lower the entry barrier for content people to provide services.

Ms. ESHOO. Thank you very much, Mr. Chairman. I yield back.

Mr. PICKERING. Thank you.

Mr. Murphy.

Mr. MURPHY. Thank you, Mr. Chairman.

Mr. Seidenberg, I want to address this one to you and actually have other panel members respond, too, because what we are dealing with here is an issue of competition and a concern that so few companies will dominate the market and what it will really do to affect services.

We have seen the market begin to consolidate around one platform that provides voice, video, and data, however many consumers who reside in rural areas are not afforded access to broadband at this time. In several instances, municipalities have taken proactive steps to build their own networks and thus provide broadband to their residents. In Pennsylvania, for example, this happened in Kutztown, and Verizon mustered its full force to ensure legislation occurred—was passed that prevented such independent network building. And similar issues have occurred in many other States.

Now I fully understand, having met the Pennsylvania Senator before. There are inherit inequities when a municipality sets up its own network, namely, they don't have to comply with the same regulations. They can raise capital via bond issues, and then use them over your wires. That is a whole different setup there. However, the bottom line is that a lot of these consumers feel they are being left out of the system. So now before me, I see three potential companies that have the potential to really dominate the entire market. And so I want to ask what assurances do you provide that innovation, price competition, and coverage will actually improve with such a dominance in the marketplace of a couple companies?

Mr. CAPELLAS. I don't quite know how to answer that question, but I think—I have to start with the premise of the question, which is I don't think we are as concentrated as some have said this morning. I think we are big. I would agree with that. But in the markets that we participate in, we are not the only players. If you can go to—in the State of Pennsylvania, there are 50 C-lex operating, at least. In the rural areas, we have satellite TV providers. We have all sorts of other carriers that are operating in the marketplace. So I think what guarantees high-quality, low-price is robust competition. And I believe that if you think about all of the substitutable forms of services that we have talked about this morning, consumers every place in the country have more choices today than they have ever had before, and I am confident that, to your question, innovation will continue to drive prices down and you will continue to see higher quality services. I mean, we have had lots of consolidation in wireless, and yet we have had prices lower and we have had quality go up. And you will see the same thing occur with advance platform networks in the enterprise space and in the consumer space.

Mr. MURPHY. Well, certainly my rural constituents are concerned that they feel that they have been left out of things, and I understand how the size of a company can help fund innovation, which would drive down prices, but it is an issue that I certainly want to go on the record of raising with all of you that it is also an issue that competition also helps drive down prices. And there is a concern that there is this huge market dominance here. And I would

just like to know from some of you how you can assure us that competition will still exist when you have so few companies controlling the market.

Mr. WHITACRE. Well, I think—as Ivan said, I think there are going to be more companies, not fewer. And I know in Texas, for example, there must be 100 C-lex. The cable companies are—have now entered the business, the satellite companies, the wireless companies. The wireless companies are on the verge of offering broadband to customers in rural areas, and they can reach them easier than the wireline company can. But in terms of total competitors, I think there is more, not less. There is going to be more.

Mr. MURPHY. Mr. Dorman.

Mr. DORMAN. I would just add that I think one of the things that is hard to grasp is that as broadband technologies are deployed, whether it be cable modem or DSL or fiber into the home or EV-DO Rev.A whatever in the wireless world, all of these high-capacity technologies will be able to serve all of the applications that we have traditionally thought of as simply the domain of the telephone company, particularly with voice. And frankly, the comment Mr. Capellas made about long distance really applies to all voice service. It is indistinguishable to the user, in most cases, what network they are using as their voice passes through. We haven't talked about companies like Skype and some of the newer pure Internet-based communications providers. This is a company that was in Astonia that is now exporting technology that can be loaded on any PC. And I suspect that the definition problems are still plaguing us. I believe that there are going to be lots of choices for high-capacity service, even in rural communities, as wireless evolves. I think wireless is very important. The idea that we are going to rely on a copper wire only in the rural communities is not economically sustainable.

Mr. MURPHY. I appreciate that. I appreciate you getting your comments in the record regarding this, because it is an issue that is raised by my constituents. And I also know that much of these things to make sure we have assured competition, which will drive innovation, is going to be addressed in the telecomm bill that, hopefully, this committee will get out soon. And I am sure all of you will have valuable input on that, too.

Thank you, Mr. Chairman.

Mr. PICKERING. Thank you.

Ms. Baldwin.

Ms. BALDWIN. Thank you, Mr. Chairman. And I also want to join in thanking our panel.

What is really exciting is that the convergence of these technologies are providing consumers with new ways to communicate. I want to follow down a similar angle as our previous questioner, because it is increasingly clear that, to be off the information superhighway is to really be left out and left behind. It leads me to a series of related questions.

As we saw historically with electrification and wireline telephone service, not all areas of our country provided sufficient economic incentive to attract service at anywhere close to an affordable cost. And that appears to be the case still today with some of these technologies, and particularly, as we have drawn attention to, in rural

areas. Assuming you agree, and feel free to point out if you do not agree with that, my question is specifically where do you expect to see these gaps in coverage and access closed, the good news, and the bad news, where do you expect to see them persist? And if you want to follow up with plans you would have to build out or invest to those areas where you expect the gaps to persist. I will throw it open to whoever wants to jump in.

Mr. Whitacre?

Mr. WHITACRE. Well, I will start that, Ms. Baldwin.

I think if we were having this conversation a year from now, you wouldn't be so concerned, because I think in the rural areas, for example, while we don't have broadband to all of them now, it is quickly coming. And we have certainly moved our broadband offerings closer to the rural areas, and we will continue to do that. But wireless is sitting there very close, and it covers all of the United States. Wireless is going to be able to offer broadband capability to all of those rural areas, and I think that happens rather quickly. So I think while you are—you have a right to be concerned, and you should, I think we are right on the edge of technology changing that, as well as, in our case, extending the fiber further out. And the technology is changing on the wireline side, too, where it is now possible to offer customers our DSL service further out than we have ever been able to do it. It is a matter of technology. It is not wanting to do it. So I think it is about to happen.

Mr. SEIDENBERG. Well, I agree. I—just to make you comfortable, it—you know most of these statistics, but you know, the cable companies pass almost 90 percent of all of the homes or DSL services pass 80 to 85 percent of all of the homes. Statistics will show that 85 percent of all teenagers use cell phones, and they don't distinguish between city and rural. There is this universal service fund issue that is working in the background.

Mr. BALDWIN. That is my next question.

Mr. SEIDENBERG. Yeah, well, I had a feeling you were setting us up for that.

So I think, you know, from my perspective, the—if it is targeted correctly and if it is applied in the right way to the people who need it, it is something that we have always been willing to participate in. I think the issue with universal service is—that sometimes the disease—the cure is worse than the disease, so we have to just be careful that we don't take this beyond the point. But where there are legitimate gaps, it is something we will work with on making sure we have it.

Ms. BALDWIN. Well, let me jump right in with the universal service fund question.

If we recognize the need to ensure broader access and to advance telecommunication services, obviously the need for the USF will be larger than ever. If we don't expand the source of funding beyond traditional wireline services, I suspect we will have insufficient funds. So I would like to hear your suggestions for how we should fund the USF in the future and how we determine its scope.

Mr. SEIDENBERG. Well, you know, we have been trying to fix this for a long time. We have never gotten this right, but I think there are a couple of principles here. First, I don't know that we have ever gotten agreement and how—as to how big it needs to be. So

I think as we look at all of the deployment of all of these services and technologies, we need to find a way to take off the table those places that are really getting the choices that are necessary and then focus on what is left. And then the principle on what is left is everybody plays, not just one group of carriers. And we shouldn't be administering this through, for example, State commissions or the FCC. It needs to apply to a broader set of players, and I suspect in the long term that is one of the things Congress probably should address.

Mr. DORMAN. I would just add that since 1999, AT&T has paid about $9.5 billion into the universal service fund, and that is about 30-some-odd percent of the total. With the acquisition of AT&T, MCI, SBC, and Verizon will become the biggest payers, or even larger payers into the fund. And so I would agree. Everyone paying, regardless of mode, is very important. As we have said repeatedly here today, convergence of capability and substitutes is clear, having the old wireline long distance regime bearing most of the cost is not sustainable. So whether it be VoIP, wireless, all of the other different forms, this is long overdue in terms of funding reform and that is, I think Mr. Seidenberg said, I couldn't agree more. What is it we are trying to fund is also very important.

Mr. FORSEE. Let me just add quickly. Sprint today is the only company that owns assets across local access lines, across long distance, and across wireless, and I think our perspective on this has been that universal service fund and intercarrier compensation need to be joined, because those two are economic issues that have impacted, you know, what has been going on in our industry across those three sectors. The technology has changed. The basis of competition has changed, and those two issues need to be vectored together to recognize what has changed, and I agree with the comments of my colleagues here.

Mr. PICKERING. Thank you.

Mr. Terry.

Mr. TERRY. Thank you.

I—just to get on the record, then, on the universal service fund, I, too, wanted to ask questions—first of all, I agree with your principles. I think that absolutely has to be our starting point. As I have tried to work through the principles to details, that is where the problems come in. But we will continue to work.

But I received a letter from Grange today that has expressed concerns that these mergers will reduce your payments into universal service fund, or at least that is what they are insinuating in this letter. I don't know if a merger particularly sets up a reduction in funds to the universal service fund. Will it or will it not? Mr. Whitacre and Ivan, either one of you?

Mr. SEIDENBERG. To be honest with you, the States that I deal with always figure a way around whatever it is they think they need, so I don't think the mergers themselves create any change. But I think what Dave said is right. When you have fewer companies, we scream louder if we are the sole supporter of the system. So I think what we need to finally grapple with is changing the system so we can serve those people and those communities that need it and do it in a way that is equitable.

Mr. TERRY. I agree with the principle, but the—I am focusing on whether there will be a reduction in revenue in the universal service fund by the——

Mr. SEIDENBERG. I would be happy to get back to you. I don't know that the transaction creates a mathematical change. I don't——

Mr. TERRY. Well, they don't set it out in the letter, but——

Mr. WHITACRE. I don't think so, Mr. Terry. I don't think there is any change——

Mr. TERRY. All right.

Mr. WHITACRE. [continuing] as a result of this.

Mr. TERRY. Speaking—Mr. Seidenberg, speaking—oh, okay, Mr. Dorman.

Mr. DORMAN. The fund is based on interstate revenues, and so that is not going to change, you know, based on they are what they are.

Mr. TERRY. Yeah.

Mr. Seidenberg, you had mentioned the States. My staff meeting yesterday, we entered into kind of a discussion about what it takes to go through a merger like this. What entities are involved in signing off or express approval. FCC maybe DOJ. Do the States get involved in this process?

Mr. SEIDENBERG. The States do.

Mr. TERRY. Mr. Whitacre is already going through it, I assume, and Mr. Seidenberg and MCI will be entering that phase.

Mr. SEIDENBERG. Yeah, we are—I think—I won't speak for them, but we will be filing very shortly in a lot of States that—and the genesis of it is we are seeking to transfer a 214 license or a public convenience certificate in the State, and therefore, the States feel they have some sort of a—they have jurisdiction over it in some place—some States don't. But in our previous mergers, we have had to achieve approvals in—between 30 and 35 States in addition to the Washington agencies that normally oversee these things.

Mr. TERRY. Wow.

Mr. SEIDENBERG. We have——

Mr. TERRY. So even those States that just have the wireless, you will still have to—those——

Mr. WHITACRE. No, what is in their State law, vis-á-vis their oversight of a merger, we have already filed in, I think, 28 States. I think that is all. But we also have to file in foreign countries. Don't forget that.

Mr. TERRY. Well, that is interesting. The—would Verizon have to?

Mr. SEIDENBERG. Well, sure. Sure. It operates globally, absolutely.

Mr. WHITACRE. It is not an easy process.

Mr. TERRY. No, I wouldn't expect that. For—with Verizon-MCI, would it be about 30 or 35 States? Don't you do business with more States than that?

Mr. SEIDENBERG. Yeah, I—not every State requires it. My attorneys are here scrambling around trying to figure it out, but I think the answer is somewhere in the 20's——

Mr. TERRY. Interesting.

Mr. SEIDENBERG. [continuing] is the number of States we will file in.

Mr. TERRY. What is the length of time estimate that it would take to get 20-some States and Federal and foreign governments to sign off?

Mr. SEIDENBERG. Well——

Mr. WHITACRE. Years.

Mr. SEIDENBERG. A year, that is exactly right.

Mr. WHITACRE. Yes, year is a good guess. 12 months.

Mr. TERRY. All right.

In my last 1 minute, I am going to ask a question by one of my colleagues. I think this is a follow-up to Heather's. After the mergers, approximately what percentage of the Nation's Internet infrastructure facilities will be under the control of SBC-AT&T and Verizon-MCI?

Mr. WHITACRE. Okay. You answered that.

Mr. DORMAN. Based on publicly available data, the market share of Internet service providers suggests that currently AT&T and MCI both have somewhere in the range of 15 to 16 percent of current Internet traffic, and Verizon and SBC are not in the top 10 in terms of backbone traffic today. So in the case of SBC-AT&T, we would see our market share somewhere in the range of 15 to 18 percent of Internet traffic today. In fact, if you look at the two of us at approximately 30 percent, the other 70 percent is in the hands of about 30 different competitors.

Mr. CAPELLAS. And that is today. I just certainly agree with Dave, but then you start streaming video. What is a video? A thousand fold of phone calls over the Internet. Where do those numbers go when you start streaming video across it? I am not sure how we answer the question in a year, to be honest with you, as fast as things are changing on the delivery.

Mr. TERRY. Thank you.

Mr. RADANOVICH. Mr. Stupak.

Mr. STUPAK. Well, I thank you, Mr. Chairman.

Like Mr. Terry, we have worked on the universal service fund and trying to distribute it to the States in a more equitable way. But universal service fund, the mergers really should not affect the amount of money going in universal service fund, but rather the technologies. Isn't as you use technologies where you don't have to make the wire connections, that really determined—that is why there has been a loss in the universal service fund, isn't that correct? I see a lot of heads nodding and——

Mr. SEIDENBERG. That is true.

Mr. STUPAK. That is true? Okay.

Mr. Capellas and Mr. Dorman, let me ask you this question, if I can. I indicated in my opening statement that Michigan has reaped the benefits of the competition. In a 5-year period, there was a steady and continued growth in the percentage share where the competitive local exchange carrier lines in Michigan from 4 percent in 1999 to 26.5 percent in 2003. Can you explain why you were able to compete in Michigan and how that competition benefited my constituents and consumers? And what effect did the recent FCC and court decisions have on your ability to grow competitively in Michigan and other States?

Mr. DORMAN. Well, the mechanism that we use is no longer going to be available, so——

Mr. STUPAK. Because of the FCC and court ruling?

Mr. DORMAN. Right. Basically the construction of the rules around the platform went to court multiple times. They were remanded multiple times. And in the end, the FCC's construction of the rules to meet the requirements of the court have fundamentally changed that. I—looking beyond it, it would be my view that wireless competition and cable-based competition, as well as Voice-over IP competition, have rapidly emerged as a substitute for what that was offering. While it did uniquely affect, I think, AT&T and MCI as competitors, those are technologies certainly that the new combined Sprint Nextel in the wireless area will be competing for residential customers with. So I think that what we have seen is while we were all arguing about the shape of the playing field and wireline the last 9 years through these repeated appeals and litigation, a whole new set of fields had evolved, and customers are taking advantage of it. And that is the—I think the simple fact of where we are today.

Mr. STUPAK. Mr. Capellas, do you want to add anything?

Mr. CAPELLAS. No, I wouldn't have much to add to that other than I certainly agree with Dave. It was the perfect storm of cable delivery plus wireless plus changing the regulatory world that all, you know, just worked against the economics.

Mr. STUPAK. And Mr. Whitacre, let me ask you this. SBC tried to sell their entire Upper Peninsula of Michigan system last year. And it seems to be indicative of a trend that—to sell off rural exchanges. At the same time, the Bells are pursuing deregulation in the States. The Bells have entered into a regulatory compact with the States in exchange for service territory and an opportunity to earn a fair return. They must agree to serve anyone who can pay. It is an obligation to serve all comers. What assurances can you give us that if you get the deregulation you are looking for from the States or from the Federal Government that you will stay in rural areas, areas that are more costly and have fewer customers?

Mr. WHITACRE. I don't know where you got your information, Mr. Stupak. We, from time to time, try to value the market of that, but we never negotiated nor tried to sell the Upper Peninsula, never got in serious negotiations with anybody.

Mr. STUPAK. Well——

Mr. WHITACRE. We are the carrier of last resort.

Mr. STUPAK. Sure.

Mr. WHITACRE. We have a geographical territory. We are, obviously, obligated to serve, and we will continue to uphold that. We intend to stand by—behind that.

Mr. STUPAK. I will be happy to send you those articles where it indicated you were trying to sell the Upper Peninsula.

Mr. WHITACRE. I read those articles, too, but as somebody said earlier, you don't believe everything you read.

Mr. STUPAK. Well, I will agree with you, that is why I am glad to see you answer my question, but having been up there for a number of years and seeing how—that much like when you were doing pronto, you—SBC was going to do pronto, everywhere in Michigan but the Upper Peninsula, so that was my concern. I hate

to see services be offered—but in areas which are rural, or even inner city areas, which may be under-served areas in the cities, they are just sort of skipped over for new technologies and that. And that is what we are trying to protect against as these mergers go through.

Mr. WHITACRE. And I would like to talk to you, if you are agreeable, off-line about some of the regulatory circumstances.

Mr. STUPAK. Sure.

But if we are now talking about intermodal competition, I think we need to recognize the realities of rural America. In my District, wireless coverage is spotty, at best. And now there will be further consolidation into wireless service. And in addition to the fact that Verizon owns Verizon Wireless and SBC and Bell South owns Cingular, VoIP requires broadband deployment. Cable is not an option for many of my northern Michigan constituents. How do we ensure that rural America, again, is not left behind or, as I said in my opening statement, that the gap doesn't widen, the technology gap? I want to make sure that when we have less of—what less company is doing wireless in this?

Mr. WHITACRE. Well, do you want to answer that, Ivan, for Verizon Wireless?

Mr. SEIDENBERG. Sure. I will—if I might answer that a little differently. I think in the case that you mentioned, having fewer companies in wireless will get you better service, because the problem that we have had in the past is we have had six, eight, nine carriers operating in markets. The market can't support that number of players, and therefore people don't have the capital to deploy in far regions of the country. We know that every year we keep adding more towers, more coverage every place we go. And what we find, by the way, here is the good news, the people in rural areas talk just as much on the phone as anybody else, so it is a great market for us. And I think it is the financial capacity we need to make sure we serve those markets. And it is the same thing in broadband. You have got to get a tipping point where you can start to deploy further and further out into the rural communities.

Mr. STUPAK. Yeah, I agree with everything you said except when it comes down to the fact, okay, from the—deployed broadband in the Upper Peninsula. I need more towers, and therefore, while they talk just as much on the phone, I can take that same money and I can go to an area, like Green Bay, Wisconsin, just south of me, which has more people and where I get the best return on my dollar. It is not the rural areas, it is more in the urban areas. While there may be less wireless competitors, you are still going to go to the place where you get the greatest return on that dollar. And unfortunately, because of the sparseness of the population in the Upper Peninsula, 312,000 people, I don't see anyone coming there.

Mr. SEIDENBERG. Well, this is a chicken and egg problem. I mean, we all have these areas.

Mr. STUPAK. Sure.

Mr. SEIDENBERG. I get——

Mr. STUPAK. I don't want to be the chicken or the egg. I just want to get service.

Mr. SEIDENBERG. I think the answer is coverage is getting better every year, and with fewer companies, there is no question that you will see better coverage every year.

Mr. STUPAK. Thank you, Mr. Chairman.

Mr. RADANOVICH. Thank you.

Ms. Blackburn.

Ms. BLACKBURN. Thank you, Mr. Chairman.

I want to thank our panel. As you all can tell, by the time you get to me, you are getting to—your time is about over, getting to the end of the line, but we do thank you for your patience. We thank you for your frankness and for being here to talk with us. We certainly appreciate that. And it is fascinating to listen to you as you talk about competition and the convergence of the technologies. And they are all things we should think through, not only as it relates to the mergers that you are discussing, but also as it relates to the telecom bill and for the lifespan of that bill as we look at the reauthorization and the speed with which the technologies that you all deal with every day are changing. Mr. Capellas, I enjoyed the fact that you used the term "everything over IP." And as we do consider the way we are moving in wireless technology, that is certainly something that we—it behooves us to be mindful of such.

Mr. Dorman, I do have a question that I would like to talk with you about. With—we have heard some about R&D and the next thing coming down in the everything over IP, and then you all touched on but really didn't discuss very much, more or less, the cost and the impact of government regulations and compliance costs on your businesses. And as you look at a merger, I wish you would just briefly speak to what you think will be an adjustment or an increase or a decrease in your compliance cost, and do you anticipate this—that that will assist you and help you with what is available for R&D and how you are planning for that?

Mr. DORMAN. Well, compliance covers a lot of ground. Certainly, in the current world, we are all focusing on Sarbanes-Oxley 404 compliance certification process. That has taken an enormous amount of time, effort, and money. As a combined company, presuming that both SBC and AT&T are compliant, we won't be paying for that money twice through separate processes. And the context of regulatory compliance, we do have to file in some States for service provision different ways. You know, today, the state of deregulation differs greatly State by State and at the Federal level. And as you know, we have witnessed a fairly significant power struggle between States and Federal regulators over the jurisdiction of things like Voice-over IP. All of those things have costs. And to the extent that we can't adequately predict them or understand them, it adds to the risk profile and, frankly, dissuades further investment waiting for clarification. Some people may be so bold as to build ahead of knowing the answer. I can tell you that over the last 6 years in telecom, many people who did that paid a huge price as things changed or evolved or were clarified. It would be my hope that, as new telecom legislation is contemplated, that we would look carefully at the last 10 years and say should we debate whether the telecom act failed or succeeded may be interesting historically, but where we are today, in my view, is the writers of the Act

can say for whatever set of reasons, we now have competition across multiple modes. People have more choice. There is a lower price. There has been a huge impact on the incumbent businesses, as Mr. Whitacre said, and job loss, a boom and bust cycle of investment. But I do think we are at a point now where we can look at this industry going forward in all forums and say this should be a healthy, vibrant industry that can grow at the rate of GDP or beyond, because it serves the needs to so many constituents: customers, governments, consumers, and businesses alike.

And I would just like to say that hopefully we are going into an era of much less regulation and much more market managed competition than more compliance.

Ms. BLACKBURN. Thank you, sir. My hope would be that we would be moving toward something that is free market oriented and that we do our part to be certain that you all stay vibrant, American companies. You did reference some of the international competition as we look at wireless and other forms.

Mr. Seidenberg, very quickly for you, I represent Fort Campbell. That is located in Montgomery County, Tennessee. I have had the opportunity to meet with some of those folks and to do a little bit of training with our troops as they are getting ready to re-deploy. You all have a lot of contracts, government contracts. If you will, just speak very briefly to the impact that the merger would have on our military operations, both here and as our troops are deployed.

Mr. SEIDENBERG. Well, I think we would look to increase our penetration of services to military and to use the vast resources available to the two companies to do as much as we can, like we always have.

Ms. BLACKBURN. Thank you.

I appreciate that, Mr. Chairman. I yield back.

Chairman BARTON. Thank you. The very patient gentlelady from California, Ms. Solis, is recognized for 5 minutes.

Ms. SOLIS. Thank you very much, Mr. Chairman.

I want to change the subject a little bit and address my question to Mr. Whitacre from SBC. And you talk—when we talk about mergers, we don't often talk about the human resource potential there. And my understanding is that if this merger takes place between yourself and AT&T, that we are looking at a job loss of about 12,000 employees before the merger and 13,000 after. That is a total of 25,000 jobs, a large number, to say the least. And during your testimony, you spoke of the benefits you believe the merger will generate. With the job losses over 25,000, and most of them from highly skilled individuals, my question to you is who, then, is reaping the benefits here? And is it difficult then—or for me it is a little difficult to believe that it would be for—benefits for the employees and the consumers. And this is a big issue for many of us, because my question also goes toward, well, if we are going to downsize and consolidate, are we also then outsourcing jobs, because I have heard, from many of my constituents who are employed by your organization, as well as others that are seated at the table, that in fact they train employees from other countries for their jobs? So if you could, please elaborate on that, and give us some cost——

Mr. WHITACRE. Sure.

Ms. SOLIS. [continuing] savings that are truly going to be beneficial for the consumers.

Mr. WHITACRE. Okay. I will be glad to do that, and it is a good question. And job reductions, if any, I point out, are a function of how well we do after this acquisition is completed. So with that caveat, if we do very well, there is obviously going to be less or none or maybe we will grow. And that certainly would be where we would start from. And that is a function of how well we can manage it. We normally, at SBC, lose every year about 12,000 employees just from normal attrition. That is retirements or people change their jobs. They don't want to work at SBC anymore. Mostly retirements. But we would do 1,000 a month, or 12,000 a year. And that is a standard number for us. It goes back many years. There are obviously going to be duplicate jobs when we do this—complete this deal, and I think good examples are we will have people in networks that overlap functions or perhaps in marketing or sales, but I can't give you an accurate number. It is going to be a substantial number, but again, it is a function of how well we do. But I guess what I am saying is I think a number has been published of about 13,000, and you can't add those two numbers. You can't add 13,000 and 12,000. It was 13,000. We normally lose 12,000. If you net that, it is really only 1,000, if you look at it that way. I wish I could give you a number, because I don't know what is going to be required as we go forward, but I would like to tell you that we are going to do everything humanly possible to not have that, and if we do, to deal with that in a way you would want us to deal with it. And if we are successful, I hope we can grow this company and put some excitement in Wall Street and maybe good things will happen, not necessarily the bad stuff that everybody thinks is going to happen.

Ms. SOLIS. Could you tell me——

Mr. WHITACRE. So we are just going to have to wait and see.

Ms. SOLIS. Could you tell me how many jobs have been outsourced?

Mr. WHITACRE. We have done some outsourcing. We have a few software or programming jobs in India. I think it is less than 1,000. I think it is around 600. I would have to go back and check, which I would be glad to do.

Ms. SOLIS. Could you, please?

Mr. WHITACRE. Sure.

Ms. SOLIS. And maybe——

Mr. WHITACRE. But it is about that number.

Ms. SOLIS. Okay.

Mr. WHITACRE. And then we do some customer service contact work in the Philippines. And incidentally, those jobs were turned down by the union that represents us. You should know that, because those jobs didn't pay as well, and they really weren't interested in them at one time. I can't tell you that number, either, but it is not a huge number, and interestingly enough, we are moving some of those back to this country.

Ms. SOLIS. Why is that?

Mr. WHITACRE. Because we find that customers—and we are trying to be responsive to that. The customers react more favorably

when they talk to somebody here, which doesn't surprise anybody. It is a matter of cost and how you deal with that.

Ms. SOLIS. Right. Thank you. If you could pass that information on.

My next—oh, well, I don't have enough time.

Chairman BARTON. You can ask one more question.

Ms. SOLIS. Okay. I just wanted to ask——

Chairman BARTON. You waited a long time, so you ought to get to ask another question.

Ms. SOLIS. This is directed to Verizon. This whole issue of universal access and service, copper lines versus fiber, that is a big issue in the State of California in different parts, and I am concerned that what happens to those poor communities where we still have copper lines. Do we get neglected? Are you going to continue to service those areas? What amount of money and timeframe will you have to try to bring up those areas that are still not in the fiber main?

Mr. SEIDENBERG. Our highest penetration of DSL in our company is in California.

Ms. SOLIS. Well, rural areas and others?

Mr. SEIDENBERG. Well, it is—well, we serve about 20 percent of the State, and over 80 percent of all of those lines have——

Ms. SOLIS. Okay. But what about other parts of the country——

Mr. SEIDENBERG. Well——

Ms. SOLIS. [continuing] that you have kind of heard from other members here?

Mr. SEIDENBERG. Yeah, well, the way we have our telephone franchise, we have excellent deployment, so the answer to your question is we spend money every year to continue to deploy DSL-based technologies, and we will continue to do that.

Ms. SOLIS. The information that I have indicates, I guess, there has been a drastic change, for example, in the State of New York, areas like Westchester and Nassau Counties where there have—where there are differences——

Mr. SEIDENBERG. No.

Ms. SOLIS. [continuing] in terms of——

Mr. SEIDENBERG. I am not exactly sure what you are reading from, but when we deploy fiber, we don't do it every place at the same time, so you pick and—you make choices.

Ms. SOLIS. So you—do you pick higher income areas and it leaves——

Mr. SEIDENBERG. No.

Ms. SOLIS. [continuing] the lower incomes behind or——

Mr. SEIDENBERG. No. We pick—as a matter of fact, we have picked locations in every State, and they have—and they are based on a lot of factors.

Ms. SOLIS. Random? What is your criteria?

Mr. SEIDENBERG. Well, the criteria is pretty clear. It is based on where we get market penetration——

Ms. SOLIS. Um-hum.

Mr. SEIDENBERG. [continuing] where we could physically do it, where it is cheaper to do it, where we can get the cost savings, and——

Ms. SOLIS. And a higher rate of return.

Mr. SEIDENBERG. Higher rate of return, but by the way, we get a higher rate of return every place when we eventually deploy it when you get the scale. But this is not a question of not deploying. This is a question of how quickly we can deploy as many places as we can get the technology out there.

Ms. SOLIS. Okay. Thank you very much, Mr. Chairman.

Chairman BARTON. Thank you.

The gentleman from Mississippi, Mr. Pickering, the vice chairman.

Mr. PICKERING. Thank you, Mr. Chairman.

Each of you have testified that these mergers and acquisitions can bring about the benefits of increased competition, choice, investment, innovation, and I do believe that that can happen, but it is not guaranteed. And I think much of that depends on the decisions that you make, but also the decisions that we will soon make in upcoming legislation.

To that end, I would like to ask a few questions.

Mr. Whitacre, you had responded to Ms. Eshoo that as far as competitive access to your network that the laws are clear and won't change and that you will continue to have competitors either through IP or other forms of communication, having that access to network—to your network. Does that mean—is that your belief that the laws are now clear after the decision, after the court decision, after the FCC's tri-annual review. Do we—the current rules on access to the network, is that something you support?

Mr. WHITACRE. No, it is not clear. And that has been one of the problems——

Mr. PICKERING. Right.

Mr. WHITACRE. [continuing] it has not been clear for years.

Mr. PICKERING. Now—but to Ms. Eshoo, you said the law was clear. I wanted——

Mr. WHITACRE. In terms of access. For example, anybody can buy a local loop from SBC. That is pretty clear. That is settled. That is done. That is over. That is clear. It is not clear on special access. It is not clear on—totally on broadband. So it is not clear at all, in its totality. Some pieces of it are clear, but it is not totally clear. And it needs to be cleared up with a new law.

Mr. PICKERING. Now Mr. Dorman——

Mr. WHITACRE. Does that make sense?

Mr. PICKERING. Yes.

Mr. WHITACRE. Okay.

Mr. PICKERING. And to be honest, that was what I expected you to say.

Mr. WHITACRE. Oh, okay.

Mr. PICKERING. But Mr. Dorman and Mr. Capellas, as you know, you all have been voices for access so that competition could emerge and so that competition could be sustained. With these mergers, your voices on those positions could go away. Do you think that the current rules by the FCC on access to networks should be reformed or changed or maintained as we go forward with these acquisitions?

Mr. DORMAN. As I said before, I think you can debate this, perhaps, internally, but the courts have spoken as to what FCC proposed——

Mr. PICKERING. Well, we do advocate future changes as we debate now.

Mr. DORMAN. Well, I——

Mr. PICKERING. And based on these acquisitions, and for the future of competition, should we maintain the access that we now have, or should that be reformed as Mr. Whitacre suggests?

Mr. DORMAN. I would agree that the current state of affairs leaves a crazy quilt of regulation between States and Federal jurisdictions, and it leaves some services defined in the historic past. I am on the record as saying that, for instance, an intercarrier compensation reform, I have nine different rate structures that I currently pay to local telephone companies for access. There are interstate jurisdictions, intrastate, ESP waiver, reciprocal compensation, bill and keep, and also VoIP, which pays, you know, virtually nothing. That has got to be dealt with. I think the most important thing that I would say to public policymakers and lawmakers at this point is that universal service and intercarrier comp reform are very much tied together. There is an abundance of volume to support universal service if it is done in a technology-neutral way. So I think, in my view, when you talk about access, it has got to be done for all players on a very neutral basis, whether you are cable, telecom, historical long distance, VoIP provider, wireless. And if we do that, I think we can deal with a lot of the concerns that those representing rural constituencies have about deployment, because we can focus, as Mr. Seidenberg said, on where the real needs are if there is an information divide. We can do that.

Mr. PICKERING. Mr. Dorman, I—excuse me for cutting you off, but I—my time is running out, and I have a couple of other questions that I hope—that I can ask.

The question that I just asked pertains to going forward rules and what we may do here, but your decisions, your marketplace business decisions, are equally or more important. Mr. Seidenberg, will you—and with MCI, will you be going into SBC territory and other Bell territory now to compete for residential and business?

Mr. SEIDENBERG. We are going to follow the technology. And in wireless, we are going to definitely do that, and in the enterprise space, we will definitely do that. And we will see what happens with national VoIP services, how they develop. But we are going to follow the technology that we invested, and we will definitely be nationally competitive for us where it makes sense.

Mr. PICKERING. For example, you need a major new platform in the south, I would assume, so you need a—to be able to compete in all of those markets, and I hope that the new Verizon South could come in to, say, some facilities in Mississippi——

Mr. SEIDENBERG. Yeah.

Mr. PICKERING. [continuing] to——

Mr. SEIDENBERG. Okay. Well——

Mr. PICKERING. Just off the top of your head of——

Mr. SEIDENBERG. Actually, why don't we ask Donahue that question?

Mr. PICKERING. Okay.

Mr. SEIDENBERG. He is sitting here doing nothing. Let us see what he is going to say.

Mr. PICKERING. Yeah, that is right.

Chairman BARTON. Your time has expired, Mr. Pickering.

Mr. PICKERING. Mr. Chairman, could I ask one question of Mr. Forsee?

Chairman BARTON. If it is a quick one.

Mr. PICKERING. It is a quick question.

Dr. Burgess had a question about his Sprint phone not being able to get a text message from his son, who may have a Verizon phone. Is that a software question or an interoperability question? And do we need to have some type of going forward rules on interoperability, especially on the data, so that networks can communicate? And again, are—competitive positions are most logical?

Mr. FORSEE. And the answer is—really is both. We operate in the wireless space and on two different platforms, one GSM one CDMA. There has to be extra provisions made, software provisions made for those two networks to interoperate. We do that today on global phones and other capabilities to allow us to make that work. Certainly, as our merger comes together with Nextel, we will be interoperating our networks so that our users get the benefit of both sets of services. So it clearly is achievable, and with our merger, we will be able to do that. And any other relationships we would have with Verizon, for example, on CDMA technology, we do have roaming agreements so our networks can interoperate today at the voice level.

Mr. PICKERING. Should that be legislated——

Chairman BARTON. One question.

Mr. PICKERING. [continuing] as a requirement, interoperability?

Chairman BARTON. Mr. Inslee is waiting very patiently.

Mr. PICKERING. Okay.

Mr. FORSEE. No.

Mr. PICKERING. No.

Mr. FORSEE. It should not be legislated.

Chairman BARTON. In Texas, that question would be a Ph.D. thesis, but I guess in Mississippi, that is a quick question.

The gentleman from Washington, Mr. Inslee.

Mr. INSLEE. Thank you.

For Mr. Seidenberg and Mr. Capellas, another CEO, Dick Notebaert, in the Wall Street Journal talking about the potential plans of this new unit, and he said that after this merger, "the odds are that these behemoths would not compete head-to-head in most local markets but would instead flex their muscles to squeeze out smaller competitors, emptying the playing field." What could you tell us about competition in local markets and the behemoths not competing in the local markets?

Mr. SEIDENBERG. Well, let me not address the specific comment, but the general thing we have talked about this morning is that we are a big company, true. We will be bigger with MCI, but the fact is in the markets that you are talking about, the consumer markets, every single one of the markets that we operate in has cable providers, they have wireless providers, as well as us. There is plenty of robust competition. This transaction changes nothing in the consumer space. It is just a different transaction. This is a transaction that is focused in the business market, sir, that is not focused on the consumer. So I think what we tried to—the point we have tried to make here this morning is that these mergers

don't change the technological direction that the market is taking with respect to these consumer-based technologies.

Mr. CAPELLAS. The only thing I would add, as Dave and I have both said, it is that our decisions to exit a constructively consumer market were made long ago.

Mr. INSLEE. Right.

This is an open question to anyone who wants to chime in, but is there a general concept that ultimately the ultimate, if there is such a thing, players here are going to be providing content as well as just communication, just data, either business or consumer and that ultimately the markets driving whoever the real communication players are going to be, some were to provide the entertainment content as well as personal and business communication? I don't think we have talked a lot about that here this morning. I just wonder if any of you could address whether that is the dynamic of the market or there are some dynamics to go the other way that actually drive you to be a more specific, more niche players as opposed to providing movies, video games, personal data, et cetera. Which—where are the dynamics going here?

Mr. WHITACRE. Mr. Inslee, I can speak for SBC, but I think we—I know we have made it pretty plain. We intend to go in the TV video business, which means you have to have content. And so we have made that commitment. We have spent hundreds of millions of dollars to put a video network. We have done a deal with Microsoft, Yahoo, and others, and so we are clearly going into the video business. That is our intent.

Mr. DORMAN. I would say that the publishers of content of all kinds are morphing. Artists are now contemplating having their own distribution vehicles, going around traditional record company contracts, being able to get to any consumer who would like to hear their music, whether it be popular artists or even libraries that exist. What I have heard content players say over and over is they welcome more distribution channels beyond the traditional cable distributors, and those who make the content welcome it as well.

Mr. INSLEE. Are these mergers driven a little bit by this dynamic, the need to be in the content business? They—are they a player in these decisions at all or not?

Mr. WHITACRE. Sure. We believe that the consumer or customer wants all of these services available from one company bundled, if you will, and video is a critical piece of that. And to do that, in our world, you have got to have Voice-over—or you have got to have the Internet Protocol broadband networks. Sure. That is part of it.

Mr. DONAHUE. I think it is important that we provide the facilities in which you can enable content, but in our space, for example, we work with multiple third parties to provide the content for us. And I see that model continuing as you move forward. So for example, Sprint has an affiliation with ESPN, who is the perfect example of that, and I think that trend will continue.

Mr. SEIDENBERG. If I might, where it may be a teeny bit different, directionally, I understand where we are, but this is a smaller transaction. MCI doesn't have any particular expertise in video distribution or in the consumer marketplace outstanding in the enterprise market, so for us, this transaction is driven by moving into the enterprise base.

To your question directionally where is Verizon going, I think we are more interested in the distribution and packaging and bundling of content than we are in the making of movies. So I think we want to fill up the networks that we have as opposed to getting the video business the way you might think cable companies get in the video business, because they both own the networks and also, to some extent, own the content. I don't know where we—this will go eventually, but our initial—into this is really more in the network side of it distributing, packaging, and bundling it.

Mr. INSLEE. Well, we are just happy that many of you are using great Microsoft products from my District, so thank you very much. Take care.

Chairman BARTON. I thank the gentleman.

The gentleman from Indiana, Mr. Buyer.

Mr. BUYER. I thank the gentleman.

I—Mr. Seidenberg, I am not surprised at all that, as a businessman, you would say that you have to follow the technology. I think that is very clear. We—even some of my colleagues that are now sort of scratching their heads that really don't follow this issue, say well, how can a baby Bell now merge with an AT&T? And my counsel to them is because we created this problem. And you don't find Members of Congress willing to say we caused a problem, but we have caused this problem. In fact, we thought we got it right. And I hate to go back to visit this, but we thought it was all about the voice. We set out these regulations. Our fears were about all of this competition that we—where these monopoly power—those of whom could exert monopoly power with they could actually compete, and so we created this problem.

And I am concerned about a couple of things. I want to make sure in the rewrite we get it right, and when I—we move in that direction, I am a good listener. I think it was Mr. Whitacre that said please make sure there is a light touch with regard to technologies. I think that was very well put, but it should also be a light touch to the framework to which we got wrong. And that framework to which you have, you call it the "patch." You know, we were very clear of saying well, we are going to go in there and we are going to regulate with regard to the baby Bells, but we are not going to regulate over here and we repeal the Cable Act and we have this explosion of technology. And it is exciting. And now I have—there is no question that you have to follow that, because you can not exist under that framework—the box that we had you put in. So as we do a rewrite, we want to do a rewrite that does what? Draws down the walls of the box that we had you in? Yeah, I think so. Now there—some may disagree, because they still want access to networks, so what? How fair is that, though, to continue to build out if we are going to allow people, then, to be parasitic upon your build-out? So I think that we are going to have a very strong tussle doing this rewrite, because you are still going to have people who have interest in gaining access to your investments. And so you wonder why Wall Street doesn't want to invest. I think it is pretty clear why they are hesitant at times.

I opened up in my opening with regard to four questions. I have been informed that you have covered several of them. But please let me know about—with regard to the—to verizon-mci. MCI, you

have a lot of government contracts, interagency. Please let me know the effect of this merger upon the interagency, not only in DOD but in their cooperation with Homeland Security and first responders and how this is going to work out with existing contracts, please.

Mr. CAPELLAS. Obviously, while specific operating principles and, you know, the short strokes of how we will execute haven't been determined, I don't think there is any question that we are continuing to invest in those networks through the merger. I don't think there is any question that the financial strength of Verizon will allow us to even extend it farther. I don't think there is any question that from how you actually execute security on a network the fact that we have recently purchased, you know, another small company that deals in security to extend our footprint helps. I don't think there is any question that the size of some of the capabilities on local access to be able to go end-to-end and be able to do tracability all of the way across the endpoint of the network actually proves that. So frankly, from our government perspective, and even if I sort of look at the reaction of our employees in our Federal space, it is nothing but positive.

Mr. BUYER. All right. Thank you.

Do you concur?

Mr. SEIDENBERG. Oh, absolutely. By the way, can I go for extra credit?

Mr. BUYER. Sure.

Mr. SEIDENBERG. Yeah. Your comment about the refreshing of the Act and being willing to be accountable, before we reinvent a brand-new mousetrap, if we look at some of the things that actually work well, like wireless, there is a model that we could extend there rather than think we have to start raising the house and building the whole thing over. So there are some examples of how the marketplace has helped achieve the things that you articulated.

Mr. BUYER. Well, when government gets out of the way. If government gets out of the way and lets the marketplace work and free enterprise creativity initiative, at-risk capital, exciting things happen. People benefit. Competition brings lower prices, not government interaction making demands upon you, keeping you in a box, and saying, "Oh, we are going to help the consumer." No, we limit the choice, and we hurt the consumer. Right?

Mr. SEIDENBERG. Right.

Mr. BUYER. I mean, that is how I rate this one.

The—well, gentlemen, I would like to work with you. I would like to work with your Washington offices how we do this rewrite for all of you, because we want to make sure we get it right this time. Do you know how I think we get it right? By having less government involvement and creating a very big box, because we can't keep up. This committee can not keep up. We don't visit these issues very often, and I think we need to give greater latitude, depth and breadth, for you to operate within that box for the society to benefit.

Thank you.

Chairman BARTON. I thank the gentleman.

We have got a few more questions, but you all have been here for 3 hours. If you all want to rotate for personal convenience, it

is acceptable. Just don't more than one of you go at a time, because we want to keep this—keep the hearing going.

So with that, we are going to recognize the gentleman from Chicago, Mr. Rush, for 5 minutes.

Mr. RUSH. Thank you, Mr. Chairman. Mr. Chairman, I really want to commend you for holding this timely hearing. It is very important.

I want to commend all of the witnesses who have participated over these last 3 hours. It has been very informative, and I certainly appreciate it, and my constituents appreciate it.

And may I regard, I just want to acknowledge and single out the—Mr. Whitacre. I really appreciate your involvement in helping to close the digital divide in my District, particularly in the Englewood community and also, Mr. Seidenberg, you are—to a lesser extent, you are really have done a remarkable job working with some of my constituents, and I appreciate that.

I have a couple of questions that I—and these are some—in an area that I don't think has been touched on in previous—until now. With these mergers—and this is to everybody here. With these mergers, do you envision areas where you would have to invest some of your assets and if so, what areas or regions are you looking at investing these assets? And you can—if your—if the answer is yes, would you also answer this question along with that question? Where would the opportunities for minority entrants to acquire—be to acquire some of these assets? So I am looking—okay, you are getting ready to merge and a lot of other kind of rippling effects are getting ready to occur. Are there opportunities for minorities to become owners of some of your divested assets?

Mr. Whitacre, start.

Mr. WHITACRE. Thank you, Congressman.

We are taking the position, and I think rightfully so, that since we don't overlap in any businesses, we shouldn't have to divest anything, because we are not in the same businesses. So I guess we will have to wait and see as it goes through the process whether that occurs or not. But as you know probably better than anybody, in the past, we have worked with minority groups in those cases, and in fact, have sold some businesses and divestitures. But we are taking the approach it is not an overlapping business, and we will have to see how the process goes. If that unfolds, then maybe we can discuss that as we go down the line.

Mr. SEIDENBERG. Well, just quickly, I agree. We don't think this transaction will cause the need to divest things the way we see it. But let me just add, we just participated in the FCC auction on wireless, and there were plenty of opportunities for a designated entity, which is another way of looking at minority ownership, bid on a lot of the licenses in terms of who we partner with downstream. So there are opportunities for minority ownership in the wireless area.

Mr. FORSEE. Similarly, we don't believe that the Sprint Nextel merger itself will require any divestitures of assets. We have made the decision to spin-off to our share owners our local business, which we operate in 18 States with close to 8 million access lines, so that will occur after our merger closes. And we would expect that would occur 6 to 9 months after the close of a merger with

Nextel. So we don't expect there to be any other assets that we require because of the merger to be divested.

As Mr. Seidenberg said, we also participated in Auction 58, which was, again, specifically identified for designated entities, and that is how Sprint acquired, through that vehicle, the spectrum in that caution.

Mr. RUSH. This merger, how will it help ensure that more Americans receive the benefits of broadband and the new services it makes possible, such as Voice-over IP and video? And specifically, how would you assure that under-served areas have access to broadband services, particularly the African American and Hispanic households? And let me just give you, if I could, a framework. This is a testimony that came in from the Consumer Federation. And you have probably seen this before. And I am just going to quote it, and that would—might give you the framework so you can pinpoint the answers. It says, and I don't necessarily agree with this, but I am just—I want you to know this is what is being proposed here. "Unfortunately, the telecommunications industry looks like it is headed in the direction of cable. SBC and Verizon are scrambling to put together their own bundles. To do so, they want to be excused from the public interest obligations of video service providers, such as community-wide build out and local access channels. For example, in one of the"—well, it says, "SBC and Verizon are seeking to be excused from serving undesirable customers and simultaneously seek to prevent local governments from serving those same very—those very same customers." And then they want to say—they called this redlining. Is there any truth to that position? And if not, clarify it for me, will you please?

Mr. SEIDENBERG. Not only do I disagree, it is offensive to me, because that is not the way we do business. We deploy our technology. We don't redline. We deploy it across the whole State. Our systems are open. Cable systems are not open. So I think, Congressman, that—I think that—I think our record should speak to this, and I think the CFA, you know, they have their objections to these transactions. It is sort of theological. It is religious. They just don't like any mergers, let me say that. But our record, in all of the transactions we have done, is we have never done that, and we have a good record to support that.

Mr. MURPHY [presiding]. The gentleman's time has expired.

Mr. RUSH. I agree.

Thank you.

Mr. MURPHY. The gentlelady from Wyoming is recognized.

Ms. CUBIN. Thank you. And I, too, would like to thank you for being patient and lasting for these 3 hours.

Most of the—well, all of the questions that I had prepared before I came have been asked, so I will be brief.

But I want to bring up a subject that I am tired of bringing up, and I am sure those of you who listen to me are tired of hearing, but I am talking about real rural America. My cellular phone, my voice wireless, is with Verizon when I am in Wyoming. And I had the wonderful experience to be traveling all over Wyoming while we were home for the last 2 weeks. And as I traveled from Newcastle to Torrington, Wyoming, which is 50 to 60 miles, I had no wireless, I had no voice. My cell phone didn't work. There was no

service. Now that is not just a little spot. That is almost an hour where I don't have any access to voice. I understand the dynamics of investing in service. I know that you have to make money, but I also think there is something about service. So when I have heard the discussion here today about wireless broadband deployment and I don't even get wireless voice, I am just skeptical. And that is just one example. By the way, this area is flat. The area that I am talking about. It is not as though there are big mountains interrupting that—the service. This area is flat. It just doesn't have any service.

So competition isn't working so well in Wyoming for us. The deployment of broadband fiber is very limited. And so I guess I would like you, Mr. Seidenberg, to just respond to that, because your company is what I use. Mr. Inslee read an article where someone said that the—this merger will squeeze out small companies. We are not getting this service from the big guys.

Mr. SEIDENBERG. Well, I wrote it down, Newcastle to where?

Ms. CUBIN. To Torrington, Wyoming.

Mr. SEIDENBERG. Excuse me?

Ms. CUBIN. Torrington.

Mr. SEIDENBERG. Torrington, Wyoming. Okay. We are going to find out. Thank you for having our service. At least we serve most of the other places you operate.

Ms. CUBIN. Well——

Mr. SEIDENBERG. Okay.

Ms. CUBIN. [continuing] my point is, you know, this isn't—you know, everyone accepts that there is spotty service.

Mr. SEIDENBERG. Yes.

Ms. CUBIN. Everybody—everyone accepts that. But all over Wyoming, this is the rule, not the exception.

Mr. SEIDENBERG. Yeah. No, I think the simple answer to your question is we could do better. I don't have any debate or any disagreement that the issue is we could do better. And what I need to find out is whether or not we serve that jurisdiction. But let us assume we did. I need to find out why—or what the sequencing of events of putting more towers in. But I will go back to what I said before. You happened to choose us. Obviously, if there were another carrier serving it, you would have switched, and so maybe there isn't any carrier there. So the issue is all of us together need to keep filling out the footprint across the country, and I think—I don't want to speak for my colleagues, but I know that Donahue would agree with that. He absolutely would agree.

Ms. CUBIN. Well, my next question was going to be for him. And I wanted to ask how the Sprint Nextel spectrum will serve wireless broadband in rural America. And will Wyoming be left behind like it is in voice? I mean, what I want to say is when the rewrite comes up, you have heard everybody—practically everybody up here today talk about rural America and service to rural America. And I want you to know we are serious. We demand services. And whatever we have to do to get them, I am willing to do that. I represent 500,000 people over 100,000 square miles. That is really rural America.

Anyway, so if you would answer my question.

Mr. DONAHUE. Well, thank you for your question.

Ms. CUBIN. And Mr. Forsee, too, if you have any——

Mr. DONAHUE. Of course. And as much as it pains me, I will say that Mr. Seidenberg is right that we—all of us are taking a look at expanding our footprint. If you take a look at our 2 to 5-year bill plan, it covers a significant amount of rural America moving forward. And so it is our intent to continue to increase the coverage. And I think that this merger is going to help accommodate that, because we are going to have the financial resources and the wherewithal to get that done.

Now in terms of broadband, I think that if you take a look at our spectrum position and what our future plans are, we are taking a look a deploying not only the third generation technology on the current networks, but we have an opportunity for a fourth generation technology using our 2.5 spectrum, and that spectrum is nationwide across the entire country, and it will give us a much better opportunity to cover those areas in rural America that aren't covered today.

And finally, I would say that technology is getting more efficient. And as the technologies get more efficient, it gives us the capability of rolling out more coverage, because from a financial perspective, it makes much more sense for us.

And finally, I would say the demand is there, and we see it all of the time. And we are very cognizant of it and are working very hard to try to increase coverage in rural America.

Ms. CUBIN. Thank you.

I don't have anything further, Mr. Chairman.

Mr. MURPHY. The gentlelady's time has expired.

The gentleman from Texas is recognized.

Mr. GREEN. Thank you, Mr. Chairman.

I was going to tell our guests that they could all be excused in a few minutes, but I see my colleague from New Hampshire back here.

I have got a couple of things. One, SBC predominately provides the local telephone service, and of course, I have a Verizon Wireless center in Houston that is very familiar with us, but now with your District, you and I share part of Verizon's service area in Baytown in East Harris County. And so I have some questions concerning that, just like my other colleagues. But I have visited the SBC call centers in Houston that are predominately for the Hispanic market, and I don't know if any—see, I was there with both SBC and CWA representatives, so they didn't say they didn't want those jobs, at least in Houston. I don't know about California.

But let me ask both Mr. Whitacre and Mr. Dorman. I would like to hear your views on the state of phone competition in both consumer and business markets in the major metropolitan areas, like Houston. And I think the area is a good example, because I have Time Warner, who is beginning to roll out their Voice-over IP, and service and bundled it with video and broadband. And one of the goals I think of everyone on the committee is make sure there is competition. And would be SBC be able to—at some time, be able to provide that competition for not only the phone service but also the broadband and video? I know you can do broadband now.

Mr. WHITACRE. We are in the broadband now, Congressman, as you say. We do offer a video product through a dish network, so we can provide video now, but it is satellite video, and what we are

attempting to do is provide video through our infrastructure that we are building. I certainly hope that we can. The state in Houston, for example, is an amazing amount of competition. There are many C-lex. There are cable companies. There are wireless companies. On the business side, there are some big-name companies doing a lot of things there, so there is a lot of competition in all of the cities, and it is certainly our hope with this merger we can provide more than we are presently doing.

Mr. GREEN. Okay. What do you think from—Mr. Dorman, from AT&T's side?

Mr. DORMAN. I really don't have anything to add. The business environment has continued to have dozens of competitors, particularly in places like Houston, and we see them every day.

Mr. GREEN. Okay. But Mr. Whitacre, your goal is to be able to do the video over your infrastructure, not necessarily always have to do the satellite?

Mr. WHITACRE. No, we are going to do it over our infrastructure, and we have got Project Light Speed going full blast, and we hope to be out there with a video product near the end of this year, through our infrastructure and not satellite.

Mr. GREEN. Good.

Mr. Seidenberg and Mr. Capellas, I would like to ask a similar question, but the answer may be different, given the different companies that you have, and the committee is focusing on the convergence of phone service, residential business, and broadband and video. What would the merger with Verizon and MCI, would that be similar to what SBC and AT&T? Because, again, since I have Baytown and East Harris County now, I am interested in making sure they have some of those same services and competition to our local cable that does a great job, but I like to see the competition.

Mr. SEIDENBERG. Well, just quickly, I think it is similar, but we are a smaller transaction, and we are focused on the enterprise market mostly, so I think you will continue to see robust competition for business services, and the government.

Mr. GREEN. Okay.

And the last thing, again, since it is in Houston and with the merger of SBC and AT&T, what does it mean to our jobs in our community, and I guess, Mr. Whitacre, you could probably answer that the best? I think AT&T probably has 100 employees in Houston, and I know SBC has thousands.

Mr. WHITACRE. We do have a large employment base there. Again, it is—it depends on how successful we are going to be, but in a local area like Houston where we have an operation center and AT&T does, too, I don't think it will have any impact at all. I don't see any job changes there of any significance.

Mr. GREEN. Okay.

Mr. Chairman, I have a few seconds left. Mr. Whitacre, just say hello to a former colleague of mine, John Mumford, who I served with in the State Senate and who was a good friend for many years. Just——

Mr. WHITACRE. I will do that, Congressman. He is very busy with the Texas legislature.

Mr. GREEN. I understand, having been there, but again, just make sure he knows I said hello.

Thank you, Mr. Chairman.

Mr. MURPHY. I think I am going to do the prerogative and ask next.

Mr. Seidenberg, I think as reported recently in the Washington Post that there is alleged certain VoIP traffic is being blocked by some major providers. And I think the FCC is looking into this issue. I am concerned that post-merger Internet transport will be significantly consolidated to the point that network discrimination against unaffiliated VoIP providers will become a more frequent headache for the industry, and I guess Congress and the FCC, through complaints. I guess you could even raise anti-trust concerns. It seems that this is potentially an issue and could be reasonably addressed, perhaps, voluntarily as a condition to these mergers, just the case in point. I guess the question is are you open to such a suggestion?

Mr. SEIDENBERG. Well, first of all, I am going to check into this, but I don't think that exists with us, I mean, not that I know of, and——

Mr. MURPHY. Okay. Well, I would ask Mr. Whitacre, too, the same question.

Mr. SEIDENBERG. And just quickly, if I might, we also need to hand off VoIP traffic to others, so I don't know why we would block it if we needed others to carry our traffic.

Mr. MURPHY. Are you familiar with the Washington Post article I am talking about?

Mr. SEIDENBERG. I am not, and I will look into it, but——

Mr. MURPHY. Okay.

Mr. SEIDENBERG. [continuing] it is the Washington Post, so——

Mr. MURPHY. Yeah. Okay.

Mr. Whitacre, would you like to—had—you are familiar with the Washington——

Mr. WHITACRE. I am not familiar with that article, either, but I am sure we are not doing that.

Mr. MURPHY. Maybe my staff is the only one that read this article.

Mr. Forsee, Sprint is also a major government contractor when it comes to communications services. And if the SBC and AT&T and Verizon-MCI deals are approved, what impact, if any, would the deals have on the government service businesses, and do you see a reduction in competition in that market?

Mr. FORSEE. I think Sprint has been a long-time government contractor. Nextel has as well. As our two companies come together, we would intend to continue to invest disproportionately in public safety and homeland security. The issues have been very important to our country. And I see no diminishment of the competition today on any government bid. There are multiple providers that are willing to step forward. Wireless has become a much more important part of that discussion, and with Sprint's global IP capability, I think you will continue to see us invest in the government business and certainly with Nextel to continue to lead in the public safety sector.

Mr. MURPHY. Okay.

Another question for you. I think you indicated earlier that Sprint will be ruling out wireless broadband services aggressively

this year. And I guess the question is can you safely say, I guess, will the price of that service be competitive with DSL and with the cable modem services?

Mr. FORSEE. Yeah, the service we are rolling out this year, Mr. Congressman, is what we will consider our third generation wireless data network. The speeds on that network will not yet be up to the speeds of the landline-based services, like could be acquired from a DSL service or from a cable modem. But nevertheless, it will be significantly better than what wireless data networks that are deployed today as we continue to step up that capability. Tim mentioned earlier, as we consider deploying a fourth generation of wireless data, which would be in the 2007 and 2008 timeframe, perhaps, then you are at the point where there could be, if customers choose to use it for a substitution for DSL and broadband and rest assured price competition, because another alternative would be available, would certainly be part of that discussion.

Mr. MURPHY. This is just a question of personal—I just got back from Europe, and I had a phone, the Trio 650. And I could use it. And Cingular was the provider for this one. And I could use it in Germany and France. And I was sitting next to a man who was CEO of T-Mobile. And he pulled out a phone that he could use in 150 countries. And it combined everything the 650 Trio had, but it seemed to have a little bit more capability. And the idea of the reciprocity between European countries and the United States and the access for Americans when they go over there to use it has been a little bit of a problem. And I guess I would ask Mr. Seidenberg, do you see Verizon being able to provide the service that—in 150 countries you could use your service and still use it in the United States with ease?

Mr. SEIDENBERG. No, absolutely. I think in our case, you know, we measure this. You know, less than 5 percent of our customers roam in Europe. But we—you are probably one of them, I guess. But what I think—or Ed's customer. But I think in the long-term, we will have roaming agreements and interoperability agreements with all of the international carriers, and I think that is something that the industry will take care of over the course of the next few years.

Mr. MURPHY. Also, when I went on the web, when I first got to Germany, I couldn't get on the web with the 650, but it seemed after a day, it suddenly kicked in. So I guess there was a period there when I was roaming and that these interoperable agreements that they had, it either couldn't find it or something, so it came in. So what you are saying for the voice is also true for probably the web?

Mr. SEIDENBERG. I don't know this, but in your—in that case, somebody may have just needed to validate the number and it took a little bit of time for that to happen.

Mr. MURPHY. Yeah. Okay.

My time is expired.

The gentleman——

Mr. BASS. Am I recognized, Mr. Chairman?

Mr. MURPHY. The gentleman is recognized.

Mr. BASS. Thank you.

Mr. MURPHY. Absolutely.

Mr. BASS. Thank you. Thank you very much, and I apologize for keeping you guys here. Ten o'clock was a long time ago. I will be very brief.

Mr. Seidenberg, I—one of the many memories of 9/11 and its aftermath that I will not forget is my visit with some of my colleagues here on the committee to the West Street facility and the heroic efforts that many of your employees were making to—in fact, the chairman was there in the same trip. In the—on the streets of New York trying to reconnect all of the wires and the work that they did is truly extraordinary.

Now I also understand, of course, since that time, you have had a number of other national security events, including the GOP and Democratic Conventions and others. My question is, by merging with MCI, you are going to have—you are going to be responsible for considerably a greater number of Federal agencies and clients. And are you willing to put the resources into homeland security and cybersecurity activities if the merger is approved that would—you would—that would normally have been expended? And do you see any special challenges facing the new company as a result of that merger in this particular area?

Mr. SEIDENBERG. No, actually—thank you for the question, because it should be just the opposite. We want to do more, and we will do both. I don't think there is any—this is not an either/or question. Our interest in surveying large-scale projects like the GOP or the Democratic Convention or the Federal Government, we have a great interest in doing that, and we will put the resources to make that happen.

Mr. BASS. The—if you merge, a lot of the technology that went into the creation of the Internet will be merged into your business, most notably Ray Tomlinson at BBM in Cambridge, Massachusetts who came up with the @ for the Internet and the—Vint Cerf who is now at MCI created the Internet Protocol that we use today. Despite this legacy, many critics point to the rate of deployment of DSL and other advanced services by Verizon and claim that it has been too slow and only occurs when competitors offer the service first. How, in your opinion, would the merge firm use its—this legacy or its legacy to bring these innovations to all Americans, including those who live in rural areas, such as found in my District?

Mr. SEIDENBERG. Okay. Am I blessed with this question, too?

Mr. BASS. Sure.

Mr. SEIDENBERG. Yes. Okay. The—here is the way I would respond to that. Very quickly, when we have had an absence of regulatory interference, we have deployed technology as fast as anybody in the industry. Just look at what we have done in wireless. I think what MCI lets—gives us the capability to do, as Michael mentioned before, all of the platforms, all of the Ethernet access, and all of the—all of those services that customers on the enterprise level, we will do that. And as far as the deployment of consumer-based technologies, I think, as we have said during the hearing, all of this will just increase the capacity of the company to generate the savings and the earnings and the capital formation to do that.

Mr. BASS. Okay. Fair enough.

Thank you very much, Mr. Chairman.

Mr. MURPHY. Thank you.

And anyone else seek time?

We want to thank you for your long patience and forbearance here, and you are excused. And we will ask the second panel to come forward: Dr. Mark Cooper, Director of Research, Consumer Federation of America; Mr. Jeffrey Halpern, Senior Equity Research Analyst at Telecommunication Services; Mr. Jim Speta, Associate Professor, Northwestern University School of Law; and Mr. Phil Weiser, Associate Professor of Law and Telecommunications, and Executive Director of Silicon Flatirons Telecommunications Program at the University of Colorado School of Law. I want to welcome all of you here, and we welcome your opening statement of 5 minutes, and we will start with Dr. Cooper.

So if we will just make sure the people in the back are quiet for you, Mr. Cooper, I think we are—I beg your pardon, you each have 7 minutes. I have been corrected. So you have 7 minutes for your opening statement.

And with that, Dr. Cooper, I think we will start with you.

STATEMENTS OF MARK N. COOPER, DIRECTOR OF RESEARCH, CONSUMER FEDERATION OF AMERICA; JEFFREY HALPERN, SENIOR EQUITY RESEARCH ANALYST, U.S. TELECOMMUNICATIONS SERVICES, SANFORD C. BERNSTEIN & CO., LLC; JAMES B. SPETA, ASSOCIATE PROFESSOR, NORTHWESTERN UNIVERSITY SCHOOL OF LAW; AND PHILIP J. WEISER, ASSOCIATE PROFESSOR OF LAW AND TELECOMMUNICATIONS, AND DIRECTOR OF SILICON FLATIRONS TELECOMMUNICATIONS PROGRAM, UNIVERSITY OF COLORADO SCHOOL OF LAW

Mr. COOPER. Thank you, Mr. Chairman.

We told you that the law wouldn't work. Mr. Buyer has stood up and said we have—he has to admit it. We told you to vote against it when it came to the floor. But frankly, this shell game you heard this morning is not going to solve the problem. And it was quite a shell game. You heard Mr. Whitacre say, "The law says we can't discriminate, so we won't." But then he is there at the FCC seeking to be excused from Section 201 and 202 of the Communications Act, which is the obligation to not discriminate.

Mr. Seidenberg says, "We don't redline. We serve everybody," but in Pennsylvania when they forbade cities from providing community wireless networks, they committed to building out by 2015. That is 15 years rural Pennsylvania falls behind: 3, 4, 5 generations on the Internet. Justice delayed is justice denied.

We heard wonderful figures about a 15 or 20-percent market share in Internet backbone, but access to Internet backbone is a local commodity. I can't connect to the Internet in Houston with facilities in Dallas. You have to look at this at a—as a local market. And those local market shares are much more concentrated than all of the numbers you heard this morning. You did hear a bit of truth this morning when all of the people at the table said, "We have exited the consumer market." I represent consumers. They have exited our market. But of course, what happened was the Bells killed the competition by leaning on the FCC, and now that the competition is dead, they say, "Nothing to lose here, because there is no competition in wireline facilities."

The merged entities you had before you today are essentially Bell behemoths reconstituting their Bell operating system. For the residential customer in local markets, they will have a 90-plus-percent market share of dial tone, a 70-plus-percent market share of long distance, and a 40 to 50-percent market share of wireless. They will own and control the assets of the public switch network and have the same anti-competitive incentives that the old Bell system: to discriminate, to price squeeze by overcharging for access. And they are seeking the legal right to discriminate against competitors and application service providers who want to use their networks.

The weakness of this industry structure from the residential consumer point of view is absolutely clear. The baby Bells you had here today, the Bell behemoths, will not sell naked DSL. I realize we have to be careful where that word is in public these days on TV, "naked DSL" means you sell someone DSL with—on a standalone basis. They require you to buy their voice service when you get DSL. Well, why would any consumer buy two voice services? How is VoIP going to compete when all of the DSL lines in their service territory require that—you to buy their voice service? And of course, the cable operators won't guarantee VoIP service's quality of service. All VoIP service providers will be subject to the discriminatory practices of the network owners.

This is not competition. This is a crummy duopoly. In order to get VoIP, you have to have broadband. 70 percent of the people in this country don't have broadband. So in order to get VoIP, they would have to double or triple their phone bills. That is not competition. That is what in business we call a crummy duopoly.

So from our point of view, the steps to reforming this industry are quite clear. The box, so to speak, that Mr. Buyer talked about, has to be built with certain fundamental principles. One, nondiscrimination in the access to the networks. That has been a principle of communications in this country since its founding. Two, access charge reform so there are no price squeezes. Three, community wireless, community services so that when, in fact, some communities aren't served, they can engage in some self-help. And community wireless is actually significantly less expensive than the services that these entities are rolling out.

Meaningful universal service, the way the FCC has treated broadband, it will not be eligible for any support under universal service, because it is not a telecommunications service. That is a disaster for rural America. That is a disaster for low-income America, because the base of funds to support a ubiquitous affordable network will be destroyed. So yes, there is a way to reform this industry. But what we must not allow to happen is the thin competition between a couple of facility owners to destroy the vigorous competition we have had at the level of applications.

And finally, the worst shell game you have heard today was the promise that this is the next merger that will unleash competition. We have been coming up here for 8 years. Each year, another merger, another promise. "This is the one that will get me competition." And maybe there will be a new competitor in 2009 or 2010. The simple fact of the matter is that Congress adopted a bad law and has bought a bill of goods from entities who have now reconstituted the Bell operating system.

Thank you.

[The prepared statement of Mark N. Cooper follows:]

PREPARED STATEMENT OF MARK N. COOPER, DIRECTOR OF RESEARCH, CONSUMER FEDERATION OF AMERICA ON BEHALF OF THE CONSUMER FEDERATION OF AMERICA AND CONSUMERS UNION

SUMMARY

The recent wave of proposed mergers in the telecommunications industry—SBC attempting to gobble up AT&T, and Verizon trying to swallow MCI—mark the ultimate demise of the era in which consumers could expect more and more choices and lower prices for local, long distance, wireless, and new Internet-based services exploding on the market.

The Consumer Federation of America (CFA) [1] and Consumers Union [2] believe that the drumbeat of consolidation and ill-conceived regulatory policies have already undermined consumers' greatest hopes for ongoing and expanding competition. If not rejected or dramatically altered, these mergers could set the marketplace back to a world more akin to monopoly than competition.[3]

OVERVIEW OF THE INDUSTRY

The Failure of Vigorous Competition for Residential Customers

We urge you to ponder the following anecdote from the computer world, which demonstrates the level of competition consumers would like to see in the telecommunications sector—particularly the increasingly consolidated wireless and wireline industries. When asked about whether his company would buy another computer manufacturer, Michael Dell is reported to have said: "I like to acquire my competitors one customer at a time." That competitive ethic simply never took hold among the Regional Bell Operating Companies (RBOCs).

Instead of entering one another's service territories and competing to win customers in a new location, our nation's largest telecommunications companies chose to merge and buy each other up. As the companies acquired a larger and larger footprint, it became harder and harder for new entrants to gain a toehold in the market. The proposed SBC-AT&T and Verizon-MCI mergers, if approved, will be the final nails in the coffin of the local competition experiment the Congress launched in the 1996 Act.

The residential consumer today is faced with at most only two facility-based alternatives—the local telephone and cable companies. These two form what Business Week has called a "crummy duopoly." [4] They do not compete vigorously on price or innovate. They are more concerned about protecting a core franchise product (phone or cable services) rather than in competing against the other's core product through lower price or better quality. Because their prime profit-maximizing customer base consists of upper-income households that purchase many telecom and video services, they tend to offer high-priced bundles of services that the majority of consumers either do not want or cannot afford. As a result, to get a variety of good marketplace choices and prices, consumers must buy extra services—DSL tied to local phone service, or cable modem service tied to a cable video package or cable Internet Serv-

[1] The Consumer Federation of America is the nation's largest consumer advocacy group, composed of over 280 state and local affiliates representing consumer, senior, citizen, low-income, labor, farm, public power an cooperative organizations, with more than 50 million individual members.

[2] Consumers Union is a nonprofit membership organization chartered in 1936 under the laws of the state of New York to Provide consumers with information, education and counsel about good, services, health and personal finance, and to initiate and cooperate with individual and group efforts to maintain and enhance the quality of life for consumers. Consumers Union's income is solely derived from the sale of *Consumer Reports,* its other publications and from noncommercial contributions, grants and fees. In addition to reports on Consumers Union's own product testing, *Consumer Reports* with more than 4 million paid circulation, regularly, carries articles on health, product safety, marketplace economics and legislative, judicial and regulatory actions which affect consumer welfare. Consumers Union's publications carry no advertising and receive no commercial support.

[3] I am making available to the committee for the record several studies prepared by our organizations in the past year that document how anticompetitive behavior and regulatory failures made it impossible to develop the vigorous competition that Congress hoped for in the 1996 Telecommunications Act.

[4] Yang, Catherine, "Behind in Broadband," *Business Week,* September 6, 2004

ice Provider (ISP). In order to get the benefits of this "bundle-only" competition, the average household must double or triple its spending.[5]

At the end of the day, the Bell behemoths will have reconstituted and extended a dominant "Ma Bell-type" company in their service areas. They will have about a 90 percent market share in residential local wireline,[6] 70 percent in long distance,[7] and 40-50 percent in wireless.[8] They will have the incentive and opportunity to discriminate by using a price squeeze against competitors (both ISPs and telephone service providers, TSPs) that need access to the local or interstate long-haul networks.[9] If these mergers are not blocked or substantially altered by the Antitrust Division of the Department of Justice (DOJ) and the Federal Communications Commission (FCC), these so called Baby Bells will become regional Behemoth Bells that swallowed up their original parent company (AT&T) and its main competitor (MCI), leaving consumers almost no better off than they were before the old Bell monopoly was originally demolished.

Making matters worse, the cable industry is dominated by behemoths as well. What's more, cable's two largest companies—Comcast and Time Warner—are threatening to become even larger with an acquisition of the Adelphia properties. The average cable operator has over a 75 percent market share in video[10] and over an 80 percent market share in advanced services for high speed Internet.[11] They too have an incentive to discriminate against ISPs and TSPs.[12]

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[5] *A Nation Online,* (Washington, D.C.: National Telecommunications Information Administration, September 2004), Current Population Survey Data Base, for subscription to specific services. Zimmerman, Paul R., *Reference Book of Rates, Price Indices, and Household Expenditures for Telephone Service* (Washington, D.C.: Industry Analysis and Technology Division, Wireline Competition Bureau, Federal Communications Commission) for local and long distance bills. Bundle prices are from visits to web sites of major carriers. Comparisons based on average basic local plus average long distance. Cable modem service costs about $45 per month. DSL service costs about $30. However, the local phone companies serving 85 percent of the nation require DSL customers to also take voice, making the basic connectivity costs for a high speed line that will support VOIP even more expensive. *UNE Fact Report 2004, Prepared for and Submitted by BellSouth, SBC, Qwest, and Verizon, In the Matter of Unbundled Access to Network Elements, Review of Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers,* WC Docket No. 04-313, CC Docket No. 01-338, October 2004. Federal Communications Commission, *Reference Book of Rates, Price Indices, and Household Expenditures for Telephone Service,* 2004.

[6] Federal Communications Commission, *Local Telephone Competition: Status as of June 31, 2004,* December 2004, Tables 6, 11, show this figure at just over 80 percent of SBC and just under 80 percent for Verizon. This is prior to the impact of the UNE-P decision.

[7] Precursor, *Telecom Vital Statistics: Pillars of the Bell 2005 Competitive Respite Thesis,* January 24, 2005, put Verizon and SBC long distance market shares at close to 40 percent at year-end 2004, and predicted a gain of another 10 percent, *without* the mergers. AT&T and MCI national market shares were approximately 30 percent and 20 percent, respectively, as reported in Industry Analysis and Technology Division, *Trends in Telephone Service* (Washington, D.C.: Federal Communications Commission, May 2004), p. 9-5. Because of their respective geographic foci, the in-region market share of the long distance companies being acquired respectively is likely to be higher than the national average. Thus, a 70 percent residential market share is a cautious estimate.

[8] Consumer Federation of America and Consumers Union, Letter to Chairman Michael Powell, September 16, 2004.

[9] See Cooper, Mark, *The Public Interest in Open Communications Network* (Washington, D.C.: Consumer Federation Of America, July 2004), Chapter IV, for a discussion of past anticompetitive practices of telephone companies against CLEC and ISPs. For a discussion of the problem of vertical leverage against intermodal competitors see "Petition to Deny of Consumer Federation of America and Consumers Union," *In the Matter of Application for the Transfer of Control of Licenses and Authorizations from AT&T Wireless Services Inc., and Its Subsidiaries to Cingular Wireless Corporation,* WT Docket No. 04-70, May 3, 2004 and "Reply of Consumer Federation of America and Consumers Union," *In the Matter of Application for the Transfer of Control of Licenses and Authorizations from AT&T Wireless Services Inc., and Its Subsidiaries to Cingular Wireless Corporation,* WT Docket No. 04-70, May 20, 2004.

[10] On a national average basis, cable has just under an 80 percent share of the MVPD market (see Federal Communications Commission, *In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Eleventh Annual Report* MB Docket No. 04-227, February 4, 2005, Table B-3). Since the market share of head-to-head cable competitors (overbuilders) is only about 1 percent (*Eleventh Annual Report,* pp. 48-49), the cable market share is certainly greater than 75 percent. Moreover, the competitive overlap between cable and satellite is not perfect, with satellite still having a substantial rural base. Thus, on a market-by-market basis, cable's market share may be over 80 percent.

[11] Federal Communications Commission, *High-Speed Services for Internet Access,* June 30, 2004, Table 4.

[12] The vertical problem in the cable video and high speed Internet markets are discussed in Cooper, Mark, *Cable Mergers and Monopolies: Market Power in Digital Communications Networks* (Washington, D.C.: Economic Policy Institute, 2002), Chapters 4 and 5; see also The Public Interest in Open Communications Networks, Chapter IV.

Administrative and Congressional Action That is Needed to Protect Consumers

The proposed telecommunications mergers would lead to such high levels of concentration that we believe the antitrust and regulatory authorities should not allow them to proceed without imposing extensive nondiscrimination requirements and requiring substantial divestitures of assets to restore competition in numerous in-region markets dominated by SBC and Verizon. These mergers must not be allowed to proceed until public policy ensures that these companies will not have the opportunity to squeeze out their competitors through inflated access charges or other anti-competitive practices.

However, even if regulatory and antitrust authorities diminish the anticompetitive effect of these two mergers, the vigorous competition Congress had envisioned during passage of the 1996 Telecom Act has failed to materialize. Congress must take action to correct fundamental errors in the FCC's implementation of the Act.

Congress must restore the obligation of nondiscriminatory interconnection and carriage that the FCC has abandoned. Communities must be allowed to meet the needs of their citizens to ensure ubiquitous, affordable service. This would also 0ensure that communities have the right to jump-start competition by providing telecommunications services. Policymakers must expand the availability of unlicensed use of the spectrum so that entrepreneurs and citizens are no longer dependent upon monopoly networks to expand competition across all telecommunications and media services. And Congress must reaffirm the goal of universal service, taking action to bring affordable telephone and broadband services to all citizens.

THE REINTEGRATION AND RECONSOLIDATION OF THE TELECOMMUNICATIONS INDUSTRY

Today, RBOCs claim that they are no longer monopolies and face substantial competition within the wireline market and from cross-technology competitors. This is not even the case *today,* pre-merger. If there is even further consolidation in the market, the problem will only grow worse for consumers.

Local Voice Competition

Those who point to competitive local exchange carriers (CLECs) as the source of competition had better look again. SBC and Verizon have litigated, stymied, and strangled local voice competition until it has almost completely withered, and the CLECs that were supposed to offer so much competition to the dominating Bells are dying in droves.[13] Born as local monopolies, the RBOCs have remained anti-competitive to the core. Once the 1996 Act was signed into law, the RBOCs immediately set out to bulk up their local monopolies into regional monopolies through mergers and acquisitions. In the end, they never competed in one another's regions as envisioned by Congress.

There was a moment, however, soon after the 1996 Act passed when these telecom giants were considering whether to take on one another. Instead of growing by competing, however, they decided to do the opposite—to expand by merging, bringing more consolidation to the industry and less competition. Rather than earning an out-of-region market share one customer at a time, the way that Michael Dell had envisioned, the RBOCs decided to buy the entire out-of-region market, to create a bigger footprint. Verizon dominated the Northeast through the merger of Bell Atlantic and NYNEX and added to its heft with the acquisition of GTE. Texas-based SBC dominated the middle of the country as a result of its acquisition of Ameritech and held outposts on the coasts, with its acquisition of Pacific Telesis and Southern New England Telephone.

Even when they promised to compete out of region, as a quid pro quo, as in SBC's "national local strategy" pledge in the Ameritech merger, they never did.[14] It was (and remains) always the next merger that should unleash competition, but it never does. Only in the fantasy world of industry-funded think tanks do we get competition without competitors.

And in the residential market, SBC and Verizon today have about an 80 percent market share,[15] and that number will go up as a result of the latest acquisitions and the decision of the FCC to eliminate unbundled network element platforms (UNE-Ps), which AT&T and MCI—the two largest local-residential service competi-

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[13] Cooper, Mark, *Stonewalling Local Competition: The Baby Bell Strategy to Subvert the Telecommunications Act of 1996* (Consumer Federation of America, January 1998); *Competition At The Crossroads: Can Public Utility Commissions Save Local Phone Competition?* (Consumer Federation of America, October 7, 2003)

[14] Cooper, Mark, *The Consumer Case Against the SBC-Ameritech Merger* (Consumer Federation, et. al, January 20, 1999)

[15] See note 6 above.

tors—relied on to compete.[16] By buying up their largest competitors and eliminating UNE-P, the market share of these two behemoths will likely exceed 90 percent in the residential sector.

The big business service market, known as the "enterprise" market in the industry, appears to be only barely more competitive. On average, these two companies have about a 75 percent market share for medium and large business lines.[17] These two proposed mergers, if allowed to go through, will increase this market share substantially. Because AT&T and MCI are the largest players in the enterprise market and because of the geographic patterns of competition, the in-region market shares of SBC and Verizon in the enterprise market for voice would rise to the mid-80 percent range.[18] These regional fortresses would also anchor their dominance of national corporate accounts.

Given this increasingly consolidated market for landline services, and especially considering the demise of the CLECs, it is critical for policymakers to consider the geographic distribution of the SBC and Verizon markets when analyzing these two mergers. MCI had its most intense competitive presence in Verizon's service territory; the MCI-Verizon merger will eliminate Verizon's most vigorous in-region competitor.[19] The situation with SBC "AT&T is similar. AT&T has a large presence in SBC's service territory. If these mergers go through, SBC and Verizon will effectively be buying market power to eliminate their strongest in-region competitors. The market is concentrated enough now; these mergers would make it much more so.

Long Distance

SBC and Verizon have run a brutal bait-and-switch game with long distance service. After having been allowed to re-enter the long-distance market because policymakers determined local markets were open—a finding that was overwhelmingly based on the availability of UNE-Ps—they launched a vigorous campaign to eliminate the availability of UNE-Ps. SBC and Verizon's gambit was a success and, as expected, the competition is drying up.

The two corporations each already has about a 40 percent market share in the residential long-distance market within their regions, but if this merger is approved, this will increase substantially to an estimated 70 percent.[20] This is, of course, well above the threshold where antitrust authorities become concerned about the abuse of market power. Once again, this merger would further concentrate and already-too-concentrated market.

Voice Over Internet Protocol (VoIP)

Given that 70 percent of households don't have broadband service and therefore cannot take advantage of Voice over Internet Protocol (VoIP) calling,[21] which requires such a connection, VoIP is not an effective competitor to the traditional landline. It is one thing for big-spending residential customers to consider VoIP as an alternative, notwithstanding its lower reliability (because it does not run when the power goes out) and lack of a fully functional E-911 service.[22] It is quite another to expect those families who pay an average $25 per month[23] for local service to

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[16] Facilities-based competition accounted for only about one-fifth of total competition (Local Competition, Table 10). Most of this competition was in the medium or large business market.

[17] Local Competition, Tables 6 and 11.

[18] Matt Richtel, "Valuing MCI in an Industry Awash in Questions," *New York Times,* February 2, 2005, C-4, puts AT&T's national market share for the "corporate telecommunications market" at 15 percent and MCI's at 12 percent.

[19] The fact that the geographic overlap of assets is more concentrated in specific regions and products than the national average has been noted in the press accounts of the proposed mergers. Almar Latour and Dennis K. Berman, "Qwest Presses Its Bid for MCI," *Wall Street Journal,* February 4, 2005, C-4, the *Wall Street Journal* described Verizon and MCI as follows: "A tie-up between Verizon and MCI also could fact cultural challenges: The companies have been fierce competitors and have been at loggerheads in court." The map accompanying Matt Richtel, "Valuing MCI in an Industry Awash in Questions," *New York Times,* February 2, 2005, C-4, shows a concentration of MCI data centers in the Northeast.

[20] See note 7 above.

[21] Cooper, Mark, *Expanding the Digital Divide and Falling Behind in Broadband Falling Behind in Broadband,* (Consumer Federation of America and Consumers Union, October 2004), shows that penetration of the Internet into homes has stalled below 60 percent, while just over half of all Internet households have broadband.

[22] "Comments Of Consumer Federation Of America and Consumers Union," *In The Matter Of IP-Enabled Services, Petition Of SBC Communications Inc. For Forbearance,* Before The Federal Communications Commission, WC Docket No. 04-29, 04-36, July 14, 2004.

[23] Reference Book of Rates, Table 1.6.

pay another $30-$50 for broadband in order to have access to VoIP, which costs another $25-$30.[24]

Making matters worse, SBC and Verizon also use an anti-competitive bundling tactic to ensure that VoIP can never effectively compete with their basic local voice services. Neither Verizon nor SBC will sell a consumer DSL on a stand-alone basis, what is known as "naked" DSL. Both force consumers to buy their voice service in order to get a DSL line. So a consumer who wants to buy VoIP from a competitor has to pay for local service twice.

While they cite VoIP as a competitive threat, SBC and Verizon are seeking to be excused from the obligation to allow VoIP service providers to have access to the underlying telecommunications network in a just, reasonable, and nondiscriminatory manner. They will do to these unaffiliated telephone service providers (TSPs) exactly what they did to CLECs and what the cable modem operators did to ISPs—foreclose, discriminate, and delay until they wither and die.

Ironically, when AT&T and MCI exited or pulled back from local competition as a result of the FCC's decision to eliminate UNE-P, they both declared that they would look to VoIP as an alternative approach to putting the bundle of local and long distance together. These mergers, if approved, will remove the two largest potential VoIP competitors from the market where they are needed most—in the home service territories of the two largest RBOCs. AT&T will no longer exist to compete against SBC's wireline business in SBC's service territory. The same holds for MCI, which will no longer compete against Verizon's wireline business in Verizon's service territory.

Wireless

Two critical factors limit the ability of wireless services to effectively compete with wireline. First, even with a big bundle, wireless costs about ten cents a minute for the typical pattern of use of local calls, five times as much, on a per-minute basis, as local flat-rate dialtone, which is the staple of local service. Wireless is also less reliable than wireline and still does not have 100 percent access to the E-911 system. Second, Cingular and Verizon Wireless, the nation's two largest cell phone companies, are owned by two large RBOCs—SBC (with BellSouth) and Verizon, respectively—and therefore have little incentive to compete with their own wireline business.[25] Through mergers and acquisitions, as well as their brand name prominence, SBC and Verizon are each the leading wireless supplier within their local RBOC market.[26]

Backbone Services

These mergers also pose severe problems because they would increase the vertical integration of assets (i.e., when a firm owns the inputs into the process, making it that much more difficult for competitors to get those inputs). AT&T and MCI are large providers of Internet and interstate transport (backbone). As independent companies, their interest is in maximizing traffic. SBC and Verizon are larger purchasers of Internet and interstate backbone services. As unaffiliated buyers, they make up a large portion of the market. From a competition standpoint, it is important to keep SBC and Verizon, which need the Internet and interstate backbone services as inputs, separate from AT&T and MCI, which provide this critical input. Otherwise, SBC's and Verizon's competitors will have difficulty gaining this input and are more likely to go out of business.[27]

The result of these proposed mergers—called "upstream integration" in the parlance of economics—would therefore likely have a dramatic impact on the rest of market for Internet and interstate backbone traffic. SBC and Verizon would have an incentive to abuse their control over those assets to diminish competition for their retail businesses, rather than maximize the revenue flowing over those assets.

As a vertically integrated entity, both of the resulting behemoth companies would have an incentive to maximize profits by using their leverage in the form of a price squeeze. Unfortunately, the opportunity to run a classic price squeeze will be readily available in the form of excessive access charges. The RBOCs have been overcharging for access, particularly special access that was prematurely deregulated by the FCC. AT&T and MCI were the leading critics of the access charge system. Should these mergers go through, those who profit from those overcharges will have swallowed those who sought lower access charges that drive down prices for con-

[24] These prices are based on web site visits, exclusive of short term promotions.

[25] "Petition to Deny" and "Reply Comments," see note 9 above.

[26] Letter to Michael Powell, September 16, 2004.

[27] See Cable Mergers and Monopolies, note 12 above, and "Petition to Deny" and "Reply Comments," note 9 above.

sumers. These mergers should not be allowed to proceed until access charges are reformed.

This prediction is no paranoid delusion, but the logical extension of SBC and Verizon's current activities. In Court cases like Brand X, regulatory proceedings such as the wireline proceeding, and petitions to the FCC including those Bell South, Verizon and SBC, SBC and Verizon both support the elimination of the obligation to interconnect and carry traffic on just, reasonable, and nondiscriminatory rates terms and conditions. They are buying the assets that provide critical inputs for their competitors, but at the same time they are seeking the right to discriminate against those competitors. These mergers would undoubtedly exacerbate the price-inflating, anti-competitive dangers that already exist in today's market.

Intermodal Competition

Intermodal competition is also limited, with a "crummy duopoly" an ineffective base of competition, and it is not substantial enough to protect the public from abuse. For evidence, just look at a parallel industry—cable—where operators were also born as monopolists and have faced only limited competition from satellite.[28] Not surprisingly, they have remained anti-competitive to the core in order to maximize their profits.

Cable prices have been unaffected by intermodal competition from satellite (which lacks the capacity to deliver high-speed Internet, a critically-valued bundled product, particularly among the desirable high-income customers). Since the passage of the 1996 Act, the average monthly cable bill has more than doubled. Consumers are offered almost the very same type of choice they were nine years ago: take the bundle, switch to a similarly high-priced satellite alternative, or live without a decent package of television programming.

Cable operators continue to have a market share in the 75 percent range in the multi-channel (MVPD) market[29]—well above the minimum threshold level to count as a monopoly under antitrust law. Their high-speed Internet market-share in the residential sector is also in the same range.[30] In fact, when one looks at what the FCC calls "advanced services" (those with at least 200k in both directions), cable has over an 80 percent market share.

Cable companies bundle their services in a brutally anti-consumer and anti-competitive fashion. They discriminate against unaffiliated VoIP service providers, reserving for themselves quality-of-service guarantees, while relegating others to best effort delivery of voice traffic.[31] They force consumers to pay for their affiliated ISP and foreclose competition for Internet access services.[32] This has the effect of undermining ISP competition over the cable wire/platform. They create a virtual tie between the provision of video and Internet service. Consumers who only want to buy cable modem service are charged $55 to $60, but for those who buy the underlying cable service, the price is lower—$40 to $45 dollars.

This anticompetitive strategy substantially weakens satellite's ability to compete with cable. Moreover, cable companies bundle video programming and use it as lever to exclude competition (directly by refusing to sell programming they own and distribute through coaxial cable/fiber optic lines and indirectly where they can leverage their power over distribution to deny competitors unaffiliated programming).

Unfortunately, the telecommunications industry looks like it is headed in the direction of cable. SBC and Verizon are scrambling to put together their own bundles. To do so, they want to be excused from the public interest obligations of video service providers, such as community-wide buildout and local access channels. For example, in one of the most outrageous examples of corporate chutzpah in recent years, SBC and Verizon are seeking to be excused from serving "undesirable customers" and simultaneously seeking to prevent local governments from serving those very same customers. This is redlining taken to a new level; "we won't serve these customer and you cannot."

THE ECONOMIC AND SOCIAL CONSEQUENCE OF THE FAILURE OF TELECOM COMPETITION

The "crummy duopoly" that now confronts residential customers—a cable wire centered on defending its franchise video market and a telephone wire centered on

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[28] Cooper, Mark, *The Failure of "Intermodal Competition in Cable and Communications Markets* (Consumer Federation of America and Consumers Union, April, 2002).

[29] See note 10 above.

[30] See note 11 above.

[31] Scovill, Kim Robert, "Cable/Telephony IP Network Basics and the Relationship to Comcast Digital Voice," *Pennsylvania Public Utility Law Conference,* PBI NO. 2005—3354, Vol. III, p. 433.

[32] Public Interest in Open Communications, Chapter IV.

defending its franchise voice product—simply will not serve the public or the nation well, especially if these two wire owners are excused from the obligations of nondiscriminatory interconnection and carriage. The vigorous competition that we have enjoyed in the applications marketplace created by the Internet is being strangled. Regulators have allowed feeble facilities-based competition to strangle vigorous applications-based competition, and antitrust authorities have allowed huge cross-platform, vertically integrated behemoths to dominate the telecommunications marketplace.

Policymakers have made a gigantic public policy mistake, and all of us are paying a huge economic price for it. The United States has slipped from third in the world in broadband to fifteenth.[33] Americans pay more on a megabit basis for broadband than a dozen countries around the world, and the explanation is not population density or government subsidies; rather, it is the lack of competition and the abuse of vertical market power. With lagging penetration, innovation in the applications layer has gone abroad. Jobs follow the exit of innovation.

Moreover, the digital divide that FCC Chairman Michael Powell belittled in his first press conference as a "Mercedes Benz divide"[34] has substantially worsened during his tenure. Penetration of the Internet in households has stagnated. Half of all households with incomes above $75,000 per year have broadband; half of all households below $30,000 do not even have the dial-up Internet at home.[35] Black and Hispanic households are particularly hard hit by Chairman Powell's "Mercedes Benz" divide; white households are fifty percent more likely that Black or Hispanic households to have Internet access at home and twice as likely to have high speed access.

The false characterization of the ever-increasing digital divide as a "Mercedes Benz" divide highlights the reason why the bundled quadruple-play (local phone, long-distance/wireless, video and broadband) competition that the cable and telcos are pushing does not do the average consumer any good. There is little competition for voice, video, and high-speed Internet. Three-quarters of Americans do not have high-speed Internet access, so they can't benefit from VoIP. In order to get the "benefit" of intermodal competition the average American household has to double or triple its monthly bill.

THE POLITICAL LANDSCAPE

Policymakers and authorities in various arenas and at all levels of government could take action to alleviate some of these concerns. Here is a preview of what lies ahead:

The Supreme Court's review of the Brand X case has the potential finally to press the FCC to restore the obligation of nondiscrimination in interconnection and carriage. The 9th Circuit Court of Appeals held, properly in our view, that the advanced telecommunications services offered by cable operators to the public are telecommunications services and therefore are subject to regulation and open access. The 9th Circuit decision might have finally persuaded the FCC to enforce the obligation for nondiscrimination on the advanced telecommunications networks of the 21st century. Even if the Supreme Court upholds the Ninth Circuit, the FCC seems determined to go in the opposite direction, which the Congress should not allow.

We hope the Department of Justice and the FCC will understand the brutally anticompetitive in-region impact of the SBC-AT&T and Verizon-MCI mergers and order large-scale divestitures of long distance/backbone capacity and impose nondiscrimination/fair access charge requirements as they review the mergers. Unfortunately, this is an equally unlikely outcome.

On the state front, we hope state legislatures will resist the efforts by the RBOCs to completely deregulate basic phone service based on the smoke and mirrors of competition from wireless—owned by the very same Behemoth Bell—and from VoIP—available only to those households that can afford broadband and only if the cable and telephone behemoths do not strangle VoIP competitors with discrimination and price squeezes. As important, state legislatures must stop RBOC-led campaigns to prevent local communities from meeting the needs of their citizens, by

[33] Expanding the Digital Divide.

[34] To quote Michael Powell's exact words: "I think the term ["digital divide"] sometimes is dangerous in the sense that it suggests that the minute a new and innovative technology is introduced in the market, there is a divide unless it is equitably distributed among every part of society, and that is just an unreal understanding of an American capitalist system . . . I think there's a Mercedes Benz divide, I'd like one, but I can't afford it . . . I'm not meaning to be completely flip about this—I think its an important social issue—it shouldn't be used to justify the notion of, essentially, the socialization of deployment of infrastructure

[35] Expanding the Digital Divide.

banning community Internet systems. There are tough fights brewing all across the country and the outcome is up in the air.

THE ROLE OF CONGRESS: THE TELECOM ACT REVISITED

Given the troubling track record of the regulatory authorities and the behavior of these two "crummy duopolists," it is imperative that in its review of the Telecommunications Act of 1996, Congress takes a critical look at the communications landscape.

This time, Congress will have to restructure the landscape to ensure the existence of competitive markets and provide as little room as possible for the FCC to flaunt the will of the Congress. This will be even more important if the telecommunications market becomes even more concentrated through the approval of the proposed mergers. At the very least, Congress will have to address the following issues to even begin to create a semblance of competition.

Nondiscriminatory Interconnection and Carriage

Congress must clearly establish that the obligation to provide nondiscriminatory access to the means of communications, which has been part of our national and cultural heritage for centuries, is inviolable. The tried and true principle of nondiscrimination is clearly stated in the Act

> All charges, practices, classifications, and regulation for and in conjunction with such service, shall be just and reasonable . . . It shall be unlawful . . . to make any unjust or unreasonable discrimination in charges, practices, classifications, regulations, facilities or services for or in connection with like communications service, directly or indirectly, by any means or device, or to make or give any undue or unreasonable preference or advantage to any particular person, class of persons, or locality or to subject any particular person, class of persons, or locality to any undue or unreasonable prejudice or disadvantage.

This sounds good to consumers. Congress defined telecommunications service providers clearly in the 1996, **regardless of the facility used.** The FCC ignored this language and invented a new definition to let cable operators escape form the obligation of nondiscrimination. It is seeking to let the telephone companies evade the obligations as well. Just as the Congress recently took away the authority of the FCC to set the cap on national broadcast ownership, Congress should remove from the FCC the ability to abrogate the most basic right of nondiscriminatory treatment.

Community Access to the Public Airwaves

Congress must reaffirm the interconnected principles of community-based provision of local services, which has been part of our heritage since the founding of the Republic, and public ownership of the airwaves, which has been recognized for almost eighty years. When Congress says that "**any entity**" should be allowed to provide communications services, it should mean any entity, not just the ones the Bell or cable behemoth want.

Unlicensed use of the spectrum, which is the transmission medium that supports Wifi and community Internet applications, must be expanded. The practice of licensing the public's spectrum for exclusive use by a single entity was adopted as an expedient, second-best solution eighty years ago in a response to weak technologies that could not handle interference well. Technological progress over the past century has rendered this expedient, second-best solution unnecessary. Allowing unlicensed use of the spectrum by all citizens subject to simple rules of noninterference is far more deregulatory and pro-competitive than the status quo and serves the aspiration of the First Amendment to ensure "the widest possible dissemination of information form diverse and antagonistic voices" far better than the current regime of exclusive licenses.

Universal Service

Congress must give much more precise meaning to the goal of universal service, which has been the cornerstone of the communications marketplace for seventy years. The Act has

> the purpose of regulating interstate and foreign commerce in communications by wire and radio so as to make available, so far as possible, to all people of the United States, without discrimination on the basis of race, color, religion, national origin or sex, a rapid, efficient, nationwide and worldwide wire and radio communications service with adequate facilities at reasonable changes.

More specifically, it set forth the following requirement:

> Consumers in all regions of the Nation including low-income consumers and those in rural, insular, and high cost areas, should have access to telecommunications and information services, including interexchange services and advanced

telecommunications and information services, that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to rates charged for similar services in urban areas.

The FCC must be required to take this goal seriously and not cut advanced telecommunications services off from universal service by misclassifying them as information services.[36] A Mercedes Benz divide has nothing to do with today's problem of affordable telephone and high-speed Internet services.

Sometimes traditional values are the best. The balance that this nation struck between private investment and public obligations has worked remarkably well since the founding of the republic. We need to return to those basic principles.

Mr. MURPHY. I thank the gentleman.

Mr. Halpern, welcome.

STATEMENT OF JEFFREY HALPERN

Mr. HALPERN. Thank you, Mr. Chairman and members of the committee, and thank you for inviting me to testify on the future of the telecomm industry at this exciting time in its development.

I am Jeff Halpern, Senior Equity Research Analyst at Sanford C. Bernstein covering U.S. Telecomm. And those not familiar with Bernstein, we are the oldest and one of the best respected independent equity research firms.

To keep Bernstein's lawyers happy and the SEC, I have to submit that—for the written record, a set of disclosures relative to the business we do with the companies we have discussed.

Mr. MURPHY. By unanimous consent, so ordered and put in as part of the record.

[The information appears at the end of the hearing.]

Mr. HALPERN. Thank you.

In the interest of brevity, I have organized my prepared remarks this morning into three parts.

The first is the impact of consolidation on mass-market wireline customers. The second is the impact on enterprise customers. And third is the impact on the wireless segment.

I have also submitted for the public record, several pieces of research that I have authored over the past 2 years that directly address a few of the topics I will discuss.

Looking at the consumer and small business wireline services segment, I see no immediate risk to the competitiveness of the market from the proposed mergers. Specifically, the consumer and small business market can be divided into three competitive fronts: the Bells, who today dominate the retail voice services market; the large interexchange carriers, who have built positions competing on wholesale connections, as we have heard about; and the cable multi-system operators, who have the strongest positions in multichannel video and broadband data.

Within the past year, the changes in the regulatory landscape surrounding wholesale competition have fatally eroded the economics for the wholesale competitors, like AT&T and MCI, in the mass consumer and small business markets. These changes led both companies to announce their withdrawal from active customer acquisition or attention long before the proposed mergers were negotiated. This competitive capitulation, however, occurred at the same time that technological advances supporting the carriage of

[36] "Brief for the Respondents States and Consumer Groups in Opposition to Petitioners," *National Cable & Telecommunications Association, et. al. v. Brand X,* Nos. 04-277 & 04-281.

voice services over broadband connections has emerged. This capability is generically referred to, as we have heard, as Voice-over IP, or VoIP. By our estimates, over the next 5 years, the cable MSOs, the leading facilities-based providers for consumer VoIP services, as a group, will win at least as much share of the consumer primary connections as the Bells lost over the past 5 years to wholesale competitors. And importantly, the MSOs will compete against the Bells with far more favorable marginal economics than the wholesale competitors had. Therefore, we believe it is very reasonable to believe that—to expect that despite the withdrawal either organically or through consolidation of AT&T and MCI from this space, that voice prices in the future will fall at least as rapidly as they did over the past 5 years. And for comparison, that is about 7 to 8-percent on average for a bundled local and long distance line. Thus while the Bells are proposing to buy their largest consumer market competitors, we would note that those same companies are doing nothing to pursue new customers or retain existing ones and, thus, do not believe the mergers are inherently bad for consumers or small business competitors to choice—sorry, small business competition or choice.

Turning to the enterprise market, we would draw the committee's attention to two reports authored over the past few years in a series entitled a "Tough Nut to Crack." This series title attempts to say it all.

This is a very tough market to enter. Providers competing for share of the large enterprise in government communication services market must be capable of delivering very high quality of service, provide redundancy, custom solutions, and frequently global connectivity. In addition, they must have the relationships and the credibility necessary to convince a customer the size of Citigroup or the Department of Defense that they can secure, monitor, and maintain mission critical communications under adverse conditions. To date, the Bells have been scrappy competitors relegated to the provision of only the most commoditized services. AT&T, MCI, and Sprint dominate this segment while backbone providers like Level 3 and Global Crossing, and I might add, about ten others, play price spoilers for basic transport. Absent consolidation, the four remaining regional Bells would need to spend, as we heard earlier this morning, my estimate is about $5 billion to $7 billion at least, over the next 5 years to build their credibility and competency serving this market. In our opinion, for their investment, the Bells would add relatively little to the innovation in the industry and would likely drive the ultimate demise of AT&T and MCI, at least over the next 10 years, if not sooner. Thus, while on the one end I could argue that combining the most likely share gainers, the Bells, with the incumbents and largest share losers, AT&T and MCI, is not inherently pro-competitive, it does, in my opinion, simply hasten the ultimate end game, which would have been the eventual removal of AT&T and MCI from the landscape.

Finally, let me turn to wireless. Wireless is a business built on a capitalistic investment model, not a regulated monopoly one. Market forces drive quality and innovation. As evidence, I submit that T-Mobile and Verizon Wireless, the two carriers that have won the greatest number of customer satisfaction awards over the past

several years, have also been the leading share gainers. By comparison, AT&T Wireless and Cingular, which have received the poorest service marks, have been the largest share losers. As we look at the impact of consolidation, I would say that so long as the U.S. is not allowed to devolve into a duopoly market structure in which the Bells control all of the scale wireless carriers, competition, investment, and innovation should remain robust.

So where does this leave us? My conclusions are four-fold.

First, none of the proposed wireline mergers is intuitively a recipe for higher consumer prices or reduced choice.

Second, the SBC-AT&T and Verizon-MCI combinations will likely result in modestly greater stability for enterprise service pricing than we have seen over the past few years, but competitors like Level 3 will continue to exert downward pressure for less differentiated services.

Third, in wireless, so long as there are three scale competitors and a handful of smaller players, I would not be overly concerned about choice pricing and service quality.

And fourth, if there is a concern regarding the longer-term competitiveness of the industry once the cable companies and Bells achieve a measure of stability in their own consumer market positions, then I would very strongly encourage this committee and the FCC to jointly focus attention on fostering the development of additional broadband pipes to the home, not, again, shackling the Bell companies with outdated regulations.

Finally, if I can just set the record straight on something Mr. Seidenberg said earlier, I have not actually endorsed any combination with MCI but think that both possible combinations, in a Verizon-MCI and a Quest-MCI combination, both have merit and both have risks. And I can elaborate at the committee's pleasure.

And that concludes my prepared remarks.

[The prepared statement of Jeffrey Halpern follows:]

PREPARED STATEMENT OF JEFFREY HALPERN, SENIOR EQUITY RESEARCH ANALYST, U.S. TELECOMMUNICATION SERVICES, SANFORD C. BERNSTEIN & CO., INC.

Good morning Mr. Chairman and members of the committee and thank you for inviting me to testify regarding the future of the US telecommunication services industry at this exciting time in its development. I am the Senior Analyst at Sanford C. Bernstein covering the US Telecommunications industry. For those of you not familiar with Sanford Bernstein, we are the oldest and one of the best respected independent sell-side equity research firms in the industry. We do no investment banking, and thus, have no conflicts on that front. I have, however, submitted for the written record a full list of relevant disclosures concerning my and my company's ownership of and business dealings with the all of the companies we will likely discuss today.

In the interest of brevity, I have organized my prepared comments around the various wireline customer segments of consumer, small business, and enterprise and then separately address wireless. I have also submitted for the public record several pieces of research I have authored over the past two years that directly address a few of these topics.

CONSUMER & SMALL BUSINESS COMPETITION

Looking at the consumer and small business wireline services marketplace, I see no immediate risk to the competitiveness of the marketplace from the proposed mergers. Specifically, the consumer and small business market can be divided into three competitive fronts: the Bells—who, today, dominate the retail voice services market; the large interexchange carriers—AT&T, MCI most notably—that have built positions competing on wholesale connections leased from the Bells; and, the

cable multi-system operators or MSOs who have the strongest positions in multichannel video services and broadband data.

Within the past year, the changes in the regulatory landscape surrounding wholesale competition due both to FCC and court actions has fatally eroded the economics for competitors like AT&T and MCI, leading both companies last year to announce their intention to harvest their positions and to actively do so through the cessation of advertising and promotional activity. This competitive capitulation, however, has occurred at the same time that technological advances supporting the carriage of voice services over broadband connections has emerged. This capability, generically referred to as Voice over IP, offers those competitors capable of providing or transiting a broadband connection very favorable economics. By our estimates, over the next five years the cable MSOs as a group will win at least as much share of consumer primary connections as the Bells lost over the past five years to wholesale competitors. And, importantly, the MSOs will compete with the Bells on owned networks not wholesale ones and, thus, will have with far more favorable marginal economics than did the wholesale competitors competing over Unbundled Network Element Platform or UNE-P lines. Thus, it is reasonable to expect that despite the withdrawal either organically or through consolidation of AT&T and MCI from this space, that voice prices in the future could fall at least as rapidly as the 7-8% rate experienced over the past five years. Further supporting this point, I would highlight that where the Bells have already been competing head-to-head against the cable companies, in the consumer broadband market, prices have fallen on average over 10% annually—and at times faster—for the past five years. Thus, while the Bells are proposing to buy their largest consumer market competitors today, we would note that those same companies are doing nothing to pursue new customers or retain existing ones and, thus, we do not believe the mergers are inherently bad for consumer or small business competition so long as the cable companies and, potentially, other facilities-based competitors continue to pursue sales of bundled services.

ENTERPRISE SERVICES COMPETITION

Turning to the enterprise market, we would draw the Committee's attention to two reports we authored over the past few years in a series entitled a Tough Nut to Crack. The title attempts to say it all.

Providers competing for share of the large enterprise and government communication services market must be capable of controlling and delivering high quality of service on their own networks. In addition, they must be able to provide redundancy, custom solutions and, frequently, global connectivity. And, finally, they must have deep sales relationships with the customers and the credibility necessary to convince a customer the size of Citigroup or the Department of Defense that they can secure, monitor and maintain mission critical communications under adverse conditions. To date, the Bells have been scrappy competitors relegated to the provision of only the most commoditized services for this customer segment. AT&T, MCI and Sprint dominate this segment. While backbone providers like Level 3, Global Crossing play the price spoiler role for basic transport. Absent consolidation, the four remaining Regional Bells would need to spend between $5 billion and $7 billion in operating and capital expense over the next five years to build their credibility and competency serving this market and that investment would not even begin to cover the buildout of long-haul transport capacity for which each would still need to contract. In our opinion, for their investment, the Bells would add relatively little to the innovation in the industry and would likely, over the course of the next five to ten years, drive the demise of AT&T and MCI. Thus, while on the one hand I can argue that combining the most likely share gainers (the Bells) with the incumbents and largest share losers (AT&T and MCI) is not pro-competitive, it does, in my opinion, simply hasten the ultimate end-game which would have been the eventual removal of AT&T and MCI from the landscape.

WIRELESS COMPETITION

Finally, let me turn to wireless. Two years ago, we had six national competitors fighting aggressively for marketshare. Despite that competition, average monthly revenue per user didn't fall. Why? Because demand remained robust and network differentiation drove price stability. Though I know there has been an outcry for quality of service regulation for wireless, I would posit for the committee that wireless, a business built on a capitalistic investment model not a regulated monopoly one, will be far better served allowing market forces to drive quality and innovation than regulation. As evidence, I submit that T-Mobile and Verizon Wireless, the two carriers that have won the greatest number of customer satisfaction awards have

also been the leading share gainers, have high customer loyalty and have shown some of the strongest average revenue per user trends. By comparison, AT&T Wireless and Cingular which have received the poorest service marks have been the largest share losers among the big-six carriers over the past three years. As we look at the impact of consolidation, I would say that so long as the US is not allowed to devolve into a duopoly market structure in which the Bells control all of the scale wireless carriers, competition, investment and innovation will remain robust.

SUMMARY

So where does this leave us? My conclusions are four fold:

First, none of the proposed wireline mergers is intuitively a recipe for higher consumer prices or reduced choice;

Second, the SBC-AT&T and Verizon-MCI combinations will likely result in modestly greater stability for enterprise service pricing than we have seen over the past few years but it should also be noted that pricing in that market has been declining at very unhealthy rates since the bursting of the internet bubble unleashed massive overcapacity for transport services.

Third, in wireless, so long as there are three scale competitors and a handful of smaller players, I would not be overly concerned about choice, pricing or service quality; and,

Fourth, if there is concern regarding the longer-term competitiveness of the industry once the cable MSOs and Bells achieve a measure of stability in their consumer market positions, then I would encourage this committee and the FCC to jointly focus attention on fostering the development of additional broadband pipes to the home not once again shackling the incumbents. Further, given the Bells' desire to deploy video services in competition with another former monopoly business, the cable companies, I would encourage this committee to focus efforts on removing the outdated roadblocks currently standing in the way of that innovation and competition.

Thank you, again, for the opportunity to share my thoughts.

Mr. MURPHY. Thank you, Mr. Halpern.

We now want to hear from Mr. Jim Speta, who is an associate professor of the Northwestern University School of Law.

STATEMENT OF JAMES B. SPETA

Mr. SPETA. Thank you, Mr. Chairman.

I am grateful to you and to the committee for the opportunity to testify on these topics. Telecom's policy and, in particular, competition policy for the emerging broadband era are the focus of my scholarship.

Following on the testimony this morning, I don't want to dwell on the technological drivers that have changed the communications marketplace. Increases in bandwidth, in computing power, and in conversion and transmission protocols have made possible the new data-centric networks that we have heard about on which application services whether they are voice or video will ride merely as applications. And increasing penetration of these platforms into the mass market will increase competition in markets where we have traditionally seen relatively little: basic voice services and basic access services.

I, therefore, want to address the bulk of my comments to what Congress can do to continue and perhaps even to accelerate the path of increasing competition, and that is to accomplish fundamental spectrum reform.

The two wireline mergers that we here discussed of AT&T and SBC and of MCI and Verizon provoke the fear, which have been variously stated, that mass market consumers will face only two huge companies, their incumbent local telephone companies and their cable companies, for all of their communication services. And

while two is better than one, having only two companies in the market, is not the ideal of competition.

The best answer to getting a third competitor or a fourth competitor is to get a third platform, get it soon, and that is fundamental spectrum reform. I do not claim to be able to out-guess the market as to where telecommunications technology is going, and that is one thing we should have learned in the last 8 years since the 1996 Act. But we do know that decreasing barriers to entry into wireless services can allow new technologies to come to market. And we are seeing glimpses of high-speed wireless data services, vast Internet access provided by wireless technologies. Incredibly exciting things are happening in this market. But more spectrum needs to come to the commercial market for wireless to ensure the entry of new broadband competitors. And that new spectrum ought to be structured so that companies can use it with whatever new technologies develop. The Commercial Spectrum Enhancement Act, which was signed last December, was a step in the right direction. But that spectrum is likely to be used for premium mobile services, and most of the services that we heard about this morning are still premium services. Getting more spectrum into the market would allow truly mass-market data, wireless Internet access services to develop.

In my written testimony, I have described in more detail some steps Congress should take in spectrum reform, which would increase the competitiveness of the total market.

First, existing licensees ought to be given the fullest opportunity to introduce new, innovative services, even if that means ceasing to provide the services originally contemplated by their licenses. This sort of transition, creative destruction, if you will, is one of the central engines of this great American economy. And it just following on the technological development that has changed the structure of the communications marketplace.

Second, the transition to digital television must be completed by a hard date and soon. The subcommittee recently held a hearing on this, but the analog TV licenses represent some of the most attractive spectrum for new broadband wireless data services.

Third, legislation should increase incentives for government spectrum users to economize on spectrum to enable more of it to move to commercial uses.

I have described in my written testimony some other steps that Congress could take to ensure that the law helps create conditions for increased competition wherever it may come from. And of course, the total right of the Communications Act has enormous appeal. The number of us academics are coming together with the Progress and Freedom Foundation to work on language for a new digital age communications act, and hopefully, over the summer, we will have some more to present to the committee on this question.

But even apart from a complete rewrite, spectrum reform can be the first, most important step. It will create a third platform, and that third platform can have multiple companies competing with each other and in competition with cable and telephone companies. Perhaps equally significantly, wireless can bring true broadband data services to rural areas and other areas in which there is no

broadband to address the concerns of a number of the members. Rural wireless ISPs, while still in relatively few areas, are an emerging success story that true spectrum reform could accelerate.

As I said, this is an incredibly exciting time. Things are happening in the wireless space, and spectrum reform can be a first step toward increasing competition in the data-centric world we are entering.

Thank you.

[The prepared statement of James B. Speta follows:]

PREPARED STATEMENT OF JAMES B. SPETA, ASSOCIATE PROFESSOR, NORTHWESTERN UNIVERSITY SCHOOL OF LAW

SUMMARY

We are beginning to see in the marketplace the effects of a technological convergence that began in earnest fifteen years ago, with the advent of fiber optics and digital transmission in long-haul communications networks. Today, developments in electronic switching, high-capacity transmission, and conversion and computing protocols are having three significant effects on the structure of the communications marketplace. *First,* distance is increasingly irrelevant as a matter of economics. Although capital costs still depend on distance, at the margin the transmission of data is largely insensitive to the distance it travels. Technological and legal distinctions between "local" and "long-distance" services should increasingly disappear. *Second,* transmission platforms are no longer service-specific. "Services"—be they voice or video or newer services—can be provided as applications on any data platform of sufficient bandwidth. *Third,* these advances are increasing competition in some markets that have historically seen little. Voice-over-Internet-protocol telephony is allowing cable companies to become more competitive for voice services; but the hype over VoIP hides the increasing competition that cellular telephony has brought to traditional telephone services. Similarly, assuming the announced build-outs by the telephone companies occur, *video* over IP will be the next stage of marketplace development, and will introduce a substantial new competitor in that domain. The announced mergers between SBC Communications, Inc., and AT&T Corp. and between Verizon Communications, Inc., and MCI, Inc., reflect many of the changes that technology has brought to the market structure.

Looking to the future of the communications marketplace, several imperatives appear. *First,* Congress should ensure that competition continues to develop, by creating the conditions necessary to enable new access platforms to challenge those owned by the telephone and cable companies. Spectrum reform is of utmost importance: wireless could be a third, full-service access platform (with multiple providers in each market), but more spectrum, with flexible use rules, needs to come into the commercial market. *Second,* Congress should ensure that the Federal Communications Commission has adequate authority to preempt state laws that create barriers to or uncertainty for the development of new communications platforms, such as wireless and broadband over power line. *Third,* should it turn to a comprehensive re-write of the Communications Act, Congress should create a telecommunications law that is technologically neutral, that links regulatory authority in most regards to the principles of competition law, and that seeks to pursue social goals such as universal service through transparent and competitively balanced mechanisms.

INTRODUCTION

I am grateful for the opportunity to testify before the Committee on changes in telecommunications technology and the changes in the marketplace that technological change has wrought. My testimony here summarizes some of the work that I have been doing on broadband competition policy and on the need for legislative action to eliminate legal and economic barriers to the development of additional competition in the future.[1] The catalysts for this Hearing, the announced mergers

[1] *See, e.g.,* James B. Speta, *Deregulating Telecommunications in Internet Time,* 61 Wash. & Lee L. Rev. 1063, 1069 (2004) (outlining a "comprehensive program to substantially increase the prospects for intermodal competition in local telecommunications services" and telecommunications more generally) (also available at http://ssrn.com/abstract=614523); James B. Speta, *FCC Authority To Regulate the Internet: Creating It and Limiting It,* 35 Loy. U. Chi. L.J. 15 (2003) (also available at http://ssrn.com/abstract=490122); James B. Speta, *A Common Carrier Ap-*

between SBC and AT&T and between Verizon and MCI,[2] are signs of a convergent and increasingly competitive marketplace. They are not, as some have suggested, simply the reincarnation of the Bell System twenty years after its breakup. For one, these two companies have the potential to compete with one another in many markets. More importantly, technological advance is allowing cable and wireless companies to be increasingly competitive with the traditional local telephone companies in their core local access markets. To be sure, competition in these and other telecommunications markets is not the perfect competition of micro-economics textbooks, due to the substantial investments required to build a network and the need to interconnect with multiple other networks to provide services. But, with a few cautionary notes, technological convergence seems to be advancing competition.

Looking to the future, communications law can either provide a hospitable environment for continuing technological change and the introduction of new, competing platforms and services, or it can itself be a barrier. The first priority should be to address the barriers that currently exist to the introduction of new competitive access platforms, and, here, the first priority is spectrum reform. Congress should continue the path set by the Commercial Spectrum Enhancement Act[3] and move additional spectrum into commercial service, subject to flexible licensing or to full private ownership. Second, Congress should ensure that state and local regulation does not present a barrier to emerging technologies and services. Third, Congress should begin to address the competitive neutrality of the communications law as a whole, either through a strategy that essentially deregulates new platforms or that rewrites the Act from the bottom up.

I. WHERE TECHNOLOGICAL CHANGE HAS BROUGHT US

Technological change, in the form of microwave technology, was one of the principal drivers of the break up of the Bell System in the early 1980s.[4] That technology was rapidly replaced by fiber optics and the digitalization of the long-haul portions of the telecommunications network. On a largely independent track, the Internet protocols allowed the development of general purpose data networks, which could carry the data created by any application over any interconnected physical infrastructure.[5] Today's telecommunications market reflects these revolutions in transmission and computing power and in the techniques of data conversion and transmission.

The technological change experienced in the communications marketplace can usefully divided into three types. First, advances in electronics and in materials have greatly increased the bandwidth that carriers can deploy. Modern fiber optics, boosted by the development of dense wave division multiplex transmission electronics, can carry enormous amounts of data over long distances almost instantaneously. Similarly, digital transmission technologies in the access networks—such as cable modem service, DSL, and digital cell phone service—have increased the capacity of those systems far beyond anything imagined when cable TV or wireline and wireless telephony were initially conceived. Demand has, of course, increased exponentially as well, and the bandwidth of many access services in the United States still lags. Telephone company DSL networks are not yet fast enough to provide multi-channel video services; in South Korea, by contrast, video over DSL is common.[6] Still, this greater bandwidth begets new services.

Second, advances in internetworking have allowed communications networks to transmit services widely, as soon as the new services have been deployed. In this category, the Internet protocols are the most notable. But advances in electronic switching and the development of multiple, high-capacity interconnections among

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proach To Internet Interconnection, 54 Fed. Comm. L.J. 225 (2002) (also available at http://www.law.northwestern.edu/faculty/fulltime/Speta/Speta.html).

[2] As of the date of this written testimony, Qwest Communications International, Inc., continues to have a counter-offer pending for MCI, and the foregoing should not be read as a statement about the eventual acquisition of MCI. The two transactions have much in common from a structural marketplace perspective, however, and do not substantially affect the conclusions that I offer here.

[3] Pub. L. 108-494 (signed Dec. 23, 2004).

[4] *See generally* Joseph D. Kearney, *From the Fall of the Bell System to the Telecommunications Act: Regulation of Telecommunications under Judge Greene,* 50 Hastings L.J. 1395 (1999); Glen O. Robinson, *The Titanic Remembered: AT&T and the Changing World of Telecommunications,* 5 Yale J. on Reg. 517 (1988) (reviewing Peter Temin, The Fall of the Bell System).

[5] *See generally* Philip J. Weiser, *Law and Information Platforms,* 1 J. Telecomm. & High Tech. L. 1 (2002).

[6] *See generally* James B. Speta, *Policy Levers in Korean Broadband,* 5 J. Korean L. 1, 6 (2004) (noting widespread availability of 20 megabit DSL service in South Korea, by contrast to typical 1.5 megabit service in the U.S.).

Internet backbones have also played a significant role. These technologies erode the traditional barriers between types of networks and will, over time, completely erase the barriers between "telephone networks," "cable television networks," and "Internet networks." In the core of the networks, such distinctions are almost without meaning today.

Third, the increased computing power available to users of the telecommunications networks—in their telephones, cameras, and personal computers—drives the creation of digital information and new services for the use of that information. Scanning a picture at home and e-mailing it to far-away relatives was but a precursor of video instant-messaging and multiplayer on-line gaming.

The consequences for market structure are significant. Costs of service have been falling, and platforms are now capable of providing multiple services. This has increased competition in several dimensions. Core network providers have substantial capacity and can serve the needs of large businesses, but they can also carry aggregated traffic from individual users and small businesses.

This technological change is also introducing competition into historically less competitive access markets—reducing the so-called last mile problem. Although VoIP has been garnering much of the attention, cellular telephony has been quietly gaining ground on traditional, wireline voice. We are reaching a point at which there are at least as many wireless telephones as there are traditional, switched access lines to the telephone network. In fact, the number of traditional telephone lines has been falling in recent years, from a high of just over 192 million lines in 2000 to under 180 million lines in mid-2004, while the number of wireless phones reached almost 170 million.[7] The FCC reports an estimate that 5-6% of U.S. households have dropped wireline service entirely, in favor of wireless, and another that 23% of all voice minutes are originated from wireless telephones.[8]

The hype around VoIP seems justified to a large degree, as one research group has reported a 900% increase in the number of cable VoIP subscribers in just the past year,[9] with total current VoIP subscribers being estimated variously between 600,000 and 1 million.[10] As cable companies convert existing voice customers to VoIP and as the technology otherwise matures, the service will continue to grow to reach the millions by year end.[11]

The story is similar in multi-channel video services, where over the past 10 years DBS has gone from a mere 3% of the market to more than 25% of the market.[12] Here, both technological advance and regulatory change were necessary to allow DBS to carry local television channels, which was important to its ability to compete with cable service. Nevertheless, DBS's growth rate of subscribers far exceeds that of cable.[13]

These are significant changes, although competition is in many respects still emerging. Incumbent local telephone companies continue to dominate basic residential and small business voice services in most markets.[14] VoIP service, although itself competitive in price with traditional telephone service, requires the subscriber to have broadband access, at least doubling the total price. For the nearly 30 million subscribers to high-speed services,[15] VoIP may be in the same market as traditional service; for those not subscribing to high-speed services, the analysis is more com-

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[7] *See* FCC, Industry Analysis and Technology Division, Local Telephone Competition: Status as of June 30, 2004, table 1 (Dec. 2004); FCC, Industry Analysis and Technology Division, Trends in Telephone Service, tables 7.1, 11.1 (May 2004). To be accurate, the number of switched wireline access lines does not reflect all voice telephone lines, as many businesses use their own premises equipment to aggregate calls from extensions (both those that have their own telephone number and those that do not) and deliver those to the telephone network over a higher capacity connection.

[8] Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, Ninth Report, FCC 04-216, at para. 212 n.575, 213 (Sept. 28, 2004).

[9] *See* Cable VoIP Subs Jump 900%, Light Reading, Feb. 23, 2005 (http://www.lightreading.com/document.asp?site=lightreading&doc_id=67093) (reporting data from Infonetics Research).

[10] *See, e.g.,* Ben Charny, Year in Review: VoIP's Voice Gets Stronger, Cnet.com, Jan. 5, 2005 (http://news.com.com/Year+in+review+VoIPs+voice+gets+stronger/2009-7352—3-5499915.html).

[11] *See also* Ben Charny, Cablevision Rings in 270,000 Subscribers, zdnet.com, Feb. 23, 2005 (http://news.zdnet.com/2100-1035gG7**X**22-5587465.html).

[12] *See* Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Eleventh Annual Report, FCC 05-13, table B-1 (Feb. 4, 2005).

[13] *Id.* at para. 53.

[14] *See, e.g.,* Local Telephone Competition: Status as of June 30, 2004, *supra* note 7, at 1-4.

[15] FCC, Industry Analysis and Technology Division, Wireline Competition Bureau, High-Speed Services for Internet Access: Status as of June 30, 2004, at 1-4 (Dec. 2004).

plex.[16] Similarly (but more speculatively), if developing services require significant increases in both up and downstream throughput to users and if the telephone companies do not quickly increase the amount of fiber optics in their local access networks, then the cable companies may not have a substantial competitor for these services in the mass market (barring the development of new access networks).[17] Even if telephone companies do upgrade their networks and otherwise keep pace with the bandwidth possible over cable networks, the residential and small business high-speed access market will most likely have only two competitors for the foreseeable future.[18]

Despite these cautionary notes, this emerging competition is cause for optimism, for two reasons: it is platform-based, and it is often intermodal. Because this emerging competition is among facilities-based carriers, it stands in sharp contrast to the type of competition envisioned by the unbundling provisions of the 1996 Act, which were premised on the idea that local telephone company networks would not be duplicated.[19] Facilities-based competition, especially where companies try different technologies to provide services, allows the market to reward efficient providers and efficient technologies.

II. WHERE WE SHOULD GO

The regulatory issues raised by these technological advances, by developing convergence, and by expanding competition are multifarious, and they range from those traditionally linked with sector-specific regulation, such as interconnection policy, to the social policies of telecommunications regulation, such as universal service, to the broader questions of efficient tax policy, for some states and local governments today raise significant revenues by taxing some communications services. The breadth of these challenges have led many—inside and outside of government—to call for a comprehensive re-write of the nation's communications laws, and I am one of the co-chairs of a project centered at the Progress and Freedom Foundation to write a new Communications Act for the Digital Age.[20]

A. Spectrum Reform

Short of writing a new statute, however, some legal reforms should follow as a response to these changes in market structure, in order to build on the possibilities of competition. As noted above, the most likely market structure for mass market broadband IP access is one in which only the incumbent telephone companies and the cable television companies are significant players.[21] Two companies are certainly better than one, but, as a rough rule of thumb, competition is increasingly likely when the market includes at least three substantial competitors.[22]

Wireless is the leading possibility for a third platform to challenge the telephone and cable companies, but the prospects of such wireless competitors are reduced due to the lack of available spectrum for such services. Although the Commercial Spectrum Enhancement Act (CSEA) took an important step to make spectrum available for third-generation wireless services, more such spectrum should be made available for new data platforms. The FCC has been taking substantial, beneficial action in this regard, re-tasking certain underutilized spectrum and introducing a degree of

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[16] The 1992 Horizontal Merger Guidelines focus on an increase in price of the relevant goods of, usually, 5% (sec. 1.1). Thus, a wide disparity between the price of two products suggests that they would not be in the same market.

[17] *Compare* Nondiscrimination in the Distribution of Interactive Television Services over Cable, Notice of Inquiry, 16 FCC Rcd. 1321, ¶6 (2001) (discussing possibility that only cable television companies could offer the interactivity necessary for interactive television services).

[18] A second cable company provides service in only a few locations. *See generally* Eleventh Video Report, supra note 12, at paras. 66-70. DBS provides competing video service, but its two-way Internet service is not comparable. Some emerging wireless services, such as EVDO and WiMax, could provide another access platform. As I discuss later, this prospect justifies attention to spectrum reform.

[19] I do not share the unrelenting scorn that many have heaped on the 1996 Act's unbundling regime. *See* Speta, *Deregulating Telecommunications, supra* note 1, at 1151-53. But, there is no doubt that facilities-based competition is much more effective. *See* Jean-Jacques Laffont & Jean Tirole, Competition in Telecommunications 207-09 (2000) (discussing competitive difficulties of competition through unbundling, where squeezing monopoly profits out of wholesale prices decreases incentives to deploy new facilities while permitting incumbents to earn monopoly profits in their wholesale prices makes competition soft).

[20] *See* Progress and Freedom Foundation Website (http://www.pff.org/daca/).

[21] In business markets, the possibility of multiple facilities-based carriers is greater.

[22] Competition may improve as the number of market participants increases above three, but it is not the case that more competitors always increases the level of competition in a market. More importantly, this is not a law of economics, simply a rule of thumb based on experience.

flexible use rights,[23] but legislative action to confirm and accelerate these moves would be useful.

Indeed, wireless has, in several significant episodes, provided important competition to wireline incumbents. MCI originally used microwave transmission, the economics of which were more favorable, to challenge AT&T's long-distance monopoly. As noted above, DBS today provides the main competition to cable video services. The increasing numbers of especially young people dropping wireline service is another confirming factor, although these current wireless services are not competitors to high-speed IP-based services.

Glimpses do exist of the wireless future, with higher-speed data services from cell phone companies now coming to market, such as Verizon Wireless's 300-500 kbps service. But truly broadband services, such as WiMax or EVDO, using speeds that compete with cable and DSL services, are still a few years away.[24] More importantly, widespread deployment of these services will certainly require that additional spectrum be made available to the market. FCC Chairman Michael Powell has linked the availability of additional spectrum to the development of potentially competitive wireless broadband platforms.[25]

A significant move in the direction of spectrum reform requires two steps. First, more spectrum must be made available to commercial markets, and such spectrum can only come from either government or existing private users.[26] The CSEA's technique of using auction proceeds to fund the relocation of government users and the purchase of more efficient equipment does provide some balance between commercial demand and the interests of government users,[27] but the Act does not provide any systematic incentives for government users to economize on spectrum or release it for commercial uses. This could be done by giving government agencies the right to monetize their spectrum by auction or, in a more extreme version, requiring them to do so. Under this approach, government agencies would have to purchase spectrum rights on the open market, much as they must do with real property.[28] Alternatively, government users could be required to include within their budgets expense amounts for the use of spectrum. This proposal has been made and well-received in the United Kingdom.[29]

Current commercial licensees should also be given the right to auction their spectrum to those who would use it for new, more valuable uses.[30] Although some have objected to this proposal on the ground that it creates a "windfall" where the licenses were originally granted without charge (or even by auction, but restricted to a limited term),[31] this objection should not stand in the way of a transition to a more efficient, market mechanism. Today, many if not most of the holders of the most valuable licensees purchased those licenses on the secondary market at prices that included the economic value of the license. Any "windfall" from the no-cost allo-

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[23] Many of these actions are summarized in the FCC's Spectrum Policy Task Force Report. See FCC, Spectrum Policy Task Force Report, ET Docket No. 02-135 (2002) (available at http://hraunfoss.fcc.gov/edocs—public/attachmatch/DOC-228542A1.pdf/).

[24] Richard Shim, WiMax To Lead Broadband Wireless Market, Cnet news.com, April 21, 2004 (http://news.com.com/2102-1305—3-5196795.html).

[25] E.g., Chairman Michael K. Powell, "Broadband Migration III: New Directions in Wireless Policy, Remarks at the Silicon Flatirons Telecommunications Program," University of Colorado at Boulder, October 30, 2002 (available at http://www.fcc.gov/sptf/).

[26] Spectrum is theoretically unlimited, and substantial open spectrum exists at extremely short wavelengths. But not all spectrum is created equal. Some has better propagation characteristics, such as the ability to penetrate walls, and transmitters and receivers are more expensive to produce in some ranges.

[27] *See* Pub. L. No. 108-494 (amendments to 47 U.S.C. § 923(g)).

[28] *See* Ewan Kwerel & John Williams, A Proposal for a Rapid Transition to Market Allocation of Spectrum, FCC OPP Working Paper No. 38, at 28-30 (Nov. 2002).

[29] *See, e.g.,* Martin Cave, Independent Review of Spectrum Policy (2002).

[30] This proposal is made in a number of articles, in addition to the Kwerel & Williams paper (*supra* note 28) and builds on Ronald Coase's seminal article pointing out that spectrum rights could be treated equivalently to private property. Ronald Coase, *The Federal Communications Commission,* 2 J.L. & Econ. 1 (1959). Several central articles, which themselves provide entry into most of the other literature, are: Stuart N. Benjamin, *Spectrum Abundance and the Choice Between Private and Public Control,* 78 N.Y.U. L. Rev. 2007 (2003); Thomas W. Hazlett, *The Wireless Craze, The Unlimited Bandwidth Myth, The Spectrum Auction Faux Pas, and the Punchline to Ronald Coase's "Big Joke": An Essay on Airwave Allocation Policy,* 14 Harv. J.L. & Tech. 335 (2001); Gerald R. Faulhaber & David J. Farber, *Spectrum Management: Property Rights, Markets, and the Commons,* in Rethinking Rights and Regulations 193 (Lorrie Faith Cranor & Steven S. Wildman, eds. 2003); Ellen P. Goodman, *Spectrum Rights in the Telecosm To Come,* 41 San Diego L. Rev. 269 (2004).

[31] Norman Ornstein & Michael Calabrese, *A Private Windfall for Public Property,* Wash. Post, Aug. 12, 2003, at A13.

cation of licenses was received by the original licensees who are now long gone.[32] Moreover, the statute already recognizes very strong expectations of renewal of licenses and of transfer approval and, in these two regards, the rights are already very similar to property rights.[33] Thus, any "windfall" is likely small, and an acceptable cost of moving to a market-based system of allocation.

Short of a full-blown change to spectrum allocation policy, the Congress can continue to work to free up government and commercial spectrum. In the latter regard, the Committee has previously given attention to the need to accelerate the transition to digital television, because television broadcasters' analog licenses represent some of the most desirable spectrum for new data services.[34] Current statistics show that more than 85% of all U.S. households subscribe to either satellite or DBS.[35] The transition raises important issues, but the value of moving that spectrum to other uses must be weighed against any transition costs suffered by the relatively small number of households receiving terrestrial service. Moreover, the cost of digital television tuners is falling rapidly, and is now below the $200 mark even for HDTV functionality.

It is my sense that new spectrum rights ought to be privatized, to allow owners instead of government to determine the most appropriate and efficient uses. At a minimum, licenses should permit the maximum amount of flexibility in use. Some spectrum should be dedicated to unlicensed uses, such as local networking and other low-power services that have proved recently successful. But property rights in spectrum have the advantage that a single provider can more easily internalize all of the coordination problems that a new service may entail, such as equipment standards, operating protocols, and interconnection with other networks. Similarly, a spectrum owner captures all of the gains from monitoring spectrum use, increasing the efficiency of equipment, and eliminating interference.[36]

B. Reducing Legal Uncertainty

Short of re-writing the Communications Act from top to bottom (on which more below), Congress could make several salutary changes that would have the effect of decreasing the barriers to entry for new services. The 1996 Act forbade state and local laws that prohibited (or had the effect of prohibiting) the provision of telecommunications services by any entity.[37] But, to ensure that new services are not subject to the heavy-handed utility regulation of Title II of the Communications Act (which governs telecommunications services), the FCC has generally characterized newly emerging data services as "information services."[38] In so doing, the FCC exercises its so-called "ancillary" authority under Title I of the Act to prevent states and localities from themselves placing burdensome regulations on these new services,[39] but the scope of the FCC's authority to do so is uncertain and subject to attack.[40]

Congress should confirm the FCC's authority to preempt state and local regulation of any emerging, facilities-based two-way data network, to decrease the barriers to entry for such services. To be sure, some networks will need to be regulated, to

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[32] Current licensees who would sell their licenses as property would receive an increase in value if those licenses had greater flexibility of use, but trying to recapture that value is probably not worth the transaction and delay costs involved.

[33] *See generally* Howard A. Shelanski & Peter W. Huber, *Administrative Creation of Property Rights to Radio Spectrum,* 41 J.L. & Econ. 581 (1998); Douglas W. Webbink, *Radio Licenses and Frequency Spectrum use Property Rights,* 9 Comm. & L. 3 (1987).

[34] Most recently, the Subcommittee on Telecommunications and the Internet held a hearing on February 17, 2005, entitled "The Role of Technology in Achieving a Hard Deadline for the DTV Transition."

[35] Eleventh Video Report, *supra* note 12, at para. 8.

[36] *See generally* Speta, *Deregulating Telecommunications, supra* note 1, at 1118-21 (arguing that the need to develop intermodal competition from wireless to wireline platforms suggests a property rights approach to spectrum reform); Farber & Faulhaber, *supra* note 30.

[37] *See* 47 U.S.C. § 253.

[38] Its ability to continue to do so will be at issue in the Supreme Court's consideration of the *Brand X* case, which is scheduled to be argued later this Term. See Inquiry Concerning High-Speed Access to the Internet over Cable and other Facilities, Declaratory Ruling and Notice of Proposed Rulemaking, 18 FCC Rcd. 4798 (2002) (classifying cable modem services as information services), *rev'd in part,* Brand X Internet Servs. v. FCC, 345 F.3d 1120 (9th Cir. 2003) (adhering to prior opinion that such services were telecommunications services), *cert. granted.*

[39] Most recently, the FCC has issued an order preempted state and local regulation of many aspects of VoIP. *See* In the Matter of Vonage Holdings Corp. Petition for a Declaratory Ruling Concerning an Order of the Minnesota Public Utilities Commission, Memorandum Opinion and Order, FCC 04-267 (Nov. 12, 2004).

[40] *See generally* Speta, *FCC Authority To Regulate the Internet, supra* note 1. *But see* Philip J. Weiser, *Toward a Next Generation Regulatory Strategy,* 35 Loy. U. Chi. L.J. 41, 66 (2003) (suggesting that FCC has adequate Title I authority to address new services, and advocating a common law approach, informed by antitrust principles, to regulation).

ensure the meeting of non-economic goals such as 911 service and law enforcement intercepts. But, as has been the case with VoIP, the FCC should have the power to move toward these goals in a manner that does not compromise the initial deployment of the services. Universal service (and other state and local revenue needs) will also require consideration, but a continuing patchwork of state and local regulation of telecommunications services can create a hurdle to entry of new services.

Apart from confirming FCC authority, Congress should also consider a new category of federal regulation for new, two-way, facilities-based data networks. Such a move would not require eliminating the current service categories of the Communications Act, which continue to serve some important purposes. A new category of services—what Chairman Powell has called an IP-migration model—would allow the market, if deploying new facilities, to move itself into a much more unregulated status.

C. A New Act?

Of course, the most intellectually appealing approach would be to draft a new Communications Act from the ground up. There is a widespread consensus that the current service-based categories of the Communications Act, which provide significantly different levels and kinds of regulation based on service classifications that are tied to legacy status, no longer match the converged data platforms that technological change has made possible. The European Union has recently adopted a new regulatory structure that attempts to address all "electronic communications,"[41] and commentators have offered a number of other models, ranging from a regulatory scheme built on the technical "layers" of the network[42] to the use of a common-law, but antitrust-principles grounded, case-by-case approach to regulation.[43]

Because our work on this continues and given the scope of this Hearing, I will only outline a few of the principles that should govern consideration of a new telecommunications statute.[44] First, telecommunications law—as an independent body of law, superintended by some expert regulator—should continue. An expert regulator will address changing technology better than generalist antitrust courts. More importantly, telecommunications markets present problems that are beyond the traditional scope of competition law. For example, even where the market for telecommunications services is structurally competitive, each individual carrier will have a "terminating monopoly" on services delivered from other carriers or networks to that individual carrier's customers. As two leading economists have shown, even competitive carriers will have the incentive to raise off-network termination charges, resulting in inefficient multiple marginalization.[45] Price-setting regulation, or mandatory bill-and-keep rules, can increase efficiency.

Moreover, government may wish to assure that network competition does not eliminate fundamental interconnection. Two-way telecommunications networks, such as telephone, Internet, and integrated data networks, exhibit direct network effects.[46] If network competition is simultaneous, with numerous relatively small communications networks competing against one another, then each network will have a strong incentive to interconnect with the others, ensuring that all consumers can reach one another as well as reaching all services and content available on

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[41] The centerpiece of this effort is Directive 2002/21 of March 7, 2002, on a Common Regulatory Framework for Electronic Communications Networks and Services, O.J. 2002 L108/33 ("Framework Directive"). *See generally* J. Scott Marcus, *The Potential Relevance to the United States of the European Union's Newly Adopted Regulatory Framework for Telecommunications,* in Rethinking Rights and Regulations 193 (Lorrie Faith Cranor & Steven S. Wildman, eds. 2003); James B. Speta, *Rewriting U.S. Telecommunications Law with an Eye on Europe,* in Connecting Societies and Markets (forthcoming 2005).

[42] *E.g.,* Richard Whitt, A Horizontal Leap Forward: Formulating a New Communications Public Policy Framework Based on the Network Layers Model (MCI Layers Paper) http://global.mci.com/about/publicpolicy/presentations/horizontallayerswhitepaper.pdf.

[43] *See* Weiser, *supra* note 40.

[44] I have discussed most of these matters in greater depth in Speta, *Deregulating Telecommunications, supra* note 1.

[45] Jean-Jacques Laffont & Jean Tirole, Competition in Telecommunications 184 (2001).

[46] Such effects may be, in the language of network economics, either direct or indirect. A direct network effect is where the good itself is a connectivity good, such that value derives from the number of others that one can connect with—such as telephony or fax machines. Indirect network effects prevail in markets characterized by a hardware and a software good—such as computer operating systems and software applications or video tape players and prerecorded movies—such that greater numbers of consumers purchasing the hardware good drives demand for a wider variety of software goods, which variety in turn makes the hardware good itself more valuable. *See generally* Michael L. Katz & Carl Shapiro, *Network Externalities, Competition, and Compatibility,* 75 Am. Econ. Rev. 424, 426-27 (1985). Some network goods, such as the Internet, exhibit both characteristics.

other networks.[47] But, if competition among networks is monopolistic or serial, then networks effects suggests that denial of interconnection may be a strategic tool in inter-network competition.[48] Regulation to maintain interconnection may increase total welfare (or serve non-economic goals, such as maintaining a single community of speakers and access to information), even if it cabins the dimensions on which competition can occur.[49] In particular, mandatory interconnection rules seem valuable at the physical and logical layers of communications networks—so that competition is channeled to the quality of service and price dimensions and away from the possibility of fragmenting an integrated communications network. Although such interconnection could potentially entrench certain kinds of networks, the social and economic benefits of maintaining an interoperable network probably outweigh the risks of entrenchment.

Second, apart from maintaining fundamental interconnection, regulatory action under a new telecommunications law should be keyed to an affirmative finding of market power in a relevant market. The principles of antitrust law and economics provide a strong guide to reduce the burdens of regulation generally, by ensuring that regulation responds to a consumer welfare interest and not merely to the interests of other competitors. As Frank Easterbrook has noted in the antitrust context, "the economic system corrects monopoly more readily than it corrects [regulatory] errors,"[50] and legislatures, agencies, and courts should be circumspect about intervening in markets without a showing of market power in need of correction.

Third, a new statute ought to treat all newly-deployed, emerging data networks similarly, without regard to the legacy of their providers. Although the 1996 Act embraced competition, it did relatively little to address convergence. A new Communications Act would eliminate regulatory separation and competitively unbalanced treatment of identical services offered using different technologies and focus on the economic realities of the services.

Fourth, social goals regulation—and especially universal service funding—should be applied broadly (in the sense of subjecting services to similar burdens), but should not be the basis for maintain regulatory separation or public utility regulation.[51] It is necessary to reiterate that the most economically efficient manner of providing universal service is through the general income tax, and not through a specific tax on telecommunications services.[52] But if sector-specific funding is necessary, that funding should be spread more widely. Currently, the universal service charge on interstate telecommunications is just over 10%, and the total tax burden on telecommunications services (but not Internet and not VoIP) in some areas reaches 25%. Given that telecommunications technology is itself an input into many other processes and increases their overall productivity, heavily taxing telecommunications is counterproductive. A statute designed to treat services equally would spread taxes in a competitively neutral manner.[53]

CONCLUSION

Technological advance is continuing to restructure telecommunications markets. The transition to IP networks and IP services effects several significant changes: platforms become service independent, distance diminishes in importance, and service competition can increase. In consumer markets, traditional cable and telephone companies will likely go head-to-head with a similar package of services. Spectrum reform is needed to enable a third competitive platform, with potentially multiple competitors, to challenge these two wireline platforms. And legislation should begin to eliminate utility regulation, to create a level playing field for these new data-centric services.

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[47] *See generally id.* at 190.

[48] *See* Stanley Besen & Joseph Farrell, *Choosing How To Compete: Strategies and Tactics in Standardization,* 8 J. Econ. Persp. 117, 119 (1994).

[49] *See generally id.;* James B. Speta, *Handicapping the Race for the Last Mile?: A Critique of Open Access Rules for Broadband Platforms,* 17 Yale J. on Reg. 39, 81-85 (2000).

[50] Frank Easterbrook, *The Limits of Antitrust,* 63 Tex. L. Rev. 1, 15 (1984).

[51] It will be necessary to reevaluate the scope of the universal service commitment, and especially to consider whether Internet or video services should be brought further within its ambit. Those matters are beyond the scope of this paper. *See generally* Speta, *Deregulating Telecommunications, supra* note 1, at 1148-51.

[52] *See, e.g.,* Gregory Rosston & Bradley S. Wimmer, *The ABCs of Universal Service: Arbitrage, Big Bucks, and Competition,* 50 Hastings L.J. 1585, 1606 (1999).

[53] This may mean taxing access—whether that access is voice, Internet, or other interactive service—or it might mean pegging the tax to the use of public telephone numbers. Although these would change the general notion that IP-based services should not be taxed at all, leveling the playing field requires addressing tax policy as well.

Chairman BARTON. Thank you, sir.

Last but not least, we have Mr. Phil Weiser, who is an Associate Professor of Law and Telecommunications and Executive Director of the Silicon Flatirons Telecommunications Program at the University of Colorado School of Law. Welcome, sir, and you are recognized for 7 minutes.

You have to push that button.

Mr. WEISER. How am I doing now?

Chairman BARTON. There you go.

STATEMENT OF PHILIP J. WEISER

Mr. WEISER. Thank you, Mr. Chairman. I appreciate the opportunity to testify today before you.

And I would like to make one central point about the role of telecommunications regulation and anti-trust law in the information industries, which is vitally important to protect the possibility of technological change and innovation. As I think history teaches us, most of the established players in the information industries, like other industries, are unlikely to develop the new technologies and the disruptive technologies that will bring vast benefits to consumers. It was MCI and Sprint who developed fiber optic technologies and some of the precursors for today's Internet age that we are living in. It is Vonnage, a scrappy upstart, that helped us develop Voice-over Internet Protocol and finally Tivo who helped pioneer digital video recorders. In these cases and others, the established companies will come in afterwards and compete with the upstarts, giving consumers double benefits. But it is vitally important that we protect the opportunity for innovation and new entry in these industries.

Thus, the role of regulation, in a period of technological change, should be to look for market failures and to prevent the abuse of market powers, that any company could prevent entry. In the era of the Bell system, that was the major problem. As I recount my testimony, Dow Corning invented fiber optics and wanted to come in with this vastly better technology in the long-haul market. AT&T responded, "Look, we are not going to lay off our existing network. And once we want to put in fiber optics, we will do it ourselves in about 20 years." So if AT&T still had a monopoly grip on long distance, we probably would still be waiting for fiber optics. We would probably still be waiting for the Internet.

The point is, the vast era we have had with deregulation has enabled new entry and new technologies. And as we go forward, the most critical role for regulation, and the concern of this committee, should make sure that that form of entry can continue to happen.

And I would like to echo what—a couple of things that have been said earlier. First, it is vitally important that we look to facilitate a new platform, because if you only have two rival platforms, that limits the opportunity for experimentation and innovation. The possibility of four, I think this was getting back to Congressman Markey's comment, the final four, if you get four platforms, that raises the possibility of innovation and entry. And the best opportunities we have for a third and fourth broadband platform is wireless, and the best opportunity to get more of those, a spectrum of four, I know you are pushing hard on the DTV transition, in short, that

is why it is so important. And today's regime says if I am a UHF broadcaster and nobody is watching over the air, I can't sell my spectrum to a broadband provider who could provide rural services. That is crazy. The FCC is trying to figure out whether it can help on an unlicensed basis, wireless ISPs come in and provide wireless broadband where it won't disrupt existing transmissions. These sorts of initiatives are critical to our broadband feature, and I encourage the committee's leaderships in this regard.

Finally, I want to get to one point that was talked about and eluded to by Dr. Cooper, which is in a broadband world, one of the exciting opportunities for innovation is I can be an applications provider of Voice-over Internet Protocol or Video-over Internet Protocol. I don't need to own my own platform. And so a critical opportunity is if all sorts of application providers can provide new services, what they need to know, and I believe this was asked by Congressman Stearns, that they won't be discriminated against. And so one concern that the FCC has had is to ensure that anyone can provide their applications on a broadband network. That concern is an important one, and frankly, the state of the law in this area is somewhat cloudy.

Finally, I would like to just underscore what many people have said, which is today's mergers are reflective of a changing marketplace environment. The expectations of the United States Telecommunications Act have not come to pass, but lots of other important things in wireless and broadband have. That has rendered this Act totally antiquated, focused on irrational distinctions, like local versus long distance, broadband services provided by cable companies as opposed to those provided by telephone companies. And in time, I am sure this committee will help to change those distinctions.

Going forward, protecting the innovation and entry that we have seen is a critical role for regulation. Regulation should be smart. It should be succinct, and it should focus on avoiding market failures and abuses of market power. It also should invite the large companies to respond and to provide the benefits to consumers that will be a double benefit with respect to the original innovators.

Thank you very much.

[The prepared statement of Philip J. Weiser follows:]

PREPARED STATEMENT OF PHILIP J. WEISER, ASSOCIATE PROFESSOR OF LAW AND TELECOMMUNICATIONS, UNIVERSITY OF COLORADO

Mr. Chairman and members of the Committee, thank you for the opportunity to speak with you today. Since working in the Justice Department's Antitrust Division from 1996-1998 as a senior counsel, I have observed, taught, and written about telecommunications policy. Most recently, I have co-authored the book *Digital Crossroads: American Telecommunications Policy in the Internet Age* (MIT Press) (with Jonathan Nuechterlein). I also have founded and serve as the Executive Director of the Silicon Flatirons Telecommunications Program, which holds regular conferences and seminars on cutting edge topics in technology policy, including the recent conference on "Rewriting the Telecom Act." Finally, I am involved in the Progress and Freedom Foundation's Digital Age Communication Act project, which is developing a set of recommendations for Congress to consider in its deliberations over telecommunications policy.

Today's topic is a very timely one, as it focuses on the main challenges of telecommunications policy: keeping up with technological changes as well as facilitating innovation. In my remarks, I will explain how competition and innovation have reshaped the telecommunications industry and how regulation can continue to facilitate competition and innovation in the future. In short, my bottom line is that the

principal benefit of promoting competition is to facilitate innovation that challenges today's incumbents. Historically, both telecommunications policy and antitrust policy have promoted that objective to great effect and they should continue to do so.

THE ESSENTIAL RATIONALE FOR COMPETITION

In the midst of a number of high profile mergers that some claim are the effort to put Ma Bell back together, many consumers are asking whether the basic rationale of the 1996 Act—to facilitate competition and innovation in telecommunications—was sound. My answer is that the essential logic of the Act was sound, even if a number of its particular tactics and statutory provisions have proved flawed.

To appreciate the power of competition, let me highlight one of the often underappreciated aspects of the original antitrust case against AT&T. In general, commentators often underscore the cost savings that consumers enjoyed in long distance service as a result of the break-up. But equally important was the boom that the break-up provided to innovation in general and for the Internet in particular.

In the late 1970s, Dow Corning began developing fiber optic technology and approached AT&T about installing this innovation in its long haul network. In response, AT&T replied that it would be thirty years before it installed fiber into its network and when it did, it would develop the technology itself. Thus, if AT&T still maintained its monopoly grip on telecommunications, as it had in the 1970s, consumers would probably still be waiting for the deployment of fiber optic technology.

Almost immediately after the AT&T break-up guaranteed long distance competitors equal access to local telephone lines, both MCI and Sprint announced plans to deploy fiber optic long haul networks. And after Sprint began advertising that consumers could hear a pin drop on its network, AT&T wrote off its undepreciated long-haul assets and invested in its own fiber optic network.

In terms of the Internet, AT&T evinced an attitude similar to its approach to fiber optic technology. In a famous rebuff of the Defense Department's request that it operate the Internet backbone, an AT&T executive replied that "it can't possibly work, and if it did, damned if we are going to allow the creation of a competitor to ourselves."[1] Consequently, the Internet developed in spite of AT&T and without its assistance, leaving both MCI and Sprint to play important roles in its development.

Finally, the development of the market for telecommunications equipment provides yet another powerful reminder of how facilitating entry and innovation can pay huge dividends to consumers. After the FCC finally rejected the AT&T's stalling tactics to enable equipment to attach to the telephone network, rival manufacturers of a number of products from cordless telephones to fax machines to computer modems entered the market and brought a vast array of benefits to consumers.

DIGITAL DISRUPTION

The principal oversight of those who criticize the Telecom Act as failing to produce benefits in the local telephone market is that they have defined success in telecommunications policy too narrowly. On a narrow definition that fails to appreciate the benefits of innovation, even the AT&T break-up can be judged a failure. After all, some consumers, like my grandmother, continued to rent her telephone from AT&T and did not change long distance providers. Unfortunately, for consumers who are unable to take advantage of technological progress, deregulatory policies will often present greater hassles and confusion than benefits.

The continuing pro-competitive agenda in telecommunications policy has facilitated new technologies that have spurred significant consumer benefits. In telecommunications, the greatest consumer benefits have emerged in the long distance, wireless, and Internet-related markets—a number of which have challenged and have caused the prices of traditional telecommunications products and services to fall. Commenting on this trend, Qwest CEO Richard Notebaert put it succinctly: "[t]he voice industry—whether long distance, local or wireless—finds itself in a commodity market with deflationary pricing. Volumes will rise, but prices will fall even faster."[2]

Like the long distance example outlined above, the increased competition in wireless telecommunications markets provides consumers with significant benefits. In the late 1990s, wireless providers began offering packages of bundled minutes that did not distinguish between local and long distance services, leading consumers to increasingly rely on their cellphones for long distance calls. More recently, Sprint

[1] JOHN NAUGHTON, A BRIEF HISTORY OF THE FUTURE 107 (2000).

[2] Scott Woolley, Into Thin Air, Forbes (April 26, 2004) (http://forbes.com/forbes/2004/0426/098__print.html).

has enlisted an array of resellers—whom it invites to use its network on a wholesale basis—to use a variety of marketing techniques to lure new subscribers to its network. Of particular note is Virgin Mobile, which is a so-called "Virtual Mobile Network Operator" and has used a creative marketing approach and reliance on prepaid services to lure many first-time cellphone subscribers onto Sprint's network.

The most fundamental force transforming telecommunications today is the increasing shift of the entire system of communications toward the Internet.[3] Initially developed as an academic curiosity, the Internet is increasingly the Pac-Man of telecommunications: gobbling up everything in its path. Part of why the Internet is such a disruptive force in telecommunications is that data traffic provides consumers far more value for the bit than traditional voice traffic. Thus, when a consumer signs up for a broadband connection, they will increasingly use email instead fax or instant messaging instead of telephone calls. More particularly, when consumers sign up for a voice over the Internet service—such as those provided by Vonage and, increasingly, the cable companies—they can actually make telephone voice calls at a far cheaper rate than they can with their traditional service providers.

THE ROLE FOR TELECOMMUNICATIONS POLICY

Some argue that in a world of "creative destruction" and increasingly dynamic technological change, there is no role for telecommunications regulation. To be sure, there is no useful role for a telecommunications policy that distinguishes between local and long distance calls; data and voice traffic; or cable companies and telephone companies that provide broadband Internet access. In short, the statutory silos of the 1996 Act continue to impede sound communications policy and must be discarded for a more holistic view of the marketplace as it is being re-shaped around the Internet.

In terms of the principal role for a new policy framework, its key objective should be to address important concerns about supporting rival service providers and ensuring that innovation and entry are not stalled or deterred by incumbent providers. Moreover, it can also be crafted to achieve certain social policy goals—such as supporting universal service—but those goals should be advanced in a manner that does not distort efficient entry and innovation.

The recent spate of mergers is causing some to ask at what point consumers should worry about losing the benefits that comes from rivalry between different service providers. In short, Chairman Powell eloquently answered this question in explaining "[m]agical things happen in competitive markets when there are at least three viable, facilities-based competitors."[4] In the wireless market, for example, the merger of Sprint and Nextel would leave consumers with four rival national service providers, almost assuredly still providing this "magical rivalry." In continuing to provide such rivalry, we can expect Sprint to continue its practice of affording outside innovators—such as Virgin Mobile—access to its network.

In the case of broadband platforms, the Holy Grail remains spurring additional competition in this important market. The most promising opportunity for additional entry is through the use of wireless spectrum, such as either next generation mobile services (the so-called 3G offerings) or fixed wireless services such as the much touted Wi-Max standard. At this point, we are still a long way away from knowing whether these new technologies will succeed. Among other challenges, it is critical that the FCC and Congress press ahead in reforming the legacy regulation of wireless spectrum to ensure that more opportunities for both licensed and unlicensed spectrum are available to those who are developing new wireless technologies.[5]

In the current broadband environment, where cable companies and telephone companies are the primary service providers, there is an important role for telecommunications policy to ensure that all application and content providers are able to enjoy non-discriminatory access to broadband platforms. In terms of appreciating the role of outside innovation, it is important to recall, as Andrew Odlyzko observes, that "[i]n spite of many attempts, the established service providers and their sup-

[3] By "the Internet," I mean Internet technology generally (including private or managed IP networks) and not simply the "public Internet" in particular.

[4] Michael K. Powell, Remarks at the Wireless Communications Association International 1 (June 3, 2004) (http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-248003A1.pdf).

[5] For the Report from the FCC Spectrum Policy Task Force, see http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-228542A1.pdf. For Chairman Powell's explanation of its this initiative, see Michael K. Powell, "Broadband Migration III: New Directions in Wireless Policy," Remarks at the Silicon Flatirons Telecommunications Program, University of Colorado at Boulder, October 30, 2002 (http://www.fcc.gov/Speeches/Powell/2002/spmkp212.html).

pliers have an abysmal record in innovation in user services . . . The real "killer apps," such as email, the Web, browsers, search engines, [instant messaging], and Napster, have all come from users."[6]

The role for regulation to ensure continued access to broadband networks does not necessarily mean a heavy-handed approach to ensuring access to broadband networks. Rather, as Chairman Powell's Net Freedom initiative underscores, policymakers can announce the forms of protection they advocate and await any departures from it before taking action.[7] If there are any attempts to discriminate against or block rival services, it is critical that the FCC not tolerate those that lack a legitimate business purpose (such as those related to reasonable network management).[8]

The FCC's legal authority to regulate broadband platforms is under great strain and a set of currently litigated cases (namely, the *Brand X* case now at the Supreme Court and the Broadcast Flag litigation at the D.C. Circuit) will test whether its regulatory authority holds up. In particular, (1) if the FCC is not able to use its "ancillary jurisdiction" to regulate broadband; or (2) if it is afforded only limited authority under that doctrine, its ability to regulate broadband platforms effectively will be greatly compromised. In short, if the FCC loses on either score in court, Congress will almost assuredly have to remedy the matter by providing the FCC with sufficient and appropriate authority to regulate broadband markets.

THE ROLE FOR ANTITRUST POLICY

The challenge of reviewing mergers that emerge out of a deregulatory environment is one of the most difficult jobs assigned to antitrust authorities. In many cases, antitrust authorities will not have a prior baseline to examine in assessing whether a particular merger would truly restrain competition. At the same time, the artificial market structures that emerged from a regulated era may well mean that certain combinations will produce more efficient operations. Balancing the expected competitive harms and benefits is the mainstay of antitrust analysis and the authorities' access to a variety of documents, business plans, and experts enable them to make the best informed judgments they can.

My respect for the fact-intensive nature of the merger review process makes me reluctant to offer too many observations about any specific merger that will undergo such a careful scrutiny. Nonetheless, in the case of two major pending long distance-Bell mergers, I will offer two preliminary observations that will be, I suspect, a starting point for the relevant antitrust reviews.

First, it is very important for policymakers to get past the "emotional logic" against a merger of AT&T (or MCI) and a Bell company. Notably, AT&T and MCI were the firms who were supposed to be the main competition to the Bell companies and thus a merger between them strikes many as antithetical to the goals of the Telecom Act. This "supposed to," however, is increasingly at odds with reality, as AT&T and MCI's base of long distance customers is eroding and their future is increasingly cloudy. To be sure, one could imagine a recent history in which AT&T (or MCI) emerged as a far more formidable and important competitive force than it is today. But due to a series of unfortunate circumstances (ranging from Worldcom's accounting fraud to AT&T's overpaying for its cable assets), events did not turn out that way.

Second, in examining the real areas of overlap between the long distance and Bell companies, the one that is likely to attract the most scrutiny is where the companies own competitive assets that would go to waste if combined into a single firm. In particular, I am confident that the antitrust authorities will take a close look at the fiber networks that MCI and AT&T purchased over the last ten years to compete directly with the Bell companies for big business customers. At the height of the boom, both AT&T and MCI (then Worldcom) paid billions of dollars for companies specializing in local access networks; whether those assets can and should be divested are likely to be a main area for antitrust authorities to scrutinize carefully on a market-by-market basis. Although I raise this as a concern, I recognize that this issue requires a careful fact-specific inquiry and thus I am not in a position to judge how antitrust authorities should address this issue.

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[6] Andrew Odlyzko, Telecom Dogma and Spectrum Allocations 7 (June 20, 2004) (http://wirelessunleashed.com/papers/TelecomDogmas.pdf).

[7] *See* Michael K. Powell, Preserving Internet Freedom: Guiding Principles for the Industry, Remarks at the Silicon Flatirons Telecommunications Program, University of Colorado at Boulder, February 8, 2004 (http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-243556A1.pdf).

[8] For my suggestion as to how the FCC could do this, see Philip J. Weiser, *Toward a Next Generation Regulatory Strategy,* 35 Loy. U. Chi. L.J. 41, 66 (2003) (http://www.luc.edu/law/activities/opportunities/docs/weiser_revised_II.pdf).

THE ROLE FOR CONGRESS

The Telecommunications Act of 1996 is unquestionably broken. It was designed primarily to address the expected entry of the Bell companies into long distance and the long distance companies into the local Bells' markets. It did not anticipate the rise of the broadband Internet or even the increased importance of wireless services. Almost ten years later, it is quite clear that broadband and wireless services are increasingly defining the challenges of telecommunications policy. In many important respects, the recent mergers are both a recognition of and response to this reality.

In evaluating any possible revisions to the 1996 Act, Congress should be careful not to codify a particular technology or vision of competition into law. Similarly, Congress should be succinct in drafting the relevant statutory provisions and thus avoid the risk of providing self-contradictory instructions to the FCC. In providing self-contradictory and vague instructions to the FCC in the 1996 Act, Congress set the stage for an array of litigation that undermined many of the Act's goals and left a legacy of legal uncertainty.

To be more specific, Congress should seek to transition away from a number of policies that are in tension with the current realities of the telecommunications marketplace. In particular, the rules governing both the hand-off of traffic between different networks (the matter of "intercarrier compensation") and universal service support for subsidized telephone service are increasingly out-of-date and a hindrance to efficient competition. Similarly, ensuring the most effective use of spectrum—including allowing some users (such as UHF broadcasters) to sell to others (say, wireless broadband providers)—should be a very high priority for Congress and the FCC. Finally, Congress should evaluate how best to reform the FCC itself so that it can carry out a mission very different from the one it was designed to perform.[9]

CONCLUSION

The anxiety over the developments in the telecommunications marketplace is understandable and can be constructive if it helps to frame the appropriate policy debate. That debate should not center on what some may have expected to happen or what some wished would happen in the wake of the 1996 Act. Rather, it should focus on the realities of the telecommunications marketplace and ask how regulation can continue to facilitate entry, technological change, and innovation.

Chairman BARTON. Thank you.

And we want to thank all of you gentlemen for waiting so patiently to provide your testimony.

The Chair recognizes himself for 5 minutes.

I am going to start with you, Dr. Cooper. I was visiting with some of my local constituents and wasn't able to be here in person, but I did listen to it on a television set. You are very opposed to these mergers. Could you consolidate—I mean, do you—your primary reason, you just think the market will not work. Is that why you oppose them?

Mr. COOPER. The—there are two levels of concern here. One is—as I said, there is a bit of a shell game here. The dial tone competition we had from C-lex was killed by a regulatory decision, which was pushed by the baby Bells. And so we are losing the people who competed for basic telephone service, not VoIP and not the big bundles, because you need broadband. So we are losing those. The fact that these two companies that are about to be bought out exited the market after that decision doesn't change the fact that that decision will hurt consumers. First answer.

Chairman BARTON. But we are not repealing the universal service requirement for basic telephone service. So everybody is still going to be guaranteed one basic phone line if they don't want any-

[9] All of these issues are taken up at length in JONATHAN E. NUECHTERLEIN & PHILIP J. WEISER, DIGITAL CROSSROADS: AMERICAN TELECOMMUNICATIONS POLICY IN THE INTERNET AGE (MIT Press, 2005).

thing else, and that will—that basic service will still be regulated in terms of the price at the State level.

Mr. COOPER. Well, it——

Chairman BARTON. So what——

Mr. COOPER. [continuing] may be, it may not be. In Texas, there are proposals to do away with that. The problem here is—though, if you look at the two mergers, what we have here is a series of markets in which the acquiring companies are, in one sense, eliminating competition. And you could hear a little bit of it. Well, they are buying up the people who serve most of the local competitors for dial tone. Even though AT&T and MCI had stopped getting new customers, they have the bulk of the old customers of the C-lex.

Second of all, they are eliminating competition for enterprise customers, especially in region, but also a little bit out of region.

Third, they are vertically integrating between the local public switch network and the Internet backbone. And that is exactly the vertical integration that gave us trouble in the old Bell system, because once you are vertically integrated, you have a different set of incentives about how you are going to let other people interconnect with your network. And of course, at the same time that they are vertically integrating, they are asking the FCC to eliminate the obligation of nondiscrimination.

Chairman BARTON. Well, I have got—I would love to have a—I mean, I am sincerely glad you are here to present that—and I don't mean this facetiously, because it needs to be presented and both us and the Justice Department need to think about those kind of issues. So I have got a few other questions, but you know, we may follow up with you in writing on some of those questions.

Mr. Halpern, you gave us more information than anybody—everybody else put together. You have got about a 100-page document where you have looked at the telecom industry. And if I could summarize it, you are very bullish on the cable companies, and you are not nearly as bullish on these companies, these merged companies. Why do you think that the cable platform is going to be preferred over these merged platforms that are based on the more traditional telephone service? And if I have misstated your thesis, then correct me on that.

Mr. HALPERN. When I tried and—said it a little bit—my thesis a little bit differently than you put it, which is, first, I don't cover the cable companies. To say I am bullish on them is outside of my realm of expertise. But what I would say is when you look at the telephone companies, and there is plenty of research that also—that I have done that shows that if you look at how many employees that have been cut out of the telephone companies over the last couple of years, the regional Bell companies, since 2000, it is about 25 percent of the workforce is—has been reduced, and largely a function of the competition that the Bells have faced as a result of wholesale competition from AT&T and MCI, which as we now know, is going away. That said, costs have stayed almost completely flat. So you are talking about companies who are losing a tremendous amount of people out of their workforce and still can't cut costs. That is a function of the networks they are operating under—the networks are operating with. When you look at the consumer market, and I respectfully disagree with Dr. Cooper, I think

that you are going to have a tremendous amount of competition in the consumer market, and I think the cable companies are going to be the largest drivers of that competition. They have a cost structure for voice services that will be very, very competitive against the Bell companies. Just to give you an example, CableVision, when it came into New York, Verizon's prevailing price for a bundle of local and long distance was $59.95. That is what I was paying every month. CableVision came in, and they offered $35. That is approximately a 40-percent discount to Verizon's prevailing rate. That is a very difficult—if you can't cut your costs and you are competing against a competitor who is willing to be incredibly aggressive on your core business, that has nowhere to go but straight—you know, to take money straight out of your bottom line.

Chairman BARTON. So you believe that while you may not have the traditional type of competition, you are going to have different sources of competition that will be just as effective. Is that safe to say?

Mr. HALPERN. I think that is—and it is very safe to say, and I would add to that that I think that that competition will drive some very significant investment by the Bell companies. One document I didn't submit, which would have been another 100 pages for you, was another one of the big studies that I did, which was on fiber and the economics thereof. And one of the things that we showed in that was that if the Bells roll out fiber, I can actually make you a financial and economic justification, if they do a certain way, for why it makes tremendous sense to do it. And that is not fiber everywhere with respect to some of—you know, some of the other Congressmen and women here who cover more rural markets. Those are not going to be markets that are—that the economic case is particularly justifiable for fiber, which is very expensive. But there is a very real economic case to be made for a fiber network.

Chairman BARTON. And my—I will let Dr. Cooper comment, and then I have a question for Mr. Weiser, and then we are going to go to Mr. Stupak.

Mr. COOPER. One simple point. The $35 for VoIP assumed $45 for your cable modem service. So that is $80. And 70 percent of the American people don't pay the $45. The average local bill is $25. So at one level——

Chairman BARTON. But for basic telephone service.

Mr. COOPER. For basic telephone service, but—so at one level, the comparison is between that $25, and throw in $15 for long distance, even. So $40 versus $80, okay. And that is the fundamental problem for ½ to ¾ of the American——

Chairman BARTON. Well, there is no question that if you are not a wired household, and you are not of—if you are a low-income household and you have basic phone service and over-the-air television service, so you don't have a cable, then to participate in this revolution is going to cost you more, unless you decide to ditch all of that and get a wireless telephone. You can get a wireless telephone, and you can get basic wireless service for $30 a month. And—anyway, I need to ask Mr. Weiser a question, because you talk about allowing the innovation—these entrepreneurial companies that we don't know who they are but we want to protect their

right to get into the marketplace to force the big boys to do something, it is very difficult proactively to protect something that doesn't exist. So when we get ready to rewrite these—the Telecommunications Act, which we are going to do, and Mr. Speta talked about that, how do we proactively protect and guarantee entry into a market that we don't even know might exist?

Mr. WEISER. It is a terrifically important question. Let me offer a couple perspectives. One is the importance of spectrum policy. I believe a sound spectrum policy allows a healthy role for unlicensed spectrum. And one role that unlicensed spectrum has proven exceptionally good at is allowing lots of innovation and new developments, like Y-fi, which came from outside the established players. And Y-fi is an unbelievable, you know, revolution in terms of this marketplace growing hugely every year, using, you know, outside innovation.

Another important role is ensuring access to broadband platforms. The FCC's authority to ensure that anyone, like Vonnage or like the next Video-over IP player, can make sure that their application is available to you on your SBC DSL line or me on my cable modem line, or what have you. And the FCC's authority to ensure that is shaky. There are some court cases going on now about that, and at the end of the day, who knows how it will get settled out.

Chairman BARTON. That would be something to put into the statute at some——

Mr. WEISER. That is right. To make clear the FCC—that is right.

Chairman BARTON. Access guarantee.

Mr. WEISER. That is right. And if there are reasons for concern about whether people will get that access, it is going to be a huge deterrent for innovation. So these people who don't know who they are, they are going to be deterred from innovating.

Chairman BARTON. I would assume, Dr. Cooper, you would support that.

Mr. COOPER. Yeah, I—there is not a lot of disagreement on this panel. I mean, some form of nondiscrimination is critical. I support the use of spectrum. I prefer to unlicense, which is the Y-fi example. I bet we could agree on universal service reform pretty quickly, because I firmly believe, as was said earlier, we need to get every connection. We need to shift, in my opinion, to a connection-based fee where we count cable, we count everybody who is hooked to that public network contributes. So I think the principles for reform are clearer now, after 10 fairly ugly years in the industry, of how to go forward.

Chairman BARTON. All right. Last comment before I go to Mr. Stupak.

Mr. Halpern, you have been raising your hand, which you don't have to do when you are—but——

Mr. HALPERN. Quick question—a quick point on that, which is when do—we haven't said it all, but when we are talking about other platforms, I would—we have one—we already have one there, and that is the power lines. You have power line coming into the home. You know, I think there—and I could certainly provide this committee, you know, some research that we have done on power line, but there are tremendous opportunities for the power compa-

nies to do what we are talking about, to provide a third broadband pipe into the home.

Chairman BARTON. That is a very good——

Mr. HALPERN. And one of the biggest issues, if you want to create an incentive for them, is allow them to cross-subsidize it, if you need to. Because the benefits actually fall under the ability to manage the power grid better, more reliably and more securely, et cetera. And then there is a secondary opportunity, which is the ability to provide a broadband pipe.

Chairman BARTON. Very good idea.

Okay. Congressman Stupak.

Mr. STUPAK. Well, thank you, Mr. Chairman.

You mentioned power companies. I actually mentioned in my opening statement, because I would like to see them come to rural areas, like I represent, because many times that is the only—where we are going to get anything done. I would have to disagree with my chairman that all people would have to do is get a wireless phone and they would be connected, because where I come from, one part of my house I can get cell phone service, the other part of my house, I can't get it at all. So we do need some better development and competition in rural areas, which I think the FCC has taken away from us underneath the current law. So—and in fact, my blackberry, you know, after 9/11 they gave us all of these blackberries to keep in instantaneous touch with Members of Congress. It worked beautifully everywhere in the United States except my District. They couldn't get a hold of me if they had to. It is just crazy.

But Dr. Cooper, let me ask you this, because some of the questions that the chairman asked I was interested in. What do these mergers mean for rural broadband deployment in phone service? The Bells have argued that if Congress relieves them of the overly burdensome State regulations, they can go and invest in broadband for rural America. It is basically, like, "Unleash us and we will go build it." That is sort of the argument they make. And I know Mr. Whitacre and I went back and forth a little bit, you know, when I said they were going to pull out of the Upper Peninsula of Michigan, and he said, "No, no. Those are just news stories. Don't believe it." But at the same time, they are talking to Michigan Public Service Commission basically saying, "You better stop regulating us or we will pull out of the Upper Peninsula of Michigan." So I had my facts based on more than just what I read in the newspaper. So what is the evidence that this has happened in States that have deregulated?

Mr. COOPER. Well, I think rural America is a tremendous challenge for these kinds of services. We have a 70-year commitment, which was strengthened in the 1996 Act, to assure ubiquitous, affordable, comparable service for all areas of the nation. That doesn't always make economic sense. It makes darn good political and social sense from my point of view. So the fundamental—and the claims that we will have more resources so we will build out in more rural areas, they are going to go where the money is, and low-density rural areas are not the most attractive places. That is why I mentioned the Pennsylvania statute, which promises to build out to serve the whole State in 10 years a 1.5 megabit network, at

the same time, denying local communities the possibility of building their own networks next year for 5 megabits. All right. And so from our point of view, the—we can not analyze service in rural America as a purely economic issue. It is a social issue. We thought we handled it well in the 1996 Act. We didn't get there. I have been—I have participated in cases where the companies decided that relatively—reasonably comparable cost—was relationship to cost. They wanted to charge people $150 a month for a phone in rural areas under the statute. This commission—this committee has to really write a commitment, a genuine commitment to universal service, which we point out in my testimony.

Mr. STUPAK. Well, go ahead, Mr. Speta.

Mr. SPETA. If I could just say something about wireless in rural areas, and that it is about spectrum reform and especially the digital television transition, because not all spectrum is created equal.

Mr. STUPAK. Correct.

Mr. SPETA. Right. Your cell phone spectrum probably isn't the kind of spectrum that really penetrates walls very well, and it needs a lot more towers a lot more closely spaced together. It——

Mr. STUPAK. Which is more expensive for them to put in——

Mr. SPETA. Right.

Mr. STUPAK. [continuing] if they are going to come to the rural areas.

Mr. SPETA. Spectrum reform can get us the——

Mr. STUPAK. Right.

Mr. SPETA. [continuing] kinds of spectrum at an economic case where the price of buying that spectrum at auction goes down to make the business case for rural areas a lot better.

Mr. STUPAK. Well, that was my next need, because you and both Professor Weiser mention the spectrum and spectrum reform. And I was going to ask you to explain why is it important for wireless development and competition, and what would your recommendations for this reform be? And then this—let these—and then we will go back to——

Mr. WEISER. Sir, let me start with one point, which is painful from a policy standpoint. In the UHF spectrum, because of the way it was originally allocated, they are spaced really far apart, right, so channel 55 and then channel 45.

Mr. STUPAK. Right.

Mr. WEISER. If you could get some of those people, literally, off the air, you free up an amazing amount of spectrum, which is referred to as beachfront property.

Mr. STUPAK. Right.

Mr. WEISER. What you can do with that for public safety, for commercial providers, and with unlicensed spectrum is tantalizing. For example, in the case of your house, you can have community networks that can help strengthen existing cell phone coverage that you and your neighbors can get together to do.

Mr. STUPAK. Sure.

Mr. WEISER. You can have new generation of technology, which will have a cell phone, which will actually work over your home wireless networks. So it will actually move between where you have cell coverage. It will work on that, and where you don't it will work over a Wi-fi network. And——

Mr. STUPAK. But we have to change the spectrum to do that.

Mr. WEISER. You have to change the regulations and laws governing spectrum to do that. That is right. And you have to be more thoughtful about universal service policy, which is to say it is not going to be a one-size-fits-all program.

Mr. STUPAK. Correct.

Mr. WEISER. If you can allow for some experimentation and adaptation so that where you can support innovative wireless-based universal service programs, that might well be superior to a tradition notion of universal service. And so the amount, I think, of thought and flexibility that should go into the new Act is a point I can't stress enough.

Mr. COOPER. The ultimate kick in the pants about spectrum is that in the Upper Peninsula, most of that beachfront property is empty.

Mr. WEISER. Correct. Yes.

Mr. COOPER. Because you only get 2 or 3 broadcast stations, and all of it—the rest of it is right there, so you don't even have to kick anybody off. You just have to have the right to use it. And it has essentially been laid—it is laying fallow. And so that is the area where we can solve those kinds of problems, and it is very, very effective stuff.

Mr. STUPAK. But you are going to need some incentive to go in there to use that——

Mr. COOPER. Well——

Mr. STUPAK. [continuing] because there is only 300,000 people spread across——

Mr. COOPER. That—well, and so you need to support that with a universal service fund. As long as the service provider is willing to commit to what we consider basic telephone service.

Mr. STUPAK. Well, as we all know, universal service fund is shrinking because technology is making——

Mr. COOPER. Well, we have to——

Mr. STUPAK. [continuing] it less——

Mr. COOPER. [continuing] fix the fund.

Mr. STUPAK. Well, we brought that up a little bit earlier in the first panel. Go ahead, Mr. Halpern.

Mr. HALPERN. Well, I was going to say, but there is a solution to that——

Mr. STUPAK. Sure.

Mr. HALPERN. [continuing] and I think we have talked about it.

Mr. STUPAK. I would like to hear it. Sure.

Mr. HALPERN. Which you have, you know—if you look—assume the universal service is, first and foremost, a voice service capability or you want to ensure. Now the President has obviously indicated his desire to have universal service for broadband. That raises a whole list of other types of issues. But what I would say there is the North American Numbering Plan does—you know, why not just have universal service funded through the North American Numbering Plan? If you are assigned a number, there is a tax on your bill that is associated with funding it, and it spreads across everybody, and it solves that issue.

Mr. STUPAK. And even if you had the money available, we wrote the rural utility service, which it brought up forth Federal money

to do it. And then as soon as we tried to put it in the Upper Peninsula, because we are identifying with Traverse City below the bridge, which is a more affluent area, we were denied the whole application by the regulator. It goes back to the regulation of the Department of Commerce. And——

Chairman BARTON. This will have to be the gentleman's last question.

Mr. STUPAK. Thank you.

Chairman BARTON. You might want to comment on what he just said before we go.

The gentlelady from Tennessee, Ms. Blackburn.

Ms. BLACKBURN. Thank you, Mr. Chairman, and I thank all of you for your patience with us today.

A quick question for Mr. Weiser, Mr. Halpern, and then I will go to Dr. Cooper.

Mr. Weiser, I—you have worked with the end trust division of the Department of Justice, and I would like for you just to comment a little bit. Talk about the sure number of competitors in a market as opposed to the financial health of those companies. And if you would quickly just talk about which do you see as being the most important.

Mr. WEISER. This is a really important question. Let me start by saying that this marketplace, the telecom marketplace, generally, is not like the market for sandwich shops, so in my neighborhood, there are probably about—within walking distance, about eight sandwich shops. They are very low-entry barriers. We have much more, what we think about as textbook competition. These markets are capital-intensive. There tend to be less numbers to providers. In terms of, I would say, a safety zone or a comfort level, I would disagree slightly with Mr. Halpern. Let us say in wireless, I am comfortable with four providers. With three, I would say it depends. Clearly, if it gets down to two major wireless providers, I get very uncomfortable. So the current wireless marketplace has generally been very healthy. If it stays at four, I continue to be comfortable.

The question is how do you find the right balance between the concerns about making the capital investments, financial health, as opposed to consumer welfare. In the broadband marketplace, we are sort of at an opposite perspective, which is we have two major broadband providers, and the question is how do we get more, which is not so much a question of anti-trust policy, it is more the regulatory policy concerns we have talked about.

Ms. BLACKBURN. Okay.

Mr. WEISER. And I think—does that answer your question?

Ms. BLACKBURN. Yeah, it does. And I thank you. I thank you for that.

I—you know, as we look at the options that are there, as we look at convergence and the different technologies, and as one of our former panelists had said, everything over IP. You know. I think that it does cause us to think more closely on those issues.

Mr. Halpern, very quickly, what do you see with the financial condition of AT&T and MCI in 5 years or 3 years or a year if the merger doesn't take place?

Mr. HALPERN. I think that you see AT&T continue to shrink at rates similar to what you have seen now. What happened—if you think about AT&T, think about it as a bunch of waves. The first wave was very much the Bell companies getting into long distance and consumer. That broke on the side of their—you know, their ship and caused a massive degradation. I think the average decline rate in the consumer business over the last 4 years, average per year, has been about 20 percent of revenues.

The next wave was, obviously, the wholesale—the impact on wholesale from regulation and the courts. And that has just further exacerbated the situation ultimately that led them to exit that market.

The next wave is here and coming, and that is really the small business market. And you are seeing that now. And the following on that, you are going to have the Bells basically going into the enterprise market, you know, the way we have described, which is a slow, organic, you know, very unpleasant strategy for the Bells to undertake, but they will do it. And it will take, you know, 4 or 5 years, and it is going to be a very tough thing, and it will continue to cause AT&T a tremendous amount of pain. As I said in my opening comments, I personally would bet that, you know, 7 to 10 years from now, AT&T would not be here necessarily.

Ms. BLACKBURN. Okay. Thank you very much.

Dr. Cooper, I have got two things for you.

First of all, in your testimony, you express concerns about concentration in the cable industry, and then your testimony seems to call for more regulation on the R-box, and even as they plan to offer IP TV and trying to get into competition. So I am trying to figure out if you are for more competition or if you are for more regulation. What is most important to you?

And let me ask a second question to finish this.

I also noticed in your testimony, when I was reading through this last night, you kept referencing a crummy duopoly and crummy duopolist. And so this morning, I went in and pulled this Business Week article that you referenced. And you even, when you were doing your testimony, referenced that. It—and the article talks about a cozy duopoly. So did you just misappropriate the term, or is there something there that we are missing?

Mr. COOPER. Well, I—if you are a consumer and you have got two duopolists who are cozy, from your point of view, it is pretty crummy, because they don't compete very hard. And that is the point here. I think here is a way to describe the balance between competition and regulation that we need now, because you have heard discussion about 2 or 3 or 4. We need another platform, which is the facilities, okay. But my point is that—and so we want more facilities, but two is not enough. They won't compete. They will—it is too easy for two guys to figure out, or two gals to figure out, how not to really go at it head-to-head, how not to drop prices. And that is why we have been falling behind the rest of the world. But the point is, we want more. We want 2—we want 3 or 4. There is an expression in economics that 4 is few and 6 is many, but the problem is, these are very capital-intensive industries.

But here is the question. Suppose I have four platforms. Do I want to allow those platform owners to pick and choose, discrimi-

nate against, the VoIP providers so that each platform owner only has one VoIP provider who can then—so now I have taken what could be competition among 50 applications companies and shrunk them down to 4 or 3. Right. I don't want to give up the vibrant competition we have had on the Internet for this crummy competition among facilities owners. So that is the balance. I want more competitors, but given the facilities, it is not going to be enough. I need some regulatory principles to let me capture the other benefits as well as applications competition. And that is a balance that I think was struck in the 1996 Act. The courts may decide otherwise, but I think this committee needs to make some form of nondiscrimination among application service providers. The more platforms, the better. If we were talking about ten platforms, you probably wouldn't listen very long, because ten is a big number. But we are only talking 2, 3, or 4. And that is not enough to really guarantee me competition.

Chairman BARTON. The gentlelady's time has expired.

Ms. BLACKBURN. Thank you, sir.

Chairman BARTON. For our last round of questions, the good doctor from Denton, Texas, Dr. Burgess.

Mr. BURGESS. Thank you, Mr. Chairman.

I—and I apologize for being out of the room, and if this question has already been answered, but Mr. Halpern, if we could just start over today with a blank sheet of paper, what—from a financial perspective, what types of companies would be the strongest competitors and what, ultimately, would be best for the consumers?

Mr. HALPERN. Boy, there is a tough question for you.

Chairman BARTON. That is why we saved him for last.

Mr. HALPERN. Well, I am going to actually ask the question back again, which is when you say start over with a clean sheet of paper, how far back are we going with—in getting clean? Are we going to eliminate the——

Mr. BURGESS. The stone tablets. The Ten Commandments. I don't know. You pick a point in history and go forward from there.

Mr. HALPERN. All right. I mean, if I look and I say, okay, we can't do anything about where we are today, to some degree, and you say okay, so what would I do if I were going to figure out, you know, what I was going to do from here, you have in front of you a bunch of companies saying they want to get together. On the wireless side, as I said in my opening comments, I feel pretty comfortable. I agree 3 versus 4—I mean, ideally you would really want four big-scale competitors, but frankly, I am not sure how you get four big-scale competitors. Right. At this point, I am very happy to see Sprint and Nextel getting together, because you know they will provide a—you know, a sort of a safety net in the market for competition against, sort of, the Verizon Wireless, Cingular Wireless, you know, behemoths. And they will be able to compete, I think, very effectively at that. If I look at the—and I separate wireline and wireless. I recognize these things are all sort of converging in their own ways. If I look at the enterprise market, I mean, you know, Verizon conveniently used a bunch of my research this morning, which I thought was humorous that Mr. Seidenberg, you know, then said he had no idea, you know, what I had been saying and it was wrong, even though he didn't know what it was. But

I thought the Congresswoman from New Mexico may—you know, when she asked him the question, I will tell you there are, you know, 13. I—literally, I counted up 13 backbone providers in the U.S. Right now it is true. Level 3 does not get nearly the credibility when they walk into an enterprise customer, but they certainly play a price spoiler role. Right. And those 13 backbone providers, to go to Mr. Cooper's 10, I have got 13, and that is a lot. If I could write who would buy what and who would be where and feel comfortable with it, I don't really personally care if Verizon gets MCI or Quest gets MCI from a regulatory perspective. I think similarly why Sprint and Nextel is a good thing. I think certainly a Quest-MCI deal is probably better regulatory-wise than a Verizon-MCI deal. Verizon can, frankly, do it themselves if they wanted to. Quest is going to have a very hard time organically building its own, you know, scale, and so they really need to go merge with someone like MCI to get that scale. But from a clean slate, it is hard to say, because, you know, it is a difficult question that way.

Mr. BURGESS. Just in the remaining time that I have, I get a lot of questions from my Ham radio operators about broadband over power line, but what can I tell them? What comfort can I give them?

Mr. HALPERN. Well, I—the issue of interference on BPL is—it is a real issue. I have—from what I have been told by people who are much more technically savvy than I am, there are ways to carve out, you know, where there is—where the interference resides. That alone is not—I don't think a reason not to pursue BPL. I think that there are technological workarounds on the interference for Ham radio operators. And I think—if you just think about from, again, consumer good, right, I think anything you can do to try to encourage another emphasis—and now I am going to put the emphasis on the word scale, another scale competitor, to the regional Bell companies and the cable companies, the guy—the only guy I think of that is going to give you that scale on day one is going to be a power company.

Mr. WEISER. Let me—one thing to tell them, which is important, this effort by the FCC is a regulatory innovation. They are putting a little bit of burden on the Hams to quickly identify interference and report it, and at which point the power guys have to remedy it. And so the traditional model of spectrum management was let us be as proactive, preventing any possibility of any interference. The consequence was a lot of spectrumalized fallow. That is a little bit why we have this UHF problem that Dr. Cooper referred to earlier. The Hams now are suffering a little bit in the new model, which is, we will take some risks but make sure to remedy them very quickly if they actually materialize. So tell them the FCC is putting them a little bit at risk, but that there is a regime in place so that the risk will get remedied very quickly, as soon as they can report that they are experiencing interference.

Mr. COOPER. I want to go back to the first point, because this also will go back to the first question that Mr. Barton asked. Mr. Halpern has outlined in his scenario in which it is quite clear that, boy, it is hard to break into markets. Verizon will have to spend a bunch of money to get in. That is what capitalism is about. The interesting thing here is that the proposition he has offered is the

following: If Quest acquires MCI, they will be in the enterprise market, and Verizon will have to get in it as well, which is the different—so I end up with two competitors when I would have had one. Now we don't always do that thinking right, but the—and certainly anti-trust authorities don't get into that game, but this committee needs to think about that and say, "Well, too bad. You know. You have to earn your way into this market." And so if I can end up in a situation where I have two competitors or three competitors or four competitors as opposed to losing that competitor, that is a public policy concern.

Mr. BURGESS. Thank you. My time has expired, I yield back.

Chairman BARTON. We thank the gentleman.

I want to thank this panel and our audience. I want to make one announcement since there was quite a bit of discussion in this panel about digital transition. I expect to introduce very quickly a, hopefully, bipartisan bill with a hard date of December 31, 2006 for digital transition, and we are working with Mr. Upton, Mr. Dingell, and Mr. Markey to get the details. And of course, we have to work with the Senate where the senior Senator over there, Mr. Stevens, has indicated some support for a hard date, but not necessarily that hard date. So your testimony had an added benefit in that it has put on the record some support for that concept.

I want to thank you all. We may have written questions for each of you, and if so, you know, reply very quickly. I would tell Mr. Speta, who talked about an academic group that is being formed, to look at putting together some legislative language for a rewrite of the Telecommunications Act. This committee is going to work more quickly than your academic committee. I think we are going to—Mr. Upton has every indication to put a bill together and report it out this summer and report it to the floor before August.

Mr. SPETA. We will get moving.

Chairman BARTON. Yes. If your group is going to do something, you better put your saddle on and put the spurs on the horse, because we are going to move on that.

The last announcement, the Energy and Air Quality Subcommittee is going to hold a hearing in this room, and it is going to start at approximately 3 this afternoon. This hearing is adjourned.

[Whereupon, at 2:35 p.m., the committee was adjourned.]

[Additional material submitted for the record follows:]

ALLIANCE FOR PUBLIC TECHNOLOGY
March 10, 2005

The Honorable JOE BARTON, *Chairman*
Committee on Energy and Commerce
U.S. House of Representatives
2125 Rayburn House Office Building
Washington, DC 20515

DEAR MR. CHAIRMAN: The Alliance for Public Technology ("APT")[1] applauds the Committee's decision to conduct hearings on a number of recently announced mergers within the telecommunications industry. APT respectfully requests that this letter be included in the Committee's hearing record.

The pending and proposed transactions highlight a number of significant trends within the telecommunications industry: the end of meaningful distinctions between

[1] APT is a nonprofit membership organization based in Washington, D.C., which was founded in 1989 to foster public policies that ensure access to advanced telecommunications technologies for all Americans.

markets for local and long distance voice services; the growing importance of IP-based services and wireless technologies; the impact of intermodal competition on incumbent providers; and, the need for many companies to be able to serve customers of all sizes, on a national, if not global, basis. Without question, these mergers will reshape the telecommunications marketplace, and they are likely to spur additional deals among the remaining industry players. As the Committee's title for this hearing suggests, however, such transactions are less the cause of the massive changes underway within the industry, than they are reactions by corporate entities to the technological forces that are rapidly changing how we communicate in the 21st century.

You and your colleagues asked a number of critical questions of the merging parties, and they will face many more as they undergo the formal process of demonstrating that their specific transactions serve the "public interest, convenience and necessity." At this time, APT does not seek to comment on the merits of any particular merger or proposed combination. Instead, we wish to urge the Committee, as well as the FCC and the state regulatory bodies specifically charged with reviewing the transactions, to examine them in light of whether they promote the goals of Section 706 of the Telecommunications Act of 1996: to "...encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans..."

The issues the reviewing agencies must consider include the following: What effect will a particular transaction have on deployment of affordable broadband services in rural areas, communities with lower income residents, or among Native American populations? Will a resulting entity be better equipped to ensure the accessibility of advanced services and equipment to persons with disabilities or other functional limitations? Will a merged company be in a position to improve access to essential health care facilities and educational opportunities, in every community it serves? Will a transaction help or hinder the achievement of important social goals, including better public safety communications and E911 services? As a combined entity seeks to derive potential cost savings from the integration of previously separate operations, what will be the impact on its future investments in human capital, new equipment, and research and development?

In short, the names and structures of the corporate entities that compete in the communications marketplace of the 21st century will surely continue to evolve. The technologies that are deployed within our telecommunications networks will continue to change, as well. What will not change, however, is the need for all Americans to have affordable access to a modern telecommunications infrastructure. The FCC and the state regulatory agencies that review such mergers should remain mindful of their ongoing obligations under Section 706 to take appropriate measures to promote such access.

Finally, these transactions and your hearing have helped to focus national attention on how the legislative framework established by the Telecommunications Act of 1996 has been impacted by rapidly evolving communications technologies. APT agrees that these technologies are making a number of the core provisions of the 1996 Act increasingly outmoded or irrelevant. Our current regulatory structure may be serving to discourage needed investments and growth in our telecommunications industry. We are pleased that your Committee has commenced the process of considering necessary legislative reforms, and APT's members stand ready to work with you in these efforts. In part, our goal should be a structure under which future telecommunications deals will be made for sound economic, business, and public service reasons, not because current regulations may favor certain providers and technologies over others, in contravention of the "competitive" and "technological" neutrality mandates of the 1996 Act.

Thank you for your consideration of APT's views.

Sincerely,

DAN PHYTHYON
Public Policy Director

cc: The Honorable John Dingell
The Honorable Fred Upton
The Honorable Ed Markey

RESPONSE FOR THE RECORD FROM TIM DONAHUE, NEXTEL COMMUNICATIONS

THE HONORABLE JOSEPH R. PITTS

Question #1: Early last year, many wireless companies, including yours, were ready to unveil a wireless directory assistance program. This received significant op-

position from the public and Sprint withdrew its decision to participate in the directory. What will the plan be for directory assistance for the new company?

Response: Sprint and Nextel will remain competitors until the merger is complete and thus we have not made a joint strategic decision concerning WDA.

Question #2: It has become clear over the last 18 months that the biggest wireless companies are planning to implement a wireless directory assistance service. This met significant resistance from the public and Sprint, along with Alltel, withdrew their participation in the directory. No such decision was made by Nextel. Once your companies merge how will the new company approach the directory? Will you participate? If so, how will you inform subscribers? If not, can you please share your reasons?

Response: The proposed merger between Sprint and Nextel has not been completed and as such any decision regarding WDA on behalf of the merged company has not yet been made.

SPRINT
April 4, 2005

The Honorable JOE BARTON
2125 Rayburn House Office Building
Washington, D.C. 20515

DEAR CHAIRMAN BARTON: Thank you for giving me the opportunity to appear before the Committee on Energy and Commerce on March 2, 2005, to present Sprint's views on "Competition in the Communications Marketplace: How Technology is Changing the Structure of Industry."

I am in receipt of your follow up questions regarding Wireless Directory Assistance (WDA) asking whether a merged Sprint-Nextel company will participate in a WDA, and, if so, how subscribers would be informed that they may be listed. Due to the still pending Sprint and Nextel merger application, it would be premature to comment on the company's future business plans with respect to offering WDA.

Sprint believes that there are substantial numbers of customers who want to have their wireless numbers listed. As you note, however, Sprint has elected not to offer WDA at this time. I can assure you that if we decide to implement WDA at some point in the future, it would be offered in a consumer friendly manner that respects the privacy of our customers.

Sincerely,

GARY D. FORSEE
Chairman and Chief Executive Officer

cc: Congressman Joe Pitts

BERNSTEIN RESEARCH

A Tough Nut to Crack: The Hegemony of AT&T and WorldCom in the *Fortune* 1000 Market

Research Findings of the Bernstein 2002 Corporate Telecom Spending Decision-Maker Research Study

Spending by *Fortune* 1000 companies represents 75-80% of the fastest-growing telecom industry segments and is expected to grow 36% faster than the total industry

Communications services appear to be the lowest beta category in *Fortune* 1000 IT budgets; *Fortune* 100 buyers are likely to grow spending 5% in 2002

AT&T and WorldCom are likely to retain their leading primary supplier roles for at least the next three to five years as the RBOCs struggle to gain traction with enterprise customers

Qwest is distinguished as an up-and-comer, with a strong foundation of credibility already established in IP networking

Sprint is considered the weakest of the leaders, suffering from insufficient sales coverage, below-average customer care and a mix weighed to steadily declining voice products

Among the Bells, Verizon has established the broadest geographic relationships and is seen as likely to pull further ahead of SBC and BellSouth over the next year

MARCH 2002

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Portfolio Manager's Summary

Investing in the U.S. large-cap telecom space has become a game of avoiding land mines. The largest players, the Regional Bell companies, were hit hard in 2001 by sluggish entry into the rapidly declining voice long-distance (LD) market, above-expectation access line losses, technology substitution by wireless, DSL and cable-based data services, and, most recently, an indication that the state public utility commissions may seriously re-evaluate the way wholesale element pricing is calculated. On a relative basis, however, the pain the RBOCs suffered pales in comparison to the two-year slides of AT&T, WorldCom and Sprint. AT&T has been hit by disappointments in its cable business, the effect of a slowing economy on its business services unit, and the loss of share to the RBOCs in its consumer unit. WorldCom has been hit by the rapid commoditization and pricing collapse of long-haul transport services, and an economy-driven slowdown in corporate IT spending.

Looking forward, the battleground will shift. If the pundits are correct, the economy will recover in mid- or late-2002. The RBOCs will continue to gain LD approvals, albeit at a rate slower than previously expected. And, as the RBOCs gain their approvals, they will focus their sights on the *Fortune* 1000 market, the historical stomping ground of AT&T, WorldCom and Sprint. But all is not lost for AT&T and WorldCom. The corporate market is large, difficult to crack, and growing telecom services, they are spending 36% faster than the telecom industry as a whole. It was this understanding that drove us to commission the 2002 Corporate Telecom Spending Decision-Maker Research Study. The key objective of the study was to better understand the depth of the risk to the incumbent primary providers of communications services to the *Fortune* 1000, from both a further economic slowdown and the eventual entry of the Regional Bells.

The results of our study were interesting and conclusive. At an industrial level, we found that telecom services has the lowest beta of any IT category, unlikely to fall further in a continued slowdown, but equally likely to see a more modest recovery in an upturn. We found that AT&T and WorldCom dominate the enterprise customer market. Somewhat surprisingly, they are expected to do so well past RBOC entry into long distance, for at least the next three to five years. Following the failure of the WorldCom merger, Sprint was thrown into disarray characterized in our study by poor sales coverage and even worse customer service. Sprint's decline — in practice and perception — contrasted sharply with our respondents' view of Qwest as a strong up-and-comer with particular credibility in the area of IP networking, the next big spending initiative for many of our study's participants. AT&T and WorldCom will be challenged, but in the near term that challenge will likely come most significantly from Qwest and only in the long term from the other regional bells.

We maintain our outperform rating on AT&T and market-perform ratings on Verizon and SBC. We are initiating coverage on Qwest and WorldCom with outperform ratings and on MCI with a market-perform rating.

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Exhibit 1 Financial Overview

	Q	WCOM	T	VZ	SBC	MCIT	SPX
Price 2/27/02	$8.30	$7.64	$15.45	$47.14	$37.80	$6.83	$1,109.89
52-Week Range	$7 - $42	$6 - $21	$14 - $21	$43 - $57	$34 - $51	$6 - $19	$945 - $1,316
YTD Relative Performance	(37.9)%	(42.4)%	(11.5)%	2.7%	(0.2)%	(42.9)%	
Stock Rating[2]	O	O	O	M	M	M	
Earnings per Share							
1999	$0.39	$0.79	$1.95	$2.83	$2.15	na	$50.78
2000	0.59	0.98	0.74	2.84	2.27	na	56.25
2001	0.05	0.70	0.19	3.00	2.35	$0.72	44.00
2002E[3]	0.25	0.75	0.38	3.15	2.33	(1.57)	48.50
2003E[3]	0.44	0.77	0.15	3.41	2.54	(2.13)	
EPS Growth Rate							
1999-01	(64.2)%	(5.7)%	(68.8)%	3.0%	4.5%	(77.7)%	(0.1)%
2001-06E	66.2	(0.7)	(36.2)	7.9	(37.0)	(229.6)	
Dividends per Share							
2001	$0.05	$0.00	$0.15	$1.54	$1.03	$1.20	
2002E	0.05	-	0.15	1.54	1.03	2.40	
Unadjusted P/E							
2001	164.4x	10.9x	81.3x	15.7x	16.1x	9.5x	25.2x
2002E	33.3	10.2	40.7	15.0	16.2	(4.4)	
Relative to S&P 500 (2001)	652%	43%	322%	62%	64%	38%	
Historical Fwd[1] Rel. P/E	102	130	103	80	85	na	
Dividend Yield	0.6	0.0	1.0	3.3	2.7	17.6	
EBITDA per Share							
1999	$3.82	$2.33	$5.81	$9.27	$5.97	$35.32	
2000	4.36	2.68	3.62	9.89	6.33	37.74	
2001	4.43	2.76	3.59	10.66	6.56	13.55	
2002E	4.20	2.82	3.65	11.07	6.67	5.09	
EBITDA Growth Rate							
1999-01	9%	9%	(15)%	6%	4%	(37)%	
2001-06E	8	6	0	5	2	(22)	
Adjusted Enterprise Value[1]/ EBITDA							
2002E	5.1x	2.8x	6.3x	5.9x	6.5x	10.4x	
2003E	4.5	3.1	6.7	5.4	6.9	12.9	
Other Statistics							
Net Debt (Per Share 2001)	$14.75	$8.02	$11.92	$23.48	$7.66	$46.99	
CAPEX 2001	8,543	7,500	9,310	17,371	13,392	594	
CAPEX/Share 2001 ($)	$5.11	$2.56	$2.56	$6.37	$3.94	$5.08	

1 Market Capitalization + Net Debt less Hidden Asset Value.
2 O=Outperform, M=Marketperform, U=Underperform.
3 EPS Numbers Include Adjustment for Implementation of FAS-142.

Source: Corporate reports and Bernstein estimates.

Significant Research Conclusions

"They're all kind of negative: you're getting less service than ever; half of them are in Chapter 11 or reorganizing; they oversell at the front end and underdeliver at the back end; the bigger companies are treading water and the little ones who show promise disappear or merge.

In the end, however, mostly the same vendors would be the likely suppliers in the IP category."

Fortune 100 Chief Technology Officer

During the first quarter of 2002, we conducted 25 one-hour interviews with *Fortune* 1000 CIOs, CTOs and VPs of Telecom Services, in order to asses the competitive supplier positioning within the enterprise communications services market and the budgeting trends that underlie the segment's spending. Our survey confirmed not only how well-entrenched AT&T and WorldCom are in the enterprise communications services market, but also that the near- and mid-term threat to their top-tier position is more likely to come from the likes of Qwest and IBM than from Verizon, SBC or BellSouth. The study also confirmed our belief that even in a continued economic slump, little additional downside exists to current communications services spending.

Spending from the *Fortune* 1000 Drives Telecom Services Growth

With significantly more exposure to the fastest-growing segments of the telecom industry — local and long-distance data and wireless — telecom services spending by the *Fortune* 1000 is expected to outpace overall telecom industry revenues by 36% over the next five years (see Exhibit 2). Specifically, of the $302 billion spent in 2001 on telecom services, we estimate the *Fortune* 1000 accounted for nearly 35%. And against an estimated industry growth rate of 5% over the next five years, we expect telecom spending by the *Fortune* 1000 to reach nearly 7%, an estimate we view as conservative given our assignment of most wireless revenues to bill-paying consumers irrespective of whether the consumer is reimbursed for the expense.

Exhibit 2 *Fortune* 1000 Domestic Telecom Services Retail Revenues ($ billion)

	2001					2006E					CAGR				
	Total Revenue	Business Share	Business Revenue	*Fortune* 1000 Share	*Fortune* 1000 Revenue	Total Revenue	Business Share	Business Revenue	*Fortune* 1000 Share	*Fortune* 1000 Revenue	Overall Total	Residential	Total Business	*Fortune* 1000	Other Business
Local Voice															
Consumer	$53.5	0%	-	0%	-	$47.6	0%	-	0%	-					
Business	40.4	100	$40.4	60	$24.3	42.0	100	$42.0	60	$25.2					
Total Local Voice	$93.9	43%	$40.4	60%	$24.3	$89.6	47%	$42.0	60%	$25.2	(0.9)%	(2.3)%	0.8%	0.8%	0.8%
Long-Distance Voice															
Consumer	$28.3	0%	-	0%	-	$13.0	0%	-	0%	-					
Business	38.2	100	$38.2	60	$22.9	14.6	100	$14.6	60	$8.7					
Total Long-Distance Voice	$66.5	57%	$38.2	60%	$22.9	$27.5	53%	$14.6	60%	$8.7	(16.2)%	(14.5)%	(17.6)%	(17.6)%	(17.6)%
Wireless	$72.0	10%	$7.0	60%	$4.2	$130.1	20%	$26.0	60%	$15.6	12.6%	9.9%	30.1%	30.1%	30.1%
Local Data															
Consumer	$3.4	0%	-	0%	-	$16.0	0%	-	0%	-					
Business	24.4	100	$24.4	88	$21.4	44.3	99	$44.1	83	$36.7					
Total Local Data	$27.8	88%	$24.4	88%	$21.4	$60.3	73%	$44.1	83%	$36.7	16.8%	37.0%	12.6%	11.4%	19.5%
Long-Distance Data															
Non-IP	$30.4	100%	$30.4	95%	$28.9	$49.9	100%	$49.9	95%	$47.4	10.4%		10.4%	10.4%	10.4%
IP	10.8	70	7.6	30	2.3	28.2	75	21.1	50	10.6	21.1	16.8%	22.8	36.0	14.8
Total Long-Distance Data	$41.2	92%	$38.0	82%	$31.2	$78.1	91%	$71.0	82%	$58.0	13.6%	16.8%	13.3%	13.2%	13.9%
Total Telecom Services	$301.5	49%	$148.1	70%	$104.0	$385.6	51%	$197.7	73%	$144.2	5.0%	4.1%	5.9%	6.8%	3.9%

Key Assumptions:

1 *Fortune* 1000 represents 60% of business spending for most categories based on:
   a. *Fortune* 1000 revenue accounts for 88% of publicly-traded companies' revenue.
   b. Privately-held companies represent one-third of business revenue.
2 Because most consumers are responsible for the cellular phone bills despite potential corporate sponsorship or reimbursement, we have assigned a low percent of wireless spending to business and, by extension, *Fortune* 1000.
3 Business wireless spending will double from 10% to 20% as providers focus on the higher ARPU market.
4 Private line and non-IP data are 95% from *Fortune* 1000 because of the large scale needed to justify dedicated solutions.
5 DSL is used in small and medium businesses and not at all at *Fortune* 1000.
6 Transport and other IP services will become increasingly weighed toward business and *Fortune* 1000 as IP-VPN-type solutions gain traction.

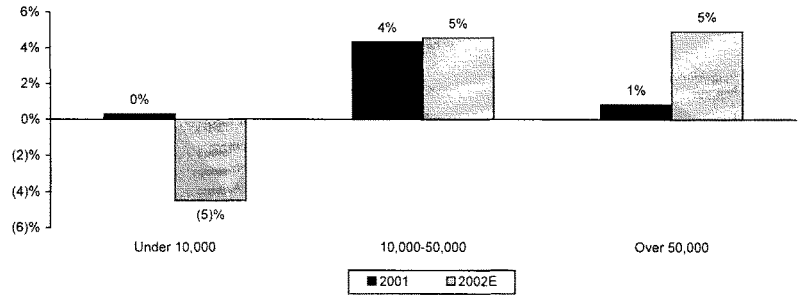
Source: Bernstein estimates and analysis.

IT Budgets Show Clear Signs of Flight-to-Quality

Our interviews indicated a broad range in 2002 IT budget growth estimates, similar to the pattern exhibited in 2001. This dispersion in spending seems to be driven by market consolidation, business cycle timing and differences in the assumptions made about the economy.

Reflecting the broad market shakeout and flight-to-quality, *Fortune* 100 companies are more likely to see increased IT budgets in 2002 than the broader *Fortune* 1000 (see Exhibit 3). Companies with more than 50,000 employees are growing their IT budgets by an average of 5%, as compared to a 5% average expected reduction in IT budgets for companies with fewer than 10,000 employees. The biggest-of-the-big demand global suppliers, reinforcing AT&T's and WorldCom's incumbent positions and highlighting the challenges facing the RBOCs as they seek to enter this market. This trend also reaffirms AT&T's strategy of focusing on the multinational and large enterprise market at the expense of the mid- and small-company market.

Exhibit 3 **Expectation of IT Budget Growth by Size (Number of Employees)**

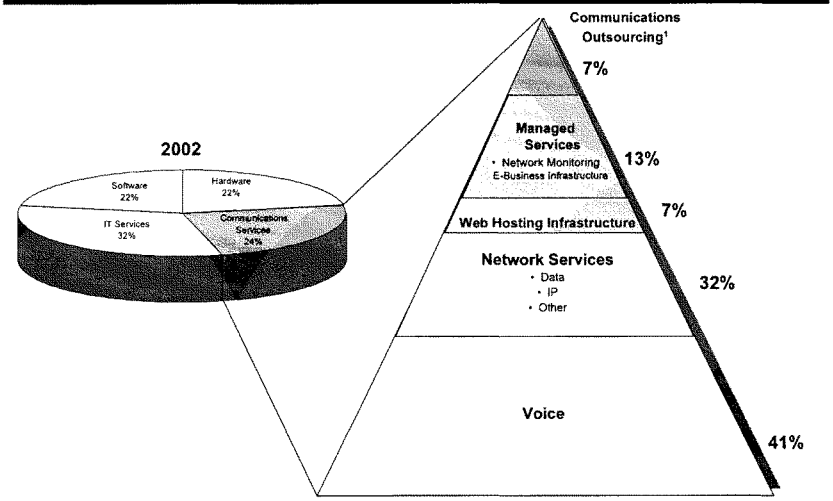


Source: Bernstein analysis.

The Spending Pyramid Is Still Voice-Heavy But Shifting to I/P by 2003

For most of our respondents, the communications spending "pyramid" is still bottom-heavy (see Exhibit 4). Voice (including wireless) still comprises 41% of their communications services spending, although many commented that this number is likely to decline steadily over time. The decline will be a result of effective price decreases in voice being greater than the decline in other spending categories as price reductions taken over the past few years continue to ripple through the customer base. The shift away from voice will also be driven by new product introductions in IP, Web hosting and managed services, as well as by increased connectivity needs. The decline in the voice segment, we believe, will mark the descent of Sprint from the top tier of providers.

Exhibit 4 **Breakdown of Communications Services Spending**



1 Excluding professional services such as ASP or Web design.

Source: Bernstein survey and Bernstein research.

Our survey confirmed that within network services, spending will move away from traditional data services (x.25, private line, frame relay and ATM) towards IP-based solutions. This shift is expected to gain momentum in 2003, but would accelerate with an early and robust economic recovery in 2002. According to our interviewees, IP services will increase to over 40% of their spending in 2003 from 27% in 2002, almost entirely at the expense of traditional data services. The widespread sentiment was that IP services, such as IP-VPN and voice-over-IP, are cost-effective, disruptive technologies likely to see significantly increased penetration over the next year or so.

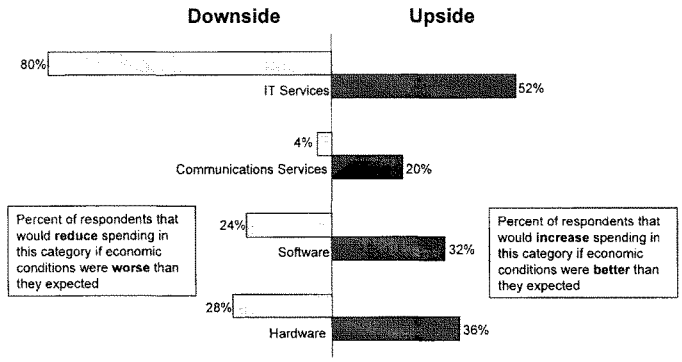
The use of IP-VPN-type services will benefit the leaders in IP-based value-added services — AT&T, WorldCom and Qwest — and are expected to drive increased use of managed services offerings from these carriers. And though AT&T and WorldCom also have the most to lose from IP substitution of legacy data services, a common caveat about using new or multiple providers was that such a shift would not be made at the expense of reliability. All acknowledged that "in the end, however, mostly the same vendors (AT&T and WorldCom) would be the likely suppliers in the IP category."

Communications Services Segment Appears More Resilient Than Other IT Categories

Relative to other IT spending categories, Communications Services appears to have a somewhat lower beta. Our respondents consistently indicated that in a further economic downturn, their budgets for communications services were less likely to be cut than those for other IT categories (see Exhibit 5). Not surprisingly, in an economic recovery, communications serv-

ices also maintains a smaller head of steam based on the percent of our respondents indicating a likely increase in a recovery. This low probability of further cuts, we believe, provides a floor for all the providers in the space should the current economic slowdown worsen before it improves. And while the upside from a recovery may not be as high as that for other IT services, an economic recovery will still clearly benefit the providers with the greatest leverage to the highest-quality customers, AT&T and WorldCom.

Exhibit 5 **Percent of Companies That Would Increase Spending in a Recovery (Decrease Spending in a Downturn)**



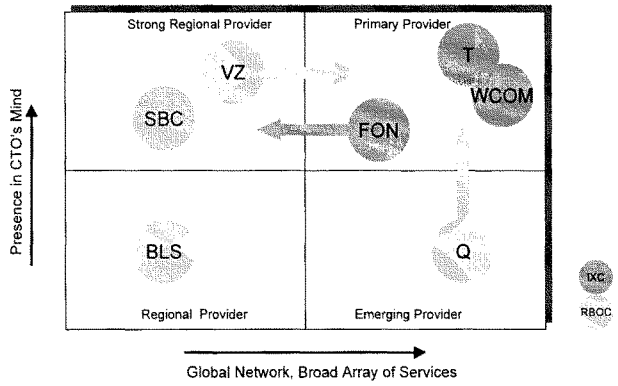
Source: Bernstein survey and Bernstein research.

Good Money Should Still Be on the Seven Footers (AT&T and WorldCom)

Although *Fortune* 1000 customers re-evaluate their service providers every two to three years (a "jump ball"), they have most often rotated among the top-tier providers rather than shifting significant portions of their communications spending towards second-tier or niche providers. Despite broad dissatisfaction with the quality of sales and care received from all the carriers serving the market, at the point of decision, CIOs and CTOs are left with an immutable set of criteria when selecting their provider: ability to offer a seamless global network, ability to guarantee and deliver very high network reliability and ability to offer the full array of services.

Thus, AT&T and WorldCom appear secure in their position as the top-tier providers, with both a high share-of-mind with CTOs and global networks capable of providing the full array of services demanded (see Exhibit 6). While Sprint is likely to be dragged down by an unfavorable mix of products weighed to voice, Qwest is favored to replace it as it continues to expand its sales reach to the *Fortune* 1000.

Exhibit 6 **Enterprise Communications Services Market**



Source: Bernstein research.

Our survey leads us to believe that Verizon, SBC and BellSouth are still several years away from capitalizing on the opportunity in the enterprise communications services market. The three "pure" RBOCs (Verizon, SBC and BellSouth) will struggle to meet the three criteria our interviewees articulated as driving their selection of primary service providers. Of the three RBOCs, however, Verizon is seen as likely to be the first to move into the top tier as it begins to leverage its Genuity stake for product line breadth. Assuming the three RBOCs choose to focus on the enterprise market once they have secured all of their long-distance entry approvals (not a foregone conclusion), our interviewees perceive that it would take them two-and-a-half years to gain enough traction to be successful. Somewhat surprising, this perception was broadly held and independent of whether the three RBOCs chose to enter through acquisition or to build an enterprise business internally (a nuance we probed during the questioning).

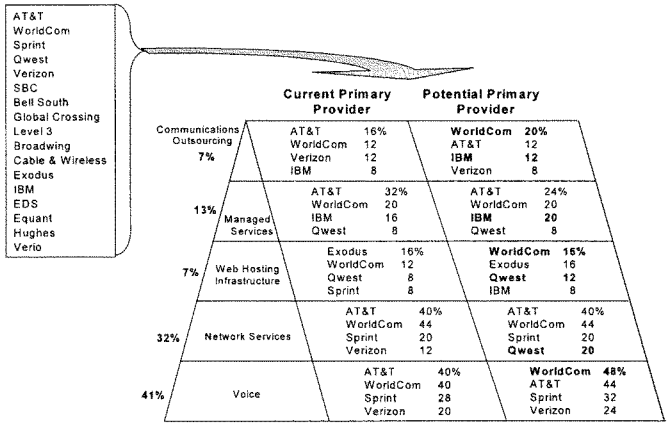
Impediments to RBOC Penetration of the *Fortune* 1000 Structural Not Sentimental

The immediate and clear impediment to significant market-share gain for the three RBOCs was seen as their inability to offer seamless global network connectivity. All of our *Fortune* 500 respondents (60% of the total sample) require global communication services. Although it is possible to buy network services on a regional basis, the bias was clearly towards engaging providers capable of servicing all of the enterprise's global needs. A global network allows customers to use managed services seamlessly across their disparate international subsidiaries and affiliates without fear of finger-pointing in the event of a network outage, a key consideration for the large multinationals in our study. Our survey respondents expressed concern over the size of the investments necessary for the RBOCs to compete organically, the risks to them of having the RBOCs compete on a resale basis and the disruptive potential of the RBOCs undertaking acquisitions of existing top-tier providers. Qwest clearly stood apart from its RBOC brethren in this category with strong existing credibility in IP networking and with its KPNQwest venture.

In terms of reliability, the reactions toward the three RBOCs were mostly negative. Many referred to the existence of significant historical problems in relationships with the local service providers. Often cited were complaints over the RBOCs' "monopolistic thinking" yielding unreasonably high prices and poor responsiveness. We heard numerous examples of mistakes in local loop service that effected the whole enterprise. Many of the interviewees were cognizant of the fact that in order to achieve a global footprint, any of the RBOCs would have to undertake a major acquisition, an outcome which created angst about service integration headaches. One interviewee put his concerns into graphic metaphor: "You talk about WorldCom having a lot to integrate — the RBOCs would have even greater digestive pains."

Our survey indicates a perceptual divergence among the RBOCs. Qwest and Verizon are seen as far better able to deliver a broad array of enterprise communications services than are SBC and BellSouth. SBC and BellSouth are not currently, nor are they expected to participate during the next two to three years in the highest-growth areas of communications services — network services, Web hosting and managed services (see Exhibit 7). Verizon was considered a top-tier provider of a limited set of network and communications outsourcing services by several companies headquartered within its geographic region. However, its stature on a stand-alone basis and *vis-à-vis* the other RBOCs was not as lofty, with customers headquartered beyond its regional boundaries. Qwest, on the other hand, ranked well in the same areas as Verizon, but was also cited as an up-and-comer likely to gain share and climb into the top tier of providers more rapidly than the other Bells. Our interviewees told us that the three "traditional" RBOCs need to build a reputation more like Qwest to be afforded the same level of respect as a provider, an opportunity seen as taking the next five years.

Exhibit 7 **Current and Future Service Providers by Service Category (Percent of Respondent Mentions)[1]**



1 Doesn't add to 100 due to multiple responses.

Source: Bernstein survey and Bernstein research.

Qwest as the Up-and-Comer

While Qwest was not always as top-of-mind for some of our interviewees as, say, AT&T and WorldCom — indicating some unevenness in marketing pressure and sales coverage — Qwest clearly has separated itself from the other RBOCs. Specific strengths cited were its global network, technological capabilities, strategic focus, and breadth of products. In fact, several participants suggested that Qwest may have more momentum, and may be making more forward progress in the category, than any other provider, confirmation of the carrier's own statements. This traction is likely to yield it a pole position next to AT&T and WorldCom in at least a portion of the *Fortune* 500 market within the next two years.

Risks

The main risk to our forecast of continued leadership from AT&T and WorldCom relates to the extent they are threatened by Qwest and IBM. In a scenario where Qwest and/or IBM come to dominate IP networking and the shift to IP accelerates rapidly, AT&T and WorldCom may compromise some of their market share.

WorldCom also stands the risk of deteriorating reliability, though our own research into the degree of network integration already completed by WorldCom gives us comfort that the company has made significant progress. The perception among our respondents was of a company still struggling to pull its multitude of acquisitions together into a cohesive whole.

The risk to our view on Qwest is of a potential drag from the acquisition of U S West. The momentum achieved in the enterprise market could be diluted by the focus required to turn around what had been a lagging

RBOC. In addition, nagging consumer-service quality issues remain, potentially causing management distractions

The three RBOCs — Verizon, SBC and BellSouth — would be able to disprove our two- to three-year timeline for entry with a quick acquisition of AT&T or WorldCom. Should they find the required regulatory opening and complete such an acquisition within a year, a significant presence in the enterprise space would follow shortly, though integration challenges would certainly follow as well.

Investment Conclusion

Current investor sentiment appears to discount a doomsday scenario for AT&T, WorldCom and Qwest, the three companies we believe will dominate the *Fortune* 1000 market over the next few years. And while AT&T and WorldCom are certain to cede some of their existing hegemony to Qwest, we do not believe at their current valuations any of the three are properly reflecting the inherent value of their business-focused wireline franchises or the potential upside all three will enjoy from an economic recovery given their leverage — more so for AT&T and WorldCom — to the enterprise customer space. On the flip side, Verizon, SBC and BellSouth are expected to take longer than current expectations to crack into the *Fortune* 1000 and, thus, will ultimately disappoint the investment community or be forced to attempt an acquisition of one of the other players in that market. AT&T, WorldCom and Qwest are rated outperform and Verizon and SBC are rated market-perform.

Why Fight for *Fortune* 1000 Share of Wallet?

As the title of this report indicates, we do not subscribe to the "offer it and they will come" philosophy of RBOC share gains in the *Fortune* 1000 market. Not only must a carrier develop sales relationships with the companies, but they must develop and train their sales and provisioning forces to offer a full suite of services and must endure relatively long sales cycles and contract lives. As a result, the battle to crack the spending nut of the *Fortune* 1000 is expected to be difficult and time-consuming for the RBOCs.

So why do it? Why expend the money, resources and effort to break into this customer segment when a dominant position with the consumer population is assured and a majority share position with Small-Medium Enterprise customers (SMEs) is highly likely? The answer, we believe, comes back to long-term growth. Communications spending by the *Fortune* 1000 is expected to outstrip aggregate industry growth by more than 36% or 180 bp, and the overall business market (including the *Fortune* 1000) by 90 bp. For the RBOCs, whose dominant local voice businesses represent an average of 59% of their total revenues and which will, at best, show zero growth over the next five years in this category, gaining exposure to the *Fortune* 1000 market is the only way to bolster a flattening growth rate.

Industry Held Back by Flattening Local Voice Growth and LD Voice Declines

We expect the United States telecom services market to grow at a 5.0% CAGR from 2001 to 2006, reaching nearly $386 billion by 2006 (see Exhibit 8). This growth rate is 230 bp higher than the expected GDP growth over the same period, primarily due to a continued ramp in penetration of wireless and broadband services.

Exhibit 8 Domestic Telecom Services: Retail Revenues ($ billion)

										CAGR		Contribution to Growth	
	1998	1999	2000	2001	2002E	2003E	2004E	2005E	2006E	1998-01	2001-06E	1998-01	2001-06E
Local Voice	$87.2	$91.0	$92.1	$93.9	$93.3	$92.5	$91.5	$90.1	$89.6	2.5%	(0.9)%	0.9%	(0.3)%
Long-Distance Voice	75.2	76.2	72.5	66.5	57.6	48.8	40.6	33.4	27.5	(4.0)	(16.2)	(1.1)	(2.3)
Wireless	37.8	45.0	58.8	72.0	83.4	95.3	108.1	119.9	130.1	24.0	12.6	4.5	3.5
Local Data	12.5	16.7	21.6	27.8	34.4	41.3	48.3	54.8	60.3	30.5	16.8	2.0	2.0
Long-Distance Data	18.2	27.0	35.0	41.2	46.1	52.9	60.3	69.0	78.1	31.4	13.6	3.0	2.2
Total Telecom Services	$230.9	$255.8	$280.0	$301.5	$314.8	$330.9	$348.9	$367.2	$385.6	9.3%	5.0%	9.3%	5.0%
Memo: Y/Y Change		10.8%	9.5%	7.7%	4.4%	5.1%	5.4%	5.3%	5.0%				
GDP ($ bil.)	$8,640	$9,037	$9,389	$9,681	$10,024	$10,308	$10,641	$10,985	$11,340	5.9%	2.7%		
Telecom as a Percent of GDP	2.7%	2.8%	2.9%	3.1%	3.1%	3.2%	3.3%	3.3%	3.4%				

Source: Bernstein estimates and analysis.

Within the total industry numbers, however, the local voice segment — the largest segment of the industry at $93.9 billion — will flatten from its roughly 3% historical growth rate as average retail revenues decline with competition and lines are lost to wireline competitors and technology substitution from wireless and broadband services. Long distance voice, too, will continue to see negative trends as falling wholesale prices and RBOC entry collude to drive retail pricing down at an expected mid-teen rate and

retail volumes continue to be lost at a double-digit rate to wireless and e-mail substitution.

Data Drives Industry Growth

The highest growth segments of domestic telecom services will be local and long distance data, combined driving 84% of total industry growth. Individually, the local data business — dominated by local private lines, but also benefiting from increased penetration of broadband services — is expected to post 16.8% average revenue growth between 2001 and 2006, to end our forecast at $60.3 billion, or 15.6% of total industry revenues. Making these growth numbers more impressive is the realization that they will be posted in an environment characterized by 15-20% declines in local private-line pricing and, at best, flat DSL and cable modem pricing.

Increasing Internet penetration and, hopefully, an economic recovery modeled to begin in 2003, should also help drive growth back into the LD data market. Specifically, we expect LD data services, including corporate network transport and managed services, Internet transport and Web hosting, to grow at a robust 13.6% rate over the next five years. This segment will drive 44% of the total growth of the telecom industry from 2001 to 2006, to end the forecast representing 20.3% of total industry service revenues.

A secondary driver of the LD data market, behind basic increases in Internet demand, will be IP-based solutions in the enterprise market. The rapid growth of Web hosting and IP-VPN, as well as the emergence of voice-over-IP, will drive long-distance data segment growth of 13.6%. The spike in demand for IP-based solutions is a result of the cost-effective nature of these products and the opportunity for new functionality, such as remote access to corporate LANs over broadband connections.

Wireless Also Expected To Support Business Market Growth

Although we expect the penetration rate for wireless services to moderate over the next few years from an average of 650 bp per year over the past two years to 600 bp over the next two, total wireless revenues are still expected to grow an average of 12.6% over the next five years. In contrast to the data market, where corporate usage will drive most of the growth, in wireless, increasing consumer penetration will be the largest driver. Hidden behind the revenue numbers is an assumption of mid-single-digit price declines for commoditized voice services mostly offset by incremental revenue per user for data offers. Thus, one risk to our wireless forecast is the as-yet unproven adoption rate and pricing power for new data services and the speed of pricing decline to be experienced in the voice segment. To date, the wireless carriers have been able to convince consumers that a 4,000-minute plan represents a benefit over a 2,500-minute plan. We continue to watch this marketing gimmick with disbelief, and dread the day the first of the six major carriers decides that the bundled-minute strategy is less effective in securing incremental share than a slightly lower price.

***Fortune* 1000 Service Revenue Growth Will Outpace the Rest of the Market**

Clearly, if data growth is driving industry growth and the *Fortune* 1000 represents 75% of total industry data spending, the total growth in telecom spending for the *Fortune* 1000 will be 36% higher than that for the industry as a whole (see Exhibit 9). Specifically, we expect the *Fortune* 1000 telecom services market to grow at a 6.8% CAGR from 2001-06, compared to a 3.9% rate for the rest of the business market which, in turn, compares to 5.0% for the industry and 4.1% for the residential market.

Exhibit 9 *Fortune* 1000 Domestic Telecom Services: Retail Revenues ($ billion)

	2001					2006E					CAGR				
	Total Revenue	Business Share	Business Revenue	*Fortune* 1000 Share	*Fortune* 1000 Revenue	Total Revenue	Business Share	Business Revenue	*Fortune* 1000 Share	*Fortune* 1000 Revenue	Overall Total	Residential	Total Business	*Fortune* 1000	Other Business
Local Voice															
Consumer	$53.5	0%	-	0%	-	$47.6	0%	-	0%	-					
Business	40.4	100	$40.4	60	$24.3	42.0	100	$42.0	60	$25.2					
Total Local Voice	$93.9	43%	$40.4	60%	$24.3	$89.6	47%	$42.0	60%	$25.2	(0.9)%	(2.3)%	0.8%	0.8%	0.8%
Long-Distance Voice															
Consumer	$28.3	0%	-	0%	-	$13.0	0%	-	0%	-					
Business	38.2	100	$38.2	60	$22.9	14.6	100	$14.6	60	$8.7					
Total Long-Distance Voice	$66.5	57%	$38.2	60%	$22.9	$27.5	53%	$14.6	60%	$8.7	(16.2)%	(14.5)%	(17.6)%	(17.6)%	(17.6)%
Wireless	$72.0	10%	$7.0	60%	$4.2	$130.1	20%	$26.0	60%	$15.6	12.6%	9.9%	30.1%	30.1%	30.1%
Local Data															
Consumer	$3.4	0%	-	0%	-	$16.0	0%	-	0%	-					
Business	24.4	100	$24.4	88	$21.4	44.3	99	$44.1	83	$36.7					
Total Local Data	$27.8	88%	$24.4	88%	$21.4	$60.3	73%	$44.1	83%	$36.7	16.8%	37.0%	12.6%	11.4%	19.5%
Long-Distance Data															
Non-IP	$30.4	100%	$30.4	95%	$28.9	$49.9	100%	$49.9	95%	$47.4	10.4%		10.4%	10.4%	10.4%
IP	10.8	70	7.6	30	2.3	28.2	75	21.1	50	10.6	21.1	16.8%	22.8	36.0	14.8
Total Long-Distance Data	$41.2	92%	$38.0	82%	$31.2	$78.1	91%	$71.0	82%	$58.0	13.6%	16.8%	13.3%	13.2%	13.9%
Total Telecom Services	$301.5	49%	$148.1	70%	$104.0	$385.6	51%	$197.7	73%	$144.2	5.0%	4.1%	5.9%	6.8%	3.9%

Key Assumptions

1 *Fortune* 1000 represents 60% of business spending for most categories based on:
   a. *Fortune* 1000 revenue accounts for 88% of publicly-traded companies' revenue.
   b. Privately-held companies represent one-third of business revenue.
2 Business wireless spending will double from 10% to 20% as providers focus on the higher ARPU market.
3 Private line and non-IP data are 95% from *Fortune* 1000 because of the large scale needed to justify dedicated solutions.
4 DSL is used in small- and medium-businesses and not at all at *Fortune* 1000.
5 Transport and other IP services will become increasingly weighed toward business and *Fortune* 1000 as IP-VPN-type solutions gain traction.

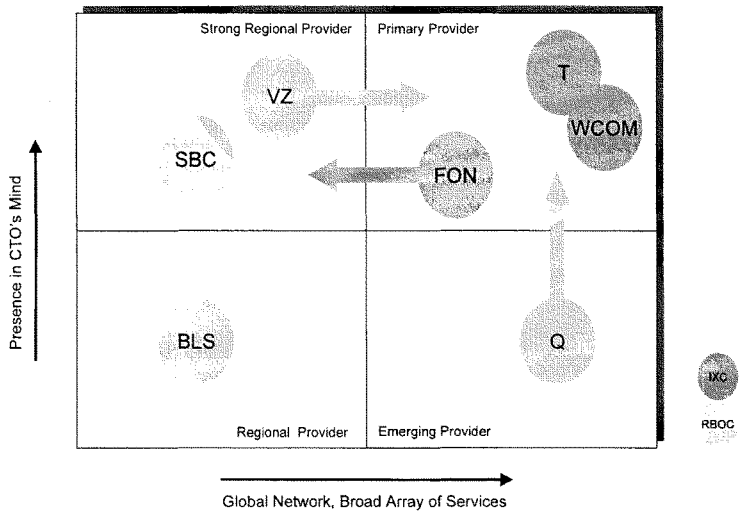
Source: Bernstein estimates and analysis.

The *Fortune*-1000 segment will enjoy the strong push to IP-based solutions. Web hosting, IP-VPN and other solutions with increased importance to large global companies, will be the main drivers of growth. As Web sites become increasingly media-rich and mission-critical, larger companies will be driving a disproportionate part of the demand for Web hosting. Demand for remote access and cost-effective network connectivity will drive the IP-VPN segment. The IP-VPN product set is also particularly attractive for large corporations with multiple interconnected locations.

Trolls on the Mountaintop

AT&T and WorldCom appear secure in their position as the top-tier providers of communications services to the enterprise market with both high share-of-mind with CTOs, and a global network with a broad array of services. While Sprint is likely to be dragged down by an unfavorable mix of products weighed to voice, Qwest should be able to replace Sprint as a supplier to many *Fortune* 1000 accounts as it improves its sales force coverage. Verizon could possibly move closer to the top tier as it leverages its Genuity stake, but none of the "pure" RBOCs (Verizon, SBC and BellSouth) are expected to pose a material threat to the hegemony of the top players for at least the next three to five years. Exhibit 10 provides our assessment of the current positioning in the enterprise services space and the shifts in competitive positioning we expect over the next two to three years.

Exhibit 10 Enterprise Communications Service Market



Source: Bernstein research.

Current Landscape Is Dominated by AT&T and WorldCom

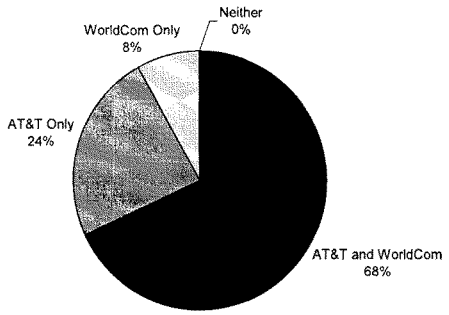
WorldCom's and AT&T's respective market shares understate their presence as suppliers to the *Fortune* 1000. Nearly all of the companies we interviewed had two to three "primary" relationships, which account for 75-80% of their total communications services spending. In many of these cases, one provider gets the dominant stake with the other a somewhat or significantly smaller piece of the pie. The typical distribution falls into one of two scenarios:

Scenario 1: Carrier A – 50%; Carrier B – 25%; Others – 25%.

Scenario 2: Carrier A – 35%; Carrier B – 25%; Carrier C – 25%; Others – 15%.

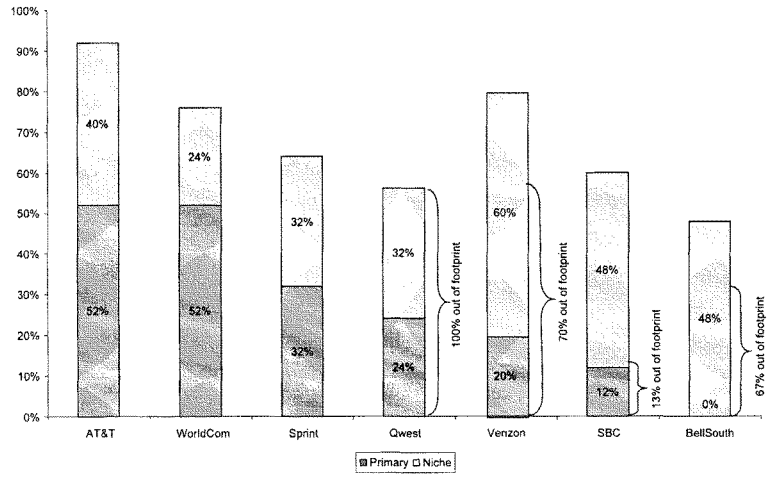
Since large enterprise customers tend to have two to three primary suppliers and two to five niche suppliers, we found that AT&T and WorldCom were almost ubiquitously represented. In fact, all of the 25 companies in our sample used one of the two leaders, and 68% used both (see Exhibit 11). Among the Bells, Verizon was the best represented outside of its regional footprint, a likely outcome of having the densely populated East Coast and having acquired GTE which had existing enterprise customer relationships by virtue of its ability to offer long-distance services when the RBOCs could not. Qwest had the greatest consideration as a primary supplier, while BellSouth and SBC were both seen as niche players with BellSouth not considered a primary provider by any of the companies in our sample, including those headquartered within its own local footprint (see Exhibit 12).

Exhibit 11 **AT&T and WorldCom Overlap**



Source: Bernstein survey.

Exhibit 12 **Current Providers of Enterprise Communications Services**

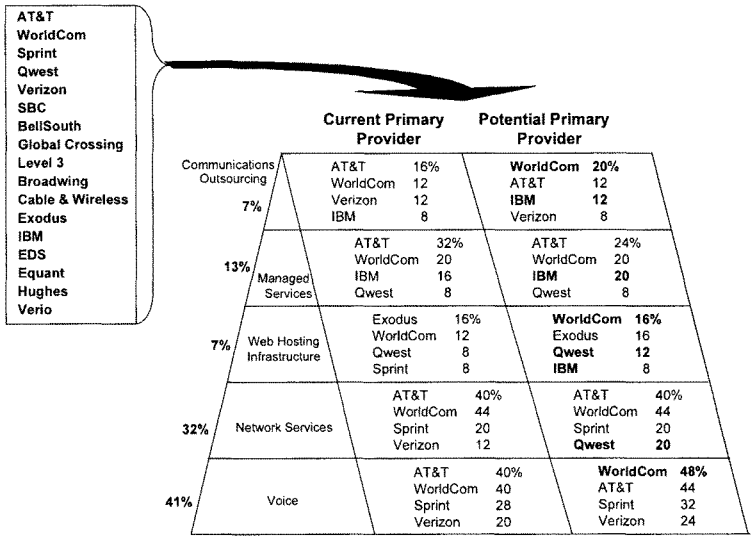


Source: Bernstein survey.

Qwest More of a Threat Than the Other RBOCs

One of the most startling findings of the study was the degree to which both Qwest and IBM have secured share-of-mind and, more importantly, consideration as primary communication services suppliers to our study's interviewees. Qwest, specifically, appears to be gaining significant momentum in the middle of the services value pyramid shown in Exhibit 13. By comparison, while Qwest seems well positioned in three of the four nonvoice categories, SBC and BellSouth are entirely missing as primary providers of communications services, even for voice service. Verizon clearly maintained some strength in the voice and outsourcing categories, (the latter a positive surprise), but failed to appear as a primary supplier for any data services. Verizon wireless' domination of the wireless market was cited as supporting Verizon's strong showing in the voice category. However, with gaping holes in their global reach, mediocre reliability records from the perspective of our survey's respondents and relatively narrow product sale and delivery capabilities, none of the "pure" RBOCs were seen as likely to quickly penetrate the top tier of enterprise communications services providers.

Exhibit 13 **Current and Future Service Providers by Service Category (Percent of Respondents Mentioned)**



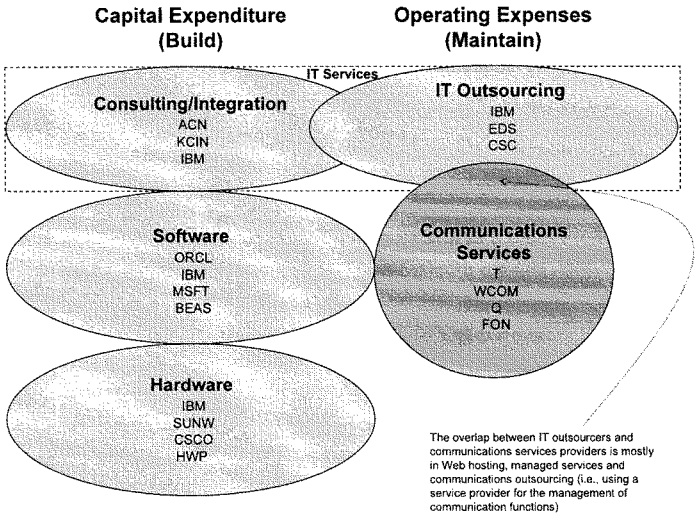
Source: Bernstein survey and Bernstein research.

While Qwest was not always as top-of-mind for some of our interviewees — indicating, we believe, unevenness in marketing and sales coverage — it has clearly differentiated itself from the other RBOCs in terms of its global network reach, technological and network management/design capabilities, strategic focus on the enterprise market, and breadth of product offering.

Outsourcing and Managed Data Services Play to IBM's Hand

As the weight of communications services shifts away from voice, it is becoming increasingly relevant to IBM, as well as to other outsourcers such as EDS and CSC. A look into the composition of the typical CTOs wallet shows that in the operations part of the budget, there is an increasing overlap in the services provided by communications service providers and those offered by IT outsourcers (see Exhibit 14). The overlap consists primarily of Web hosting, managed services and solutions (i.e., using a service provider for the design and management of communication functions). Exhibit 13 also shows that IBM will likely reinforce its leadership position in these three categories, at least within the realm of companies we surveyed.

Exhibit 14 The CTO's Wallet



Source: Bernstein research.

The importance of Web hosting is often underestimated by investors, as the "pure play" Web-hosting companies have fallen on hard times and now have valuations measured in pennies not tens or hundreds of dollars. The importance of Web hosting, we believe, stems from its ability to generate demand for core products while creating a platform from which to deliver value-added services for carriers. These value-added services include such managed services as Web administration, e-business infrastructure, Web conferencing and network monitoring. In addition, a strong presence in Web hosting cross-fertilizes professional services such as Web design and ASP. Whether selling to an existing infrastructure customer or bundling these services for new customers, AT&T, WorldCom and Qwest increase their pricing power and reduce capital intensity.

The other IP products that will be critical to success in this market are IP-VPN and voice-over-IP. The widespread sentiment among our survey respondents was that IP-VPN and voice-over-IP would help decrease costs and increase network reliability and efficiency. The perception is that IP-based products are easier to manage and enable applications heretofore cost-prohibitive to deploy.

Wireless: An Undersold Opportunity Seen as Able to Partially De-commoditize Voice

Within the rapidly declining — rapidly commoditizing — voice category, the only ray of hope came from comments surrounding wireless. Few respondents reported any aggressive pursuit of this segment by the carriers. Our interviewees reported that, in their experience, asking their sales representatives about wireless offerings often leads to confusion at the carriers as they attempt to involve two separate sales organizations. Nonetheless, Sprint and Verizon appeared to have the highest share-of-mind, a phenomenon, ironically enough, attributed to their aggressive consumer-based marketing. One interesting, though not unexpected finding was the popularity of Blackberry-type products. What was particularly notable was the inability of the survey respondents to quantify the ROI of deploying a wireless data solution or even to articulate the tangible benefits of a Blackberry-like service. In the context of the size of the other categories on which IT managers spend their dollars, we do not expect the Blackberry phenomenon to drive overall budget growth.

Despite Jump Ball Every Three Years, Incumbents Maintain Advantage

Our interviewees communicated in no uncertain terms that their loyalty to their service providers is only as deep as their contract is long. One CTO summarized his feelings best as: "They're all kind of negative: you're getting less service than ever; half of them are in Chapter 11 or reorganizing; they oversell at the front end and underdeliver at the back end; the bigger companies are treading water and the little ones who show promise disappear or merge." Rotation among carriers is common with the cycle reported to be "very dynamic — two to three years."

Interesting though, the negative remarks concerning customer service were applied to all the providers, and were not limited to any specific company. Although there are some differences in customer-care quality, it was clear from our interviews that share gain and loss in the enterprise market is not directly based on customer satisfaction. Low satisfaction ratings did correlate to size of customer. Among the companies interviewed, the smallest clearly experience greater turnover in support personnel and slower response times for complaint resolution from their carriers.

Although customers switch service providers relatively often, they appear mostly to rotate among the top-tier providers, having tried some of the smaller ones and been burned. Ultimately, when they have to choose providers, they are left with the same decision criteria that directed them to AT&T and/or WorldCom in the first place: a seamless global network, high network reliability and breadth of services.

With this in mind, it is not surprising that our interviewees not only identified AT&T and WorldCom as their current primary providers, but grudgingly expect them to remain such well into the future. One CIO summarized his feelings as follows: "That's a sore subject. The market leaders aren't the greatest, but you're forced to work with them because of their dominance...you end up choosing on the basis of market share and international coverage, more than anything else."

We see Qwest as having the potential to replace Sprint as the third top-tier provider of enterprise services. We observed the early signs of this shift when we asked for an unsolicited list of the top providers in the space. While three-quarters named Sprint to the short list, half also named Qwest (AT&T and WorldCom were mentioned by all respondents). Many added that they see Qwest as the up-and-comer in the group and Sprint as the loser.

When Will the Fault Lines Show?

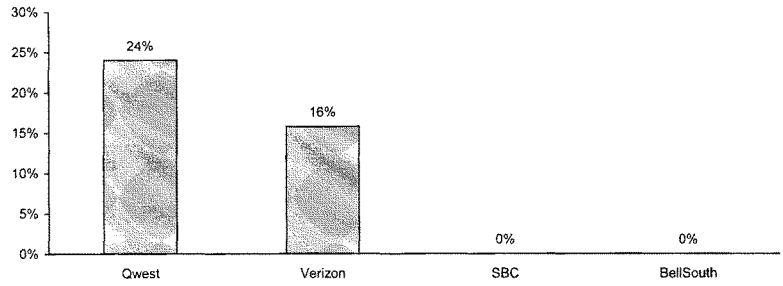
Verizon, SBC and BellSouth appear to be at least two to five years away from breaking into the top tier of enterprise communications service providers, while Qwest is well-positioned to join AT&T and WorldCom in the top tier within the next one to two years. The three RBOCs (Verizon, SBC and BellSouth) will struggle to meet the three criteria our interviewees set for "primary" status — a seamless global network, high network reliability and a broad array of services. Assuming the three RBOCs focus on the enterprise market as soon as they secure all of the in-region long-distance entry approvals, our interviewees perceive that it would take them another two to five years to be successful. Interestingly, this perception was independent of whether the three RBOCs entered through acquisition or built their enterprise businesses organically.

RBOC's Presence Based Mostly on Existing Regional Footprints

While all four RBOCs were identified as providers to about half of the companies in our sample, only Qwest and Verizon had any meaningful presence outside of their home regions. In fact, numerous respondents made a clear distinction between Qwest and the other three RBOCs, acknowledging Qwest's efforts to build its out-of-region presence over the past few years.

While most of Qwest mentions by our respondents came from companies headquartered outside its 14-state footprint (which has low corporate headquarter concentration), most of the mentions for the other RBOCs came from companies located within their respective footprint states (see Exhibit 12). In fact, Qwest and Verizon were much more likely than SBC and BellSouth to be a primary provider outside of their home state (see Exhibit 15). Importantly, the three "pure" RBOCs were likely to be providing enterprise customers only voice and very basic in-region local data services, neither of which were seen by customers as either complex or particularly value-added. Verizon was distinguished from the other companies by its wireless offering and Qwest was noted for its broader array of value-added data offerings, particularly Web hosting, IP and managed services.

Exhibit 15 **Percent of Out-of-Region Companies in Which RBOC Is a Primary Provider**



Source: Bernstein survey.

The Opportunity for Share Shift Exists...

An opportunity to shift market share certainly exists in the enterprise market. Low satisfaction levels with current providers were broadly communicated across practically all the providers in the space. We were told that providers "give you the big song and dance, get the contract and then they leave — you never hear from them again. They're paid for the sell-in, not the retention — there is no incentive." Although switching costs are high, we were told that "We're constantly switching and going through these painful installations."

...But Not for the RBOC Profile

Although many different decision criteria were mentioned, our surveyed CIOs and CTOs talked mostly about three key decision factors for choosing a primary communications services provider:

Global Network — the immediate and clear impediment to significant market share for the three RBOCs is the lack of a seamless global network. Practically all enterprise customers require services at a global level, as with all the CIOs/CTOs we interviewed. Although it is possible to buy network services on a regional basis, the bias was clearly to engaging a provider with a global network. A global network also allows customers to use various managed services on a global basis, a key factor for large multi-nationals.

We heard that "coverage is a big factor — you need to be global and they (the three RBOCs) are not" and that "you end up choosing on the basis of market share and international coverage, more than anything else." As for the option of the three RBOCs building out their own network — "that requires huge dollar investments — they may be the middlemen, the resellers for a long time out."

Qwest clearly stood apart from the other RBOCs with its robust IP network cited often (completely unaided).

Many of the interviewees were cognizant of the fact that in order to achieve a global footprint, any of the three RBOCs would have to acquire other operators. They showed concerns over such a merger considering the complex integration. One interviewee put the matter in perspective — "you talk about WorldCom having a lot to integrate — the RBOCs would have greater digestive pains."

Network Reliability — Perceptions of the RBOCs' ability to run their networks reliably were generally negative. Nearly all of our respondents who continue to count the RBOCs as suppliers had specific experiences to which they could point of unmet needs or network failures that were not remedied in a timely or satisfactory fashion. They pointed to the RBOCs' "monopolistic thinking" in local voice and data that often lead to what they perceived as unreasonable pricing practices and lack of responsiveness.

The choice of a primary provider is often influenced by what one of our interviewees referred to as "the 'never make a bad decision picking IBM' mentality at work — go with the safe, higher-profile solution, so you can never be second guessed by the CEO." Although in local voice and data this works in favor of the RBOCs, in the broader enterprise market this translates to strong entrenchment by AT&T and WorldCom.

On the positive side, we heard frequently that the RBOCs are seen to be financially strong, which is important in establishing reliability. Some of the CIOs/CTOs in our study had been burned with handing off small portions of their networks to poorly-capitalized CLECs in the late 1990s, only to have them go under and force the reintegration of the outsourced business. Today, they are reluctant to hand off any major pieces of their communications business to any carrier for which they question the longevity.

Service Breadth — Our survey indicates a significant divergence between Qwest and Verizon and the other RBOCs in the perceived ability of the former to deliver a more-or-less full suite of enterprise communications services. SBC and BellSouth are perceived as not currently participating in the highest-growth areas of communications services — network services, Web hosting and managed services (see Exhibit 12). Verizon did appear to be in the top tier of providers for network services and communications outsourcing, although all of the customers that named Verizon were headquartered within its footprint.

Our interviewees communicated the importance of a solid reputation for delivering technologically advanced services. As most indicated that they have not yet been approached by the RBOCs with nonvoice service offerings, they expect that the three RBOCs will need to deploy a significantly greater marketing and sales effort in the future to gain their confidence and consideration.

Our survey indicated that the RBOCs' potential enterprise customers perceive them as having a consumer-oriented strategy incongruent with selling large sophisticated enterprise services. The companies we interviewed were unlikely to go with a primary provider if it appears consumer-focused. One opportunity seen for the RBOCs, however, was their ability to leverage their DSL networks to sell IP-VPN remote access services. As one of the fastest-growing IP products, this could provide some degree of traction for the RBOCs outside the voice arena.

Qwest One to Three Years Ahead

With incomplete global networks, reliability concerns and a limited set of enterprise services, SBC, BellSouth, and to a large extent Verizon, have limited prospects of quickly penetrating the top tier of enterprise communications services providers. Our interviewees told us that the three RBOCs have "got to build a reputation, like Qwest — they will have a chance within five years, assuming a shakeout." Some were not quite as bleak — "RBOCs will lag unless they do an acquisition — it will take them two to three years to establish a global position."

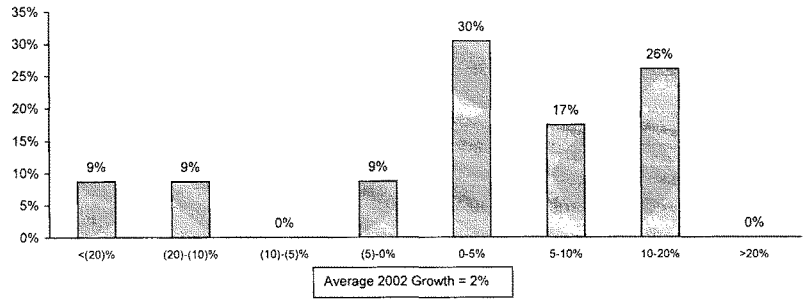
Given these criteria, Verizon is better positioned than SBC and BellSouth, although not as well as Qwest. Considering its stake in Genuity, Verizon will be able to benefit from a global network and a broad array of services before SBC and BellSouth.

IT Budgets — Now and in a Recovery

Key Findings

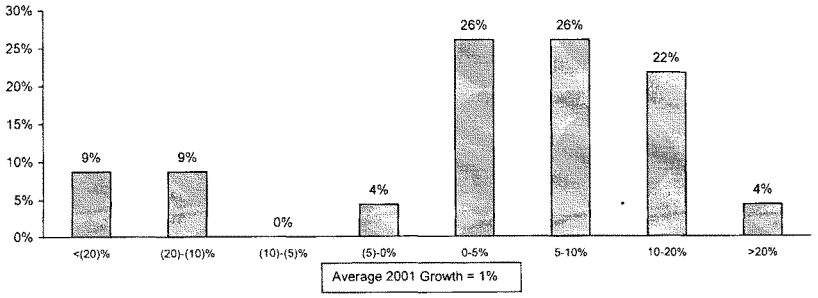
CIOs and CTOs report a wide range of expected growth rates for their 2002 IT budgets (see Exhibit 16), similar in breadth to the rates reported for 2001 spending (see Exhibit 17). This dispersion appears to be driven by differences in assumptions made about the economy, market consolidation and business cycle timing. Some of the companies also reported relative budget insensitivity to the economic environment, limiting the downside for IT suppliers. Larger companies were more likely to report an increase in 2002 spending over 2001.

Exhibit 16 Growth in 2002 IT Spending



Source: Bernstein survey.

Exhibit 17 Growth in 2001 IT Spending

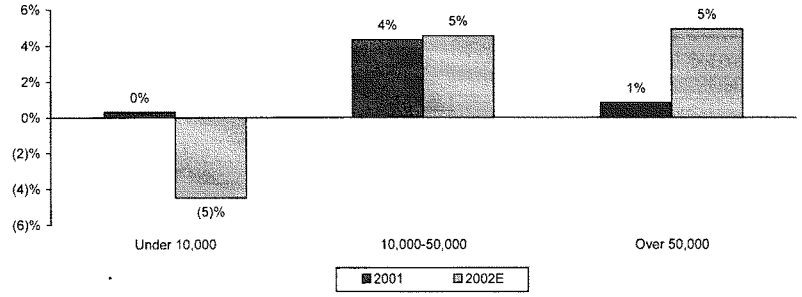


Source: Bernstein survey.

Flight-to-Quality Means Focusing on the High End

Within our sample, the smallest companies showed the greatest economic sensitivity of their IT budget, reporting essentially no budget growth from 2000 to 2001 and a significant contraction in their spending in 2002 versus 2001 (see Exhibit 18). Mid-size companies in our sample (remember, all still classify as *Fortune* 1000) actually reported the most stability in their budgets both in 2001 and looking forward into 2002. Finally, the largest companies interviewed reported having slowed their spending in 2001, to essentially hold it to low single-digit growth versus 2000, but are expecting to increase spending in the mid-single digits in 2002 versus 2001. The expected increase in spending by large companies plays into the hands of the incumbent providers to this market, AT&T and WorldCom, who are best positioned to enjoy the benefits of a cyclical recovery when these companies open their purse strings.

Exhibit 18 **Expectation of IT Budget Growth by Size (Number of Employees)**



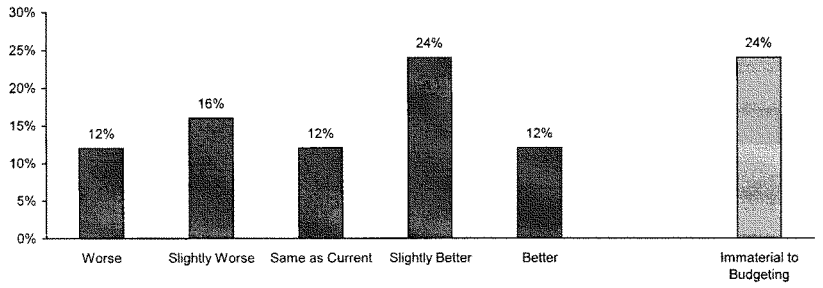
Source: Bernstein survey.

The spending patterns also remained the same within the sample from 2001 to 2002. Of the companies interviewed, only 12% switched from an increase in spend to a decrease in spend or vice versa. This is further sign of the polarization of IT spend between the haves and have-nots. Again, well-entrenched carriers such as AT&T and WorldCom will benefit as they grow with their large customers.

Differing Assumptions on Economic Prospects, as If They Even Matter

When asked about assumptions concerning 2002 economic conditions, the opinions were mixed as shown in Exhibit 19. Interviewees who indicated they expected the economy to do better, represent companies that will grow the IT budget by an average of 4% vs. 0% for companies that expect the economy to do worse. The sentiment within the largest group, which expects the economy to do slightly better, is for a flat first half and a pick-up in activity during the second half of the year, a view consistent with that espoused by most of the large-cap telecom carriers, as of the fourth quarter.

Exhibit 19 Budgeting Assumption About 2002 Economy



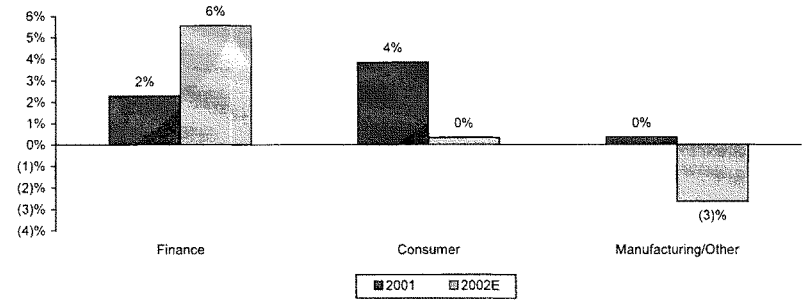
Source: Bernstein survey.

As a consequence of last year's budget constraints and subsequent layoffs, it is not surprising that most of the CIOs/CTOs did not see much room to reduce their budgets even if the environment worsened in the first half. In fact, 24% of interviewees reported that the state of the economy was immaterial to setting their 2002 IT budget. These technology leaders reported having corporate initiatives to which they are committed regardless of the state of the economy. We were told on several occasions that since many aspects of IT planning are done on a longer-term horizon with vendor commitments, there is not always the desired level of flexibility to adjust the budget for prevailing business conditions.

Early Cycle Pattern Favors Carriers with Financial Services Customers

A final driver of the dispersion in reported IT budget growth rates is economic sector, and leverage therein to economic cycles. While manufacturing companies in our sample reported an average of 3% contraction in IT budgets in the low point of an economic cycle (see Exhibit 20), financial services companies (especially the bulge bracket and super-regional banks) start investing in the trough in anticipation of an upturn, a boon for carriers supplying the financial services industry.

Exhibit 20 **Expectation of IT Budget Growth by Sector**



Source: Bernstein survey.

Communications Services Has the Lowest IT Beta

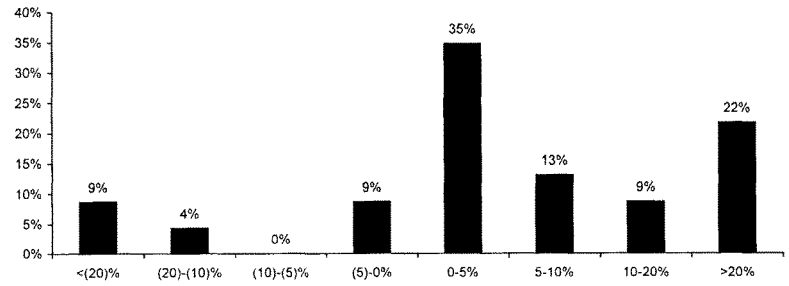
Key Findings

Communication services will grow slightly faster than overall IT spending, will be characterized by lower downside in a worsening environment and should enjoy almost as much upside as other IT categories in an economic recovery. These findings led us to dub communications services the lowest beta category of the IT budget. The lack of downside from here in the cycle indicates that we have likely reached the floor for most of the providers in the space. In conjunction with recent valuation trends, this realization led us to upgrade the group in mid-February from a portfolio underweight to a market-weight. The decline in the voice segment will mark the descent of Sprint from the top tier of providers, while the increased spending on IP services will mark the ascent of Qwest and the increasing presence of IBM in the communications category.

Winners Are Planning to Invest in Communications Services

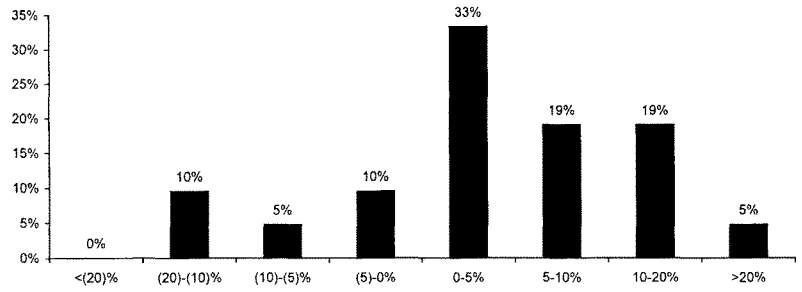
Communications services spending shows a similar pattern to overall IT spending, with a wide distribution of budget growth plans (see Exhibits 21 and 22) and generally higher growth in 2002 versus 2001. As a consequence, within the *Fortune* 1000, we expect communications services will grow slightly from 23% of overall IT spending in 2001 to an estimated 24% in 2002 (see Exhibit 23). The dispersion will actually widen in 2002 with the percent of outliers (companies changing their spending by 20% or more) increasing from 5% in 2001 to 31% in 2002. The average communications services expenditure will grow by 6%, compared with an average 3% in 2001. The existence of haves and have-nots will favor incumbent providers that will be able to grow by expanding the share-of-wallet of their large accounts.

Exhibit 21 Growth in 2002 Communications Services Expenditures



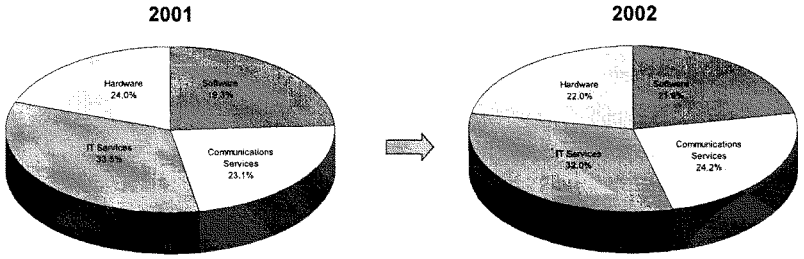
Source: Bernstein survey.

Exhibit 22 **Growth in 2001 Communications Services Expenditures**



Source: Bernstein survey.

Exhibit 23 **Change in Communications Services Share of IT Spending**



	Hardware	Communications Services	IT Services	Software
2000	24.1%	23.4%	33.8%	18.7%
2001	24.0	23.1	33.5	19.3
2002	22.0	24.2	32.0	21.9

Source: Bernstein survey.

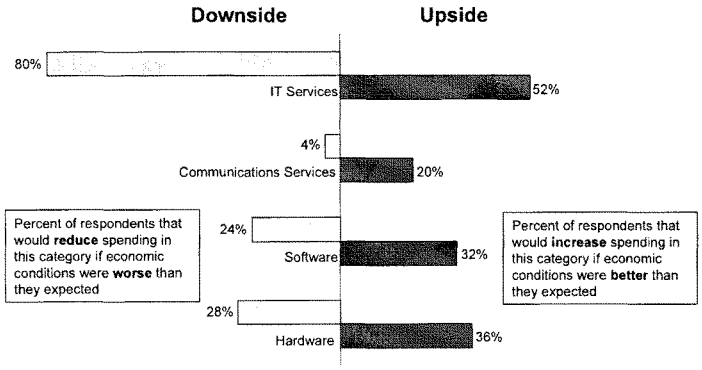
To put these shares in context, the 2002 budget for communications services, among those willing to supply a figure, ranged from just under $1 million for the smallest companies in our survey to $750 million for an international financial services conglomerate. And though we could not get a specific breakdown, of recurring and nonrecurring — a significant portion of the $750 million outlier's budget was attributable to its rebuilding efforts following September 11 — the company reported upwards of $100 million in annual recurring communication services spending. More generally, communications services budget size had far more to do with the nature of the business than with the overall size of the operation. Some of the largest companies in our sample spend comparatively little on communications

services (such as a large electronics distributor and a leading e-commerce development company) versus, for example, a home building entity that was spending twice other companies its size in our sample.

Almost No Downside from Here for Providers

Our interview respondents see communications services spending as less flexible than other IT spend categories (see Exhibit 24). Most of their communications services spending is on operating current business functions, not building out new ones. A company is unlikely to stop its phone service or deny remote users Internet access. It can, however, take longer to replace its servers and routers and push out large CRM implementations. The lack of downside risk from current levels means the carriers are not at risk of having their key market disappear in a continued downturn, and the losses experienced to date have limited further downside.

Exhibit 24 Percent of Companies That Would Increase Spending in a Recovery (Decrease Spending in a Downturn)



Source: Bernstein survey.

Of course, communications services spending is not entirely inflexible. Some interviewees reported they renegotiated their services contract prices in order to cut this expense category. Others pointed out that as their workforce shrank, the volume of communications services went down.

IT Services Take the Brunt of the Economic Hit

The category that would be most effected in a further economic downturn is IT services. The items that would get cut are consultants and staff, both of which fall into this category. This would effect companies such as Accenture and KPMG, but not IT outsourcers such as IBM and EDS. The rigidity of IT outsourcing spending is similar to the rigidity of communications services spending — IT outsourcing expenditure is for operations, not build-out (Exhibit 14).

Some Upside to Come with a Potential Early Recovery

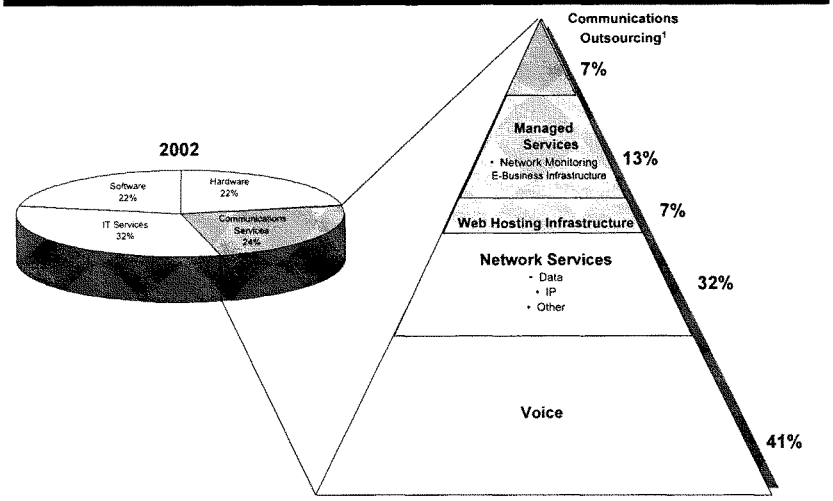
On the upside, although not as many of the interviewees appeared willing to rapidly ramp spending on communications services in an upturn as on software and hardware, many of the IT executives indicated uses for a larger communications services budget. Mentioned as likely splurges were network upgrades and end-user demand-driven items such as IP-VPN remote access and Blackberry-type devices. This growth was seen as frosting on the cake of previously expected spending on new networks, and capacity expansion on existing networks driven by number of users and increased volume.

The relative inflexibility of communications services spending has important implications on the providers, in that it clearly limits their downside in a worsening economy, but somewhat dampens their potential upside in a recovery.

Despite Data Growth, Spending Remains Voice-Heavy

For most of our respondents, the communications expense "pyramid" remains bottom heavy with voice (including wireless) comprising an average of 41% of our respondents' communications services budgets (see Exhibit 25). Many indicated that they anticipate rapid declines in the coming years as a result of pricing pressure and the migration of voice onto shared pipes with data traffic (the result of anticipated shifts to IP). The relative decline in spending on voice products was likened by several respondents to Sprint's Achilles' heel.

Exhibit 25 **Breakdown of Communications Services Expenditures**



1 Excluding professional services such as ASP or Web design.

Source: Bernstein survey and Bernstein research.

Spend Will Be Shifting Rapidly to Non-Voice Services

Spending on network services (including data and IP) is rapidly approaching that of voice. The respondents in our sample clearly identified that the combination of network services, Web hosting infrastructure and managed services now accounts for the majority of their communications dollars, a shift from the ratio only a few years ago. Though clearly not a statistical sample, the average split across the five communication services categories was 41% voice, 32% network services, 7% Web hosting infrastructure, 13% managed services and 7% other communications outsourcing. Although it may be considered a managed service, we included VPN in network services, and conversely excluded Web hosting from IP network services. We defined managed services for our interviewees to the exclusion of the other categories, using as examples network monitoring, e-business infrastructure and data security.

The shift away from voice services is being driven largely by new product introductions in IP, Web hosting and managed services, as well as increased connectivity needs for basic data services like ATM and frame relay. New products such as voice over IP and the increased use of existing products such as IP-VPN were mentioned as likely contributors in the network services category. Connectivity needs are expected to increase with the addition of new network elements and new users.

About a third of our interviewees said that their companies do not use an external Web host, confirming the opportunity for growth in the Web hosting market as penetration increases. We expect Web outsourcing to increase due to the economies of redundancy, increased complexity and vari-

able demand. A good portion of the companies that do not use an external Web host today are planning to outsource their hosting in the future. The early leaders in this segment — WorldCom, Qwest and IBM — are expected to reap the benefit of this trend.

The overlap between IT services and communications services is evident from the conflicting views our interviewees held on which category to classify Web hosting. The divergence of opinions underscored our belief that Web hosting and managed services will be a battleground between the traditional hardware players like IBM, that have developed a presence in the Web infrastructure business, and the traditional carriers like AT&T, WorldCom and Qwest.

Outsourcing: A Low-Margin, Relatively Low-Penetration Business

Communications outsourcing was only used by a quarter of the CIOs/CTOs with whom we spoke. We defined communications outsourcing as the use of a service provider for the design and/or management of communication resources. We were careful, however, to distinguish between pure managed services and the professional services nature of outsourcing. For companies that currently used outsourcing services, these services accounted for 15-20% of their total communication services expenses. We expect the number of companies using outsourcing services to increase (for reasons similar to those we expect will drive outsourced Web hosting — economies of scale, complexity and flexibility). In addition, a further move to consolidate suppliers (either for simplicity or as part of the flight to quality) will also increase the trend toward outsourcing, as the suppliers will have greater control over the management of the client's network.

AT&T Solutions, EDS, and a few other consultancies are the current leaders in communication services outsourcing, a concentration we expect to persist for at least the next few years, but one that eventually will become diluted as the RBOCs gain traction within the *Fortune* 1000 and develop the expertise and sales coverage to sell a solutions-like service.

Teaching an Old Network New IP Tricks

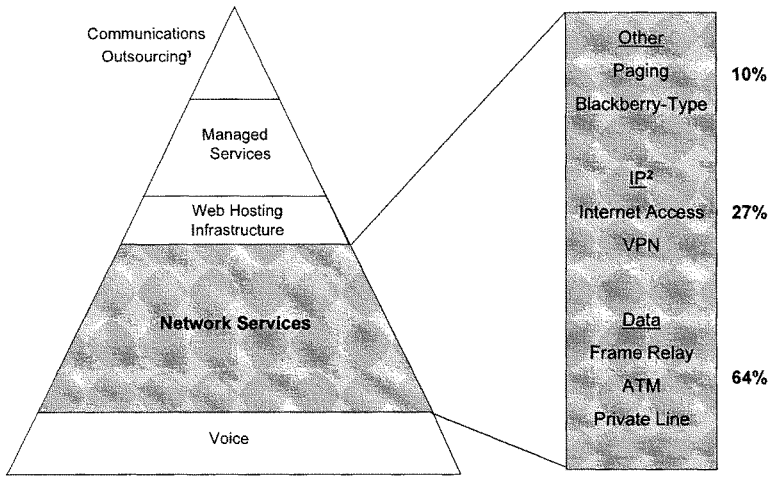
Key Findings

Our survey confirmed that over the next one to two years network services spending will move away from traditional data services toward IP-based solutions. This shift will occur mostly in 2003, but could accelerate if the economy recovers substantially in the second and third quarters of 2002. The use of IP-VPN services will benefit the leaders in corporate IP services — WorldCom, AT&T and Qwest — although our interviewees saw this market as wide open.

Traditional Services Still Account for the Lion's Share of Spending

Traditional data services currently account for about two-thirds of our respondents' network services spending (20% of communications services spending), while IP services account for 27% and other (mostly paging and Blackberry-type devices) for the remaining 10% (see Exhibit 26).

Exhibit 26 Breakdown of Network Services Spend



1 Excluding professional services such as ASP or Web design.
2 Excluding Web hosting.

Source: Bernstein survey.

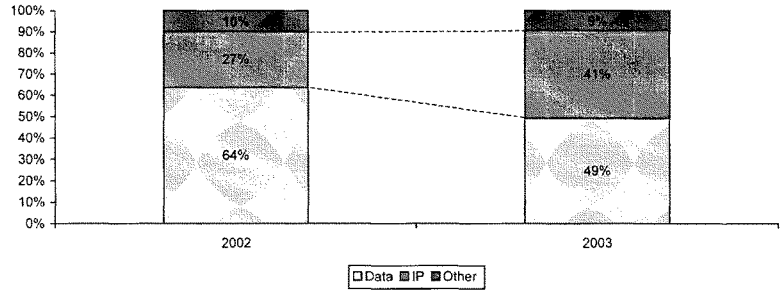
With a few exceptions, the majority of traditional data spending in 2002 will be behind frame relay, although a few of the companies in our sample indicated that private-line services are currently the most critical to their data transmission strategy. While some might be looking to ATM service for the future, few respondents indicated a meaningful role for ATM at this time, confirming our own recent management conversation at WorldCom.

The Switch to IP-Based Services Is Inevitable and Rapid

The widespread sentiment in our sample was that IP services such as IP-VPN and voice-over-IP would help to decrease costs, increase presence and, potentially, improve network reliability. IP-based products are considered easier to manage and open possibilities for new applications. Some companies report seeing significant end-user pull for IP-VPN remote access products. We heard a general sentiment that the shift from frame relay to IP would occur over the next several years, with the expected time span ranging from one to five years to complete the transition.

The replacement of traditional data services (frame relay, ATM and private line) with IP was a foregone conclusion for most of our respondents. IP services are expected to increase from about a quarter of network services spending in 2002 to about 40% in 2003, almost entirely at the expense of traditional data services (see Exhibit 27). Our only caveat to this dramatic result is that only about a third of our interviewees were willing to discuss their specific 2003 IP spending with us, which likely skewed the result upwards. A company that has specific 2003 IP targets is more likely to have already made a significant strategic shift in this direction.

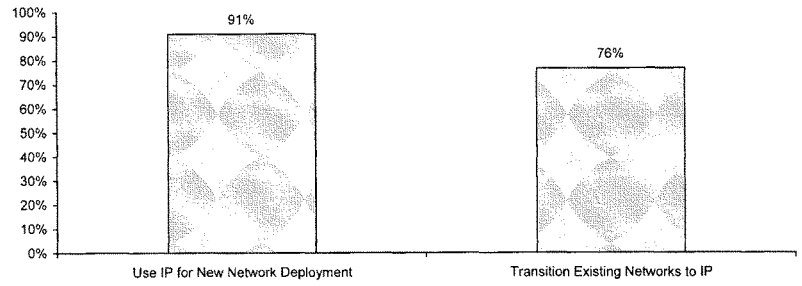
Exhibit 27 Network Services Budget



Source: Bernstein survey.

The shift to IP services will come from both the use of IP for new networks and network elements as well as from the replacement of existing networks (see Exhibit 28). Not only did over 90% of our respondents say they would deploy IP for their new networks, but also three-quarters plan to convert some of their existing networks to IP.

Exhibit 28 **Transition from Traditional Data to IP-Based Networks**



Source: Bernstein survey.

Despite the Low Volatility in Overall Communications Spending, IP Suffers in a Weak Economy

The acceleration of the shift to IP products will be very sensitive to the economy. Over half of our respondents stated that they would accelerate their current conversion plans to IP when the economy reaches a level of steady growth. As their businesses (and budgets) expand, most CIOs/CTOs intend to deploy new IP networks.

The main concern we heard relating to the use of IP-VPN was security. Some of our interviewees felt their data were more secure with private line solutions or, to a lesser extent, frame relay. As IP encryption, encoding and tunneling technologies evolve and gain respectability, these concerns will weigh less on the purchasing decision. As long as these concerns exist, however, the larger, stable carriers will be in the position of having to reassure customers hesitant to make the move to IP.

These results support recent statements by AT&T's senior management that IP is rapidly becoming the dominant data protocol and would soon become a primary transport medium for voice traffic. Once the network management software improves, more customers will rely on carriers with a complete suite of IP services to move all of their traffic over integrated networks.

Although for some, the steady shift to IP widens the pool of potential providers in the network services purchase decision, most of our interviewees acknowledged that they are more likely to purchase these services from the same major communications providers they consider their primary suppliers today. Most of our respondents recognized that, in the end, the same vendors from whom they are buying their services today — WorldCom, AT&T, Sprint, Qwest — will be carrying most of their traffic for the next two to five years.

Appendix – Methodology

The analysis presented here is based on feedback from a series of 45-60 minute in-depth interviews conducted among *Fortune* 1000 communications services purchasing decision makers whose corporate home office is located in the United States. The interviews were conducted on our behalf by Greenfield Consulting Group, a professional market research firm with whom we have undertaken other successful primary market research projects.

By design, our respondents had to be their company's primary communications decision-maker. While not all respondents were CIOs and CTOs, all were ultimately responsible for the selection process of communications service providers for their respective companies. The titles of our respondents included CTO, CIO, Senior VP, VP of Communications, etc. They are all responsible for overall communications spending and ideally the entire IT budget. As part of their responsibilities they evaluate communication service providers and make final selection decisions.

During the interviews, respondents were asked to access a Web site containing visuals to help stimulate the conversation. Many of these visuals provide the basis for the exhibits found in this report.

Our focus on larger companies, reflected by 60% of interviewees coming from companies with more than 10,000 employees, stemmed from the top-heavy nature of overall IT spending.

Industries represented within our sample were financial services, media, technology, healthcare, retailing and manufacturing. We excluded government agencies and educational institutions. The sample was slightly overweight on financial services, a factor that provided good insights into an early cyclical sector.

The overall risk to results presented as quantitative is the relatively small sample size (25 companies) from which we draw our conclusions and the overall qualitative nature of our survey. The in-depth interview format seeks to develop insight and direction rather than offer quantitatively projectable measures.

BERNSTEIN RESEARCH

A Tough Nut to Crack II: Oligopoly Returns to the Enterprise Telecom Market

Findings of the Bernstein 2003 Enterprise Telecom Decision-Maker Study

Enterprise buyers are consolidating their business with fewer carriers, thereby building leverage while simplifying service-provider relationship management — resulting in enterprise telecom services being centered in the hands of AT&T, MCI and Sprint

The mantle of "up-and-comer" appears to have decisively shifted from Qwest to Sprint over the past year, with Qwest now seen as in retreat

AT&T and Sprint appear to be gaining share of incremental business, while MCI has done an impressive job of maintaining the incumbent position with large accounts where it already had a primary provider relationship

The RBOCs showed remarkably little progress improving their relative positions in the enterprise market over the past year, despite the financial troubles of MCI and Qwest; corporate buyers consistently noted their expectation that acquisition rather than organic development would be the RBOCs' path to entry

Network technological advantage is perceived to be transient, suggesting that differentiation is better achieved through superior network reach, salesmanship and service delivery

The outlook for 2003 IT budgets is flat versus 2002, with 2004 expected to show a 3-4% rebound; within that context, most of the telecom buyers in our study expect their future communications spending to either stay flat or increase modestly as a portion of total IT budget

MAY 2003

SEE THE LAST TWO PAGES OF THIS REPORT FOR ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES

Portfolio Manager's Summary

With the telecommunications services industry expected to deliver little more than 3% growth over the next five years, without improvements in pricing or consolidation, the focus — both the carriers' and investors' — will increasingly be on segments of the market capable of delivering the highest growth. Thus, the spotlight will be on the large enterprise market, which is expected to grow 80% faster than the overall telecom services industry from 2003 to 2008. That superior performance will be driven by 30%+ volume growth in enterprise data services and high-single-digit revenue growth in wireless services, partially offset by continued low-double-digit price erosion in data and by negative price and volume growth in voice services.

Benefiting from the enterprise market's strong growth characteristics will be the three incumbent players: AT&T, MCI and Sprint. And lest the bears challenge this assertion, we point to the findings of our second Enterprise Telecom Decision-Maker Study, encompassing more than 30 hours of interviews with the top decision makers at *Fortune* 1000 companies — the results of which are discussed herein.

A clear finding of the study was that oligopolies still exist in the highly competitive telecom services industry. The hegemony of AT&T and MCI, about which we first wrote in a similar study last year not only remains, but has been reinforced in the past 12 months. Where last year we found that Qwest was poised to become a thorn in the sides of the incumbents, this year we learned that Qwest has disappeared from the enterprise services map. Where last year we heard that Sprint was floundering and losing share to Qwest, this year we learned that Sprint has regained its footing and has even been able — with the help of global partnering arrangements — to sit at the table with AT&T and MCI and bid on some global contracts.

And where last year we heard that the largest RBOCs were 2-3 years away from being players in the enterprise market, this year we heard...exactly the same projection. In fact, with the exception of apparently having satisfied potential customers that they understand the basics of telecom technology, the RBOCs appear to be precisely as far away from penetrating this last bastion of telecom growth as they were a year ago, despite WorldCom's bankruptcy and Qwest's well-publicized financial problems.

So what will be the drivers of share in the enterprise market? Not technology. We heard loud and clear that enterprise buyers see technological advantage as transient. Instead, the edge will go to the carrier demonstrating top network reliability, high-quality salesmanship, on-time project/service delivery, ease of relationship management and competitive pricing. Today, AT&T scores well on about half of these criteria, while MCI tends to win kudos for the other half. No carrier was universally loved, and none reviled, leaving the enterprise market as AT&T's to lose. We believe that, with an attitude adjustment, AT&T can keep its hold, a key reason why we rate the stock outperform, amid a market-weight recommendation for the U.S. telecom group.

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May 21, 2003

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Exhibit 1 Financial Overview

	BellSouth	Verizon	SBC	AT&T	Qwest
Price as of May 16, 2003 ($)	$26.78	$37.10	$24.76	$17.44	$4.45
52-Week Range ($)	18-34	26-45	19-36	13-29	1-6
YTD Relative Performance	(4.1)%	(11.9)%	(16.3)%	(40.8)%	(18.6)%
Target Price[1]	$25	$40	$30	$25	$6
Stock Rating	M	M	O	O	M
Revenues ($ million)					
2002	$28,497	$67,002	$51,755	$37,828	$16,571
2003E	28,206	68,381	50,800	34,932	14,658
2004E	29,287	71,058	51,655	32,684	14,753
Five-Year CAGR (2003E-08E)	2.2%	3.8%	2.5%	(4.3)%	(0.6)%
EBITDA ($ million)					
2002	$12,488	$29,253	$20,881	$10,687	$5,059
Margin	43.8%	43.7%	40.3%	28.3%	30.5%
2003E	$11,976	$28,593	$18,115	$8,195	$4,116
Margin	42.5%	41.8%	35.7%	23.5%	28.1%
2004E	$12,113	$29,165	$17,807	$7,316	$4,767
Margin	41.4%	41.0%	34.5%	22.4%	32.3%
Five-Year CAGR (2003E-08E)	(1.0)	1.0	(0.2)	(10.4)	4.6
EPS ($)					
2002	$2.09	$3.05	$2.24	$1.26	$(0.40)
2003E	1.97	2.73	1.58	1.80	(0.27)
2004E	2.10	2.76	1.64	1.30	(0.14)
2002-03E Pct Chng.	(5.7)%	(10.5)%	(29.5)%	42.9%	na
2003E-04E Pct Chng.	6.6	1.1	3.8	(27.8)	na
2003E Consensus	$1.96	$2.73	$1.61	$2.02	(0.30)
2004E Consensus	1.96	2.74	1.61	1.54	(0.22)
Mkt Cap. ($ million)	$49,463	$102,025	$82,253	$13,708	$7,543
2003E Net Debt ($ million)	11,710	41,641	14,108	14,160	20,352
EV ($ million)	61,173	143,666	96,361	27,868	27,895
2003E EV/EBITDA	5.1x	5.0x	5.3x	3.4x	6.8x
2004E EV/EBITDA	5.1	4.9	5.4	3.8	5.9
2003E P/E	13.6	13.6	15.7	9.7	na
2004E Price/Fwd Earnings	12.8	13.4	15.1	13.4	na

1 DCF based.

Source: Corporate reports and Bernstein estimates and analysis.

Significant Research Conclusions

Prove to me that you want my business. Telecom services is about S-E-R-V-I-C-E. Who knew?

— *Fortune* 50 VP of Telecom Services

Our Second Decision-Maker Study

During March and April of 2003, we conducted the second Bernstein Enterprise Telecom Decision-Maker Study, which entailed a series of 29 one-on-one interviews, each lasting 60-90 minutes, with predominantly *Fortune* 500 senior telecom purchasing decision-makers. The key findings from the study can be summarized into four conclusions.

First, the enterprise communications services market remains an oligopoly, with the top three providers maintaining a strong lead over the longer-term entrants, the RBOCs. Second, the logical entry strategy for the Regional Bells is through an acquisition of an incumbent rather than organic development of relationships and product capabilities.

Third, technological advantage is seen as transient, requiring competitors to differentiate themselves on network reach and reliability, sales and product delivery, something each has attempted with only mixed results. And fourth, though suffering through stagnant to declining IT spending levels in 2003, enterprise telecom buyers expect a modest rebound to low-single-digit spending growth in 2004, with most seeing communications services either retaining or increasing its slice of the IT pie.

The findings of our study suggest that, at least for the next several years, the lead in the market is AT&T's to lose. Nevertheless, to insure its long-term leadership, the company has a long way to go toward improving the ease with which customers interact with it and the competitiveness of its pricing.

Why Care About Enterprise Telecom?

We have conducted two major research studies, published two black books and devoted so much effort over the past two years to understanding the enterprise telecom market because of its size and superior growth compared to the overall telecom industry. Specifically, enterprise services is an estimated $90 billion market and represents about one-third of total telecom industry spending. In addition, the expected five-year growth rate for the enterprise market — at 4.7% — is nearly 80% faster than the overall telecom market's 2.6% (see Exhibit 2). Driving the outsized growth in enterprise spending is the market's significant leverage to wireline data and increasing demand for wireless data services.

Buyer Consolidation of Purchasing Reinforces Supplier Oligopoly

While competition is intensifying in most areas of the telecom industry, the enterprise market appears to be maintaining its oligopoly structure with surprising tenacity. This year's interviewees highlighted the fact that only AT&T, MCI and Sprint have any real credibility as either primary or secondary communications services providers (see Exhibit 3). In addition, for more than half of our participants whose communications needs can be classified as global, only AT&T and MCI are seen as capable of providing seamless worldwide connectivity.

Exhibit 2 Contribution of Enterprise Telecom Spending to Overall Telecom Industry Growth ($ billion)

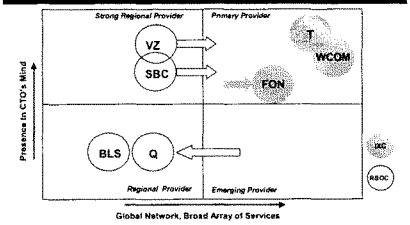
	2003E		2008E		CAGR 2003E-08E		Contribution to Growth	
	Total Industry	*Fortune* 1000	Total Industry	*Fortune* 1000	Total Industry	*Fortune* 1000	Total Industry	*Fortune* 1000
Local Voice	$81.7	$23.3	$77.5	$24.1	(1.1)%	0.7%	(0.3)%	0.2%
Long-Distance Voice	40.0	13.5	18.8	6.6	(14.0)	(13.3)	(1.4)	(1.4)
Subtotal Voice	$121.7	$36.8	$96.3	$30.7	(4.6)%	(3.6)%	(1.7)%	(1.2)%
Local Data	$33.8	$23.5	$48.2	$31.2	7.4%	5.8%	0.9%	1.5%
Long-Distance Data	33.8	24.7	49.8	37.4	8.1	8.6	1.1	2.5
Subtotal Data	$67.6	$48.3	$98.0	$68.6	7.7%	7.3%	2.0%	4.0%
Wireless	$98.9	$6.8	$133.6	$16.0	6.2%	18.7%	2.3%	1.8%
Total Industry	$288.2	$91.8	$328.0	$115.3	2.6%	4.7%	2.6%	4.7%

Source: Bernstein analysis.

Sprint appears to have executed a sound reversal in its share slide as described in last year's study (see Exhibit 4). Driving that change has been Qwest's apparent withdrawal from the large corporate market. While our study last year suggested that Qwest was within a year of being a credible threat to the incumbents (largely at the expense of Sprint), its emergence stalled as its financial condition worsened, and today, the perception among corporate buyers is that the company is in retreat.

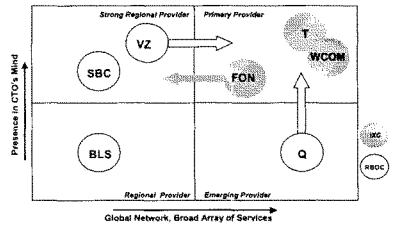
As for the RBOCs, we were surprised to hear that they have made almost no progress in cracking into the high-end corporate market over the past year, despite the opportunity presented by the financial unraveling of WorldCom and Qwest. While the RBOCs have elevated buyers' perception of their technological competency, those same buyers view the Regional Bells as unable to execute out of their own regions on anything other than cobbled-together networks.

Exhibit 3 Perceived Market Structure: 2003



Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

Exhibit 4 Perceived Market Structure: 2002



Source: Bernstein 2002 Enterprise Telecom Decision-Maker Study.

Acquisition Broadly Viewed as the Logical RBOC Entry Strategy

We have held that the most likely driver of wireline consolidation in telecommunications services would be the RBOCs' desire to enter the enterprise market — a market sufficiently difficult to enter that we have now titled two black books on the subject *"A Tough Nut to Crack..."* (our first one was published in March 2002). Our study's respondents this year echoed this view loudly, highlighting that, even though the RBOCs have done much to gain technological credibility, they remain largely invisible in the bidding process as suppliers of anything other than regional services. In

addition, those same buyers note their own reticence to award contracts to carriers unable to carry the majority of traffic on their own networks, citing the propensity for finger pointing between carriers when problems arise.

As a result, when asked for their expectations about how the RBOCs would enter the broader enterprise services market, most of our study's participants suggested acquisition over organic development. And while the potential buyers and sellers in any M&A dance are easily identifiable, assigning probability to the various possible combinations is far more difficult.

Looking at the logical buyers — Verizon, SBC and BellSouth — it is possible to at least identify the possible barriers to consolidation. For example, Verizon's Chairman and CEO Ivan Seidenberg has been vocal about his intention to build the company's enterprise presence organically, suggesting that either Mr. Seidenberg doesn't want to tip his hand about potential future plays, or that Verizon is the least likely RBOC to lead the next wave of wireline consolidation. We would posit that the latter is the more likely case, and support this view by pointing to the company's limited financial flexibility due to its higher debt load.

Similarly, in our recent management meetings with SBC, it was clear from CFO Randall Stephenson's comments that he has little appetite for a merger with a traditional interexchange carrier at current prices. Thus, we would rank SBC second on the list of M&A instigators, leaving BellSouth at the top of the list, a position it deserves given its historical appetite to pursue such deals (Sprint in 1999).

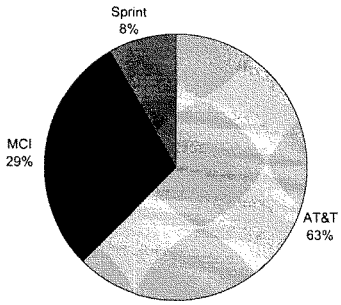
On the target side, ranking is more difficult. AT&T strikes us — particularly after completing this study — as the premier enterprise market supplier. However, for an RBOC to buy AT&T, we believe the company would need to proactively, or as a concession to secure regulatory support, divest AT&T Consumer Services. Such a divestiture would most likely take the form of a spinoff of the Consumer Services business as a special dividend to shareholders (not as a tracking stock).

MCI poses a host of different issues centering around its questionable financials and cobbled-together network infrastructure. Sprint strikes us as a mediocre merger partner given its subscale enterprise business and undifferentiated wireless franchise. Adding complexity to an RBOC-Sprint merger are the incompatible wireless network technologies between PCS and Cingular. Thus, a combination of Sprint with either SBC or BellSouth would necessitate either dissolution of the Cingular joint venture or divestiture of Sprint PCS.

When the Primary Provider Defends, Watch Out!

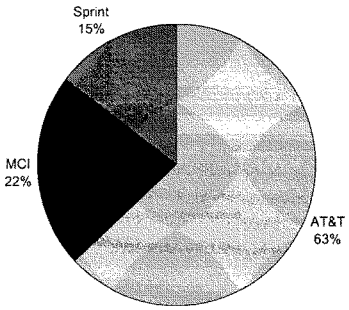
One axiom communicated by nearly every respondent in one form or another was that the legacy dominant providers to large corporate accounts deliver service well above that of the second- and third-tier providers. This description came through clearly no matter which carrier was the primary and which was the secondary on the account. Equally important was the related finding that secondary providers give second-tier service. Among our study participants, AT&T was the clear leader in both voice and data services, being named as the primary provider by a surprising 60%+ of our respondents and as secondary for another 30-ish percent (see Exhibits 5 and Exhibit 6).

Exhibit 5 Named Primary Voice Provider



Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

Exhibit 6 Named Primary Data Provider



Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

Stop Looking for MCI to Disappear

MCI is broadly expected by enterprise telecom buyers to emerge from bankruptcy protection a stronger, leaner and more rational competitor. This belief contrasts with the consensus view on Wall Street (and one with which we disagree) that, with a lower debt load to support (company filings suggest $3-$4 billion), MCI will be less rational and will intensify the price deflation in the industry in an effort to regain lost share.

Our thesis remains — supported by the findings of the study and recent company filings with the court — that MCI will emerge from bankruptcy this fall, and that it will strive to rebuild its tarnished reputation (something not often aided by pricing irrationally) and will focus its attention on the accounts with which it is already the dominant provider to solidify its position. Longer term, we would expect MCI to win back much of the share lost to Sprint as a secondary provider, and even some of the share lost to AT&T as a primary provider.

Technological Advantage Is Transient

Technological advantage is perceived to be transient by corporate buyers of telecom services, with differentiation only occurring through network reach, salesmanship and service delivery. As shown in Exhibit 7, AT&T scores well on general presence and the quality of its network, but gets mixed results with respect to its sales force (particularly relative to its flexibility and price competitiveness) and service.

Related to our comment above on primary versus secondary supplier service, customers for whom AT&T is the primary supplier rated the company significantly more favorably on service than those for whom AT&T is the secondary provider. The same dynamic was also true of MCI, though the overall perception was less favorable (likely in part a result of the dominance of AT&T as a primary supplier within our sample).

Exhibit 7 Carrier Summary of Key Evaluation Metrics

	AT&T	MCI	Sprint	RBOCs
General Presence and Strength	◎	◎	○	◒
Network	◍	◍	○	◒
Sales	◒	◎	○	◒
Service	◎	○	○	◒

Legend

◍ ◎ ○ ◒ ●

Best ← → Worst

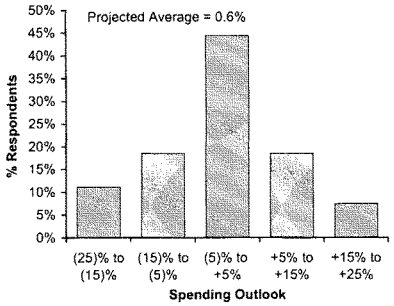
Mixed Review

Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

IT Spending Is Likely to Remain Weak for the Foreseeable Future

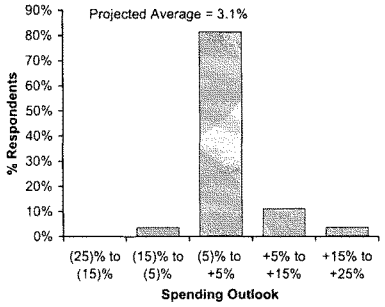
Though the outlook relative to the late 1990s is still modestly dour, we were heartened by the expectation among respondents that 2004 would see modest increases in IT spending versus 2003 (see Exhibit 8 and Exhibit 9).

Exhibit 8 IT Spending Outlook for 2003



Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

Exhibit 9 IT Spending Outlook for 2004



Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

Risks

At the highest level, there are two risks to our investment thesis on the enterprise space: (1) the timing and magnitude of a cyclical recovery in IT spending and (2) MCI's behavior following its emergence from bankruptcy court protection this fall.

Relative to the former, we believe we have been conservative in the degree to which we embed a recovery into our industry and company financial forecasts. We currently assume that on the local side, business lines will rebound to a growth rate equal to one times real GDP growth of 3% (versus a five-year history of 1.5-2.0x). Furthermore, we assume ongoing double-digit price declines on all long-distance services, with mid-single-digit volume decay in long-distance voice services due to technology substitution from IP, email and wireless. We assume no material impact of an economic

recovery on long-distance voice services. In fact, the only area we give the carriers the benefit of the doubt in an economic recovery is on the volume side of data services. Specifically, in long-lines data, we assume volumes rise from their mid-20% growth in 2002 to low-30% for 2003 and 2004. For reference, volume growth in long-lines data was nearly 50% in 2001, a year noted for its back-half downturn.

As for MCI's anticipated behavior, we can point investors to four facts that support our thesis that the company's pricing behavior is more likely to be rational than irrational following its emergence from bankruptcy. First, in MCI Chairman and CEO Michael Cappellas' own statement in April, he acknowledged the company's price aggressiveness in bankruptcy, but noted his own expectation that the direction for pricing from here was toward relative stability. Second, MCI's own filings to the court show (10)-(30)% annualized top-line declines, suggesting that being a price aggressor has done little to stabilize the company's share loss. Third, also from the filings, one can see that MCI's operating margins (margins before servicing debt obligations) remain 1,000 basis points below those of AT&T, the closest comparable company. And, finally, with expenditures for maintenance and expansion running at 1-5% of revenues, MCI has been significantly underspending the normal level of 10-12% for a company with its network profile. All of these facts, taken together, support our belief that MCI will emerge from court protection a more rational competitor, not less.

Investment Conclusion

Our 2003 Enterprise Telecom Services Decision-Maker Study presents a mixed bag of findings relative to our existing investment theses for AT&T, Verizon, SBC, BellSouth and Qwest. On the points of consistency, we have never given the Regional Bells much credit for rapid penetration gains in the large corporate services market and that predisposition was strongly reinforced by the findings of our study. In addition, we have assumed that Qwest's traction had slipped as its focus shifted away from enterprise towards shoring up its balance sheet. However, of modest concern is the consensus that Qwest is actually losing ground and not simply failing to gain incremental share. Thus, relative to the Bells, we remain comfortable with our market-perform ratings on Verizon, BellSouth and Qwest and our outperform rating on SBC.

Relative to AT&T, we were a bit sobered by the degree to which the company's inflexibility (in many respects), "sense of entitlement" and difficulty with which to do business continue to be described in the present tense. However, with the RBOCs still 2-3 years away from being seen as credible threats and AT&T's having solidified its dominant market position over the past year, the findings are insufficient to justify either a reduction in our numbers or a ratings downgrade of this undervalued company.

A Note About Methodology

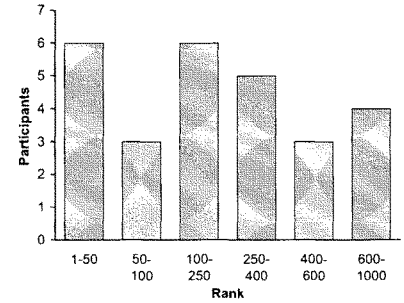
In March and April, 2003, we undertook the second in a series of our annual market research studies on the telecommunications spending patterns of large enterprises. A survey was undertaken using a Web-enabled telephone interview format — an approach that, while not providing statistically projectable results, gives a far better perspective on the decision-making process than quantitative surveys do.

The respondents for this year's study were carefully screened to meet a number of important criteria. First, each had to be the primary decision-maker for communications carrier and service selection at his or her company regardless of title. Second, the survey recruiter was charged with delivering participants from a diversity of industry segments. Third, the participant's corporation had to be listed in the *Fortune* 1000, and at least 75% of our participants had to be from the *Fortune* 500 (our final tally was 23 out of 27, or 85%).

Each 60-90 minute interview was conducted by telephone with simultaneous access to a Web interface, providing Bernstein-developed graphics to aid the discussion. All of the interviews were conducted by a trained moderator leveraging a set of questions and objectives developed by Sanford Bernstein's U.S. Telecom Services Research Team. In the end, 29 interviews were conducted, with 27 retained and two discarded for poor quality.

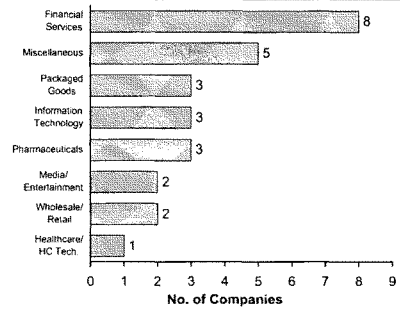
Of the fully completed interviews, 14 of the companies had truly global telecom needs, another four were primarily national in scope but with international divisions, while most of the remainder could be described as North American-focused (including the United States, Canada and Mexico). Exhibits 10 and 11 show the distribution of participant companies by rank in the *Fortune* 1000 and by broad industry segment, respectively.

Exhibit 10 Participants by *Fortune* 1000 Rank



Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

Exhibit 11 Participants by Industry



Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

Dimensioning the Market: Price x Volume = Revenues

Summary

In 2002, the total domestic telecom market was approximately $285 billion in size (see Exhibit 12) — with the *Fortune* 1000 segment accounting for over 31% (close to $90 billion) and expected to increase steadily as a percentage of the total. This share gain will be driven by the outsized growth of the enterprise market relative to the industry. Specifically, where we expect the telecom services industry to deliver less than 3% average annual top-line growth from 2003 to 2008, we see the enterprise market growing 80% faster at 4.7%.

With voice declines expected to continue, this higher growth rate is due to greater leverage to the relatively fast-growing wireline data segments, and an increased push for wireless business data spending. Combined, the data and wireless segments are expected to grow at 9% for the *Fortune* 1000 versus only 6.8% for the overall market. Underlying our forecast are assumptions for continued price decay in the 10-20% range for nearly every segment, modestly offset by double-digit unit volume growth in the data segments.

For the RBOCs — whose dominant local voice businesses represent a significant portion of their total revenues, and which will, at best, show zero growth over the next five years in local voice — gaining exposure to the *Fortune* 1000 market is the only way to bolster a flattening growth rate. Thus, we expect the battle for market share in this space to become increasingly important for the future of the industry and strength of the major players.

Exhibit 12 Domestic Telecom Services: Retail Revenues ($ billion)

											CAGR		Contribution to Growth	
	1999	2000	2001	2002	2003E	2004E	2005E	2006E	2007E	2008E	1999-2002	2003E-08E	1999-2002	2003E-08E
Local Voice	$89.6	$89.1	$87.2	$84.1	$81.7	$80.7	$79.5	$78.8	$78.1	$77.5	(2.1)%	(1.1)%	(0.7)%	(0.3)%
Long-Distance Voice	76.3	69.9	56.4	46.7	40.0	34.3	29.4	25.3	21.8	18.8	(15.1)	(14.0)	(3.7)	(1.4)
Local Data	19.0	24.6	28.8	30.5	31.9	34.7	37.3	39.1	40.6	41.6	17.1	5.4	1.4	0.6
Long-Distance Data	19.5	25.4	30.2	31.7	33.8	38.2	42.2	45.3	47.7	49.8	17.7	8.1	1.5	1.1
Wireless	51.9	67.0	81.9	91.9	98.9	106.0	113.1	120.4	127.6	133.6	21.0	6.2	5.0	2.3
Total Telecom Services	$256.2	$276.1	$284.4	$284.9	$286.3	$293.8	$301.5	$308.9	$315.8	$321.3	3.6%	2.3%	3.6%	2.3%
Memo: Yr/Yr Change	10.5%	7.8%	3.0%	0.2%	0.5%	2.6%	2.6%	2.4%	2.2%	1.7%				

Source: Bernstein estimates and analysis.

Enterprise Market Spending Breakdown

The telecom and enterprise communications markets can be divided into five primary segments: local voice, long-distance voice, local data, and long-distance data and wireless. Assuming no price rationalization or consolidation, the U.S. telecom industry is forecast to grow a modest 2.6% annually over the next five years. By comparison, over that same period, the enterprise telecom subsegment will grow 4.5-5.0%, a rate 80% faster than the industry overall (see Exhibit 13). Said differently, enterprise telecom spending will drive over half of the industry's total growth of 260 basis points.

Exhibit 13 **Contribution of Enterprise Telecom Spending to Overall Telecom Industry Growth ($ billion)**

	2003E		2008E		CAGR 2003E-08E		Contribution to Growth	
	Total Industry	*Fortune* 1000	Total Industry	*Fortune* 1000	Total Industry	*Fortune* 1000	Total Industry	*Fortune* 1000
Local Voice	$81.7	$23.3	$77.5	$24.1	(1.1)%	0.7%	(0.3)%	0.2%
Long-Distance Voice	40.0	13.5	18.8	6.6	(14.0)	(13.3)	(1.4)	(1.4)
Subtotal Voice	$121.7	$36.8	$96.3	$30.7	(4.6)%	(3.6)%	(1.7)%	(1.2)%
Local Data	$33.8	$23.5	$48.2	$31.2	7.4%	5.8%	0.9%	1.5%
Long-Distance Data	33.8	24.7	49.8	37.4	8.1	8.6	1.1	2.5
Subtotal Data	$67.6	$48.3	$98.0	$68.6	7.7%	7.3%	2.0%	4.0%
Wireless	$98.9	$6.8	$133.6	$16.0	6.2%	18.7%	2.3%	1.8%
Total Industry	$288.2	$91.8	$328.0	$115.3	2.6%	4.7%	2.6%	4.7%

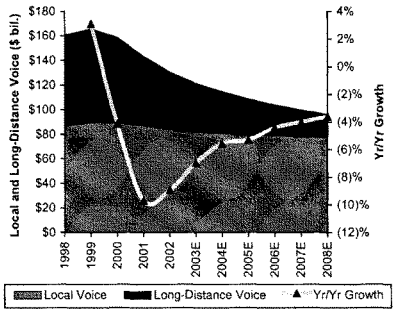
Source: Bernstein analysis.

Enterprise Voice Expected to Be Only Slightly Better Than the Industry

From a product perspective, domestic voice services (local and long distance) will likely register negative 4.6% average annual growth over our five-year forecast horizon. The large enterprise voice segment — with less local wholesale competition and with customers already enjoying long-distance voice pricing only a penny or so above marginal cost for the carriers — should decline slightly less rapidly at (3.6)% (see Exhibit 14).

These declines will be more than fully offset by continued growth in the data and wireless service segments. In wireless specifically, the proliferation of wireless email devices (such as Palm and Blackberry) within large corporations will help propel an ever-increasing percentage of total wireless revenues from the enterprise segment.

Exhibit 14 **Wireline Voice Forecast**



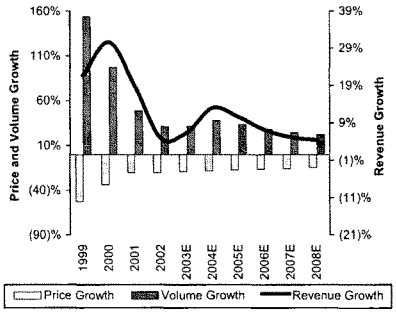
Source: Bernstein analysis.

Enterprise Growth Driven by Data

Within the enterprise telecom market, data will drive fully 86% of the growth, more than offsetting the declines in voice resulting from technology substitution (such as IP for circuit, and wireless and email for long distance). Making these growth numbers more impressive is the realization that they will be posted in an environment characterized by 15-20% declines in pricing, offset by a combination of organic volume growth of 25-30% and a 500-basis-point (or roughly 20%) estimated boost in growth from a cyclical recovery in IT spending (see Exhibit 15).

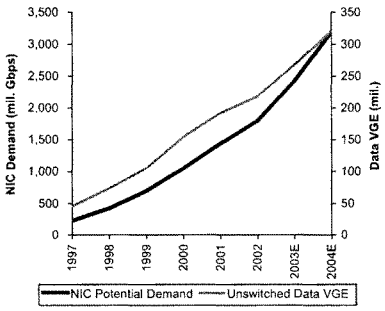
On the local corporate data side, a historical analysis shows a high correlation between dedicated access demand and the theoretical capacity of corporate local area networks (as measured by potential throughput of network interface cards in networked PCs, as shown in Exhibit 16). Similar to our expectations for the long-distance enterprise data market, we expect close to 10% ongoing unit price reductions in access data services offset by 14% volume gains, netting to 6% average revenue growth over the next five years (see Exhibit 17).

Exhibit 15 Corporate Long-Distance Data and IP Forecast



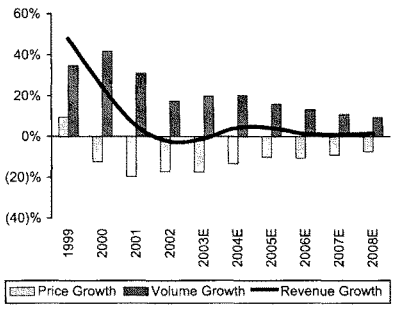
Source: Bernstein analysis.

Exhibit 16 Corporate Local-Data Forecast: NIC Potential Demand vs. Data VGE



Source: Bernstein analysis.

Exhibit 17 Local Private-Line Forecast



Source: Bernstein analysis.

Increasing Internet penetration and, hopefully, a recovery in IT spending in 2004 should help boost growth back into the data market, with the migration to IP-based solutions providing a further increase. The rapid growth of IP-VPN as well as the emergence of voice-over-IP should continue due to the cost-effective nature of these products and the opportunity for new functionality, such as remote access, to corporate LANs over broadband connections.

General Perceptions of Pricing

While we recently have heard of instances in which customers are seeing higher unit prices, the general trend has been clearly downward. Despite such declines, few customers indicated any ability to realize short-term benefits from price corrections, having to wait at least one year and often until the expiration of their contracts to realize savings.

There is also no consistency as to whether customers are pocketing any savings they realize from price declines or are leveraging the savings to increase volume purchases. Often, this choice is based on whether the enterprise is in a growth or mature mode, is experiencing severe budget pressures, or is in the midst of a migration to IP technology.

Dissecting Enterprise Spending

Summary

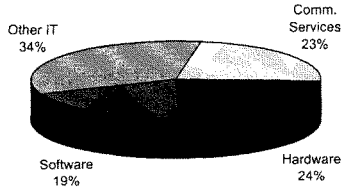
With some consistency, large-enterprise telecom buyers express guarded optimism for modest growth in overall IT spending in 2004 off an essentially flat 2003. More importantly, 70% of our study's respondents expected that communications spending within the IT budget would either remain flat or increase during the next 18 months versus 30% that expected modest declines. Consistent with this sentiment, they note that communications spending should maintain its roughly 25% weighting. Within enterprise communications services budgets, voice and data transport account for more than 80% of total dollars spent, with frame relay the dominant data protocol and AT&T the dominant voice, data and managed service provider.

Telecom Within the IT Budget

Large-enterprise IT budgets vary widely depending on the industry of the company in question. However, when averaged across a broad-enough cross-section of companies, the results offer surprising consistency over time. In our 2002 Enterprise Telecom Decision-Maker Study, we learned that approximately one-quarter of the 2001 IT budgets of our participants was allocated to communications services and that in 2002 they expected a similar allocated share (see Exhibits 18 and 19). Our 2003 study confirmed the stability of this share (see Exhibit 20).

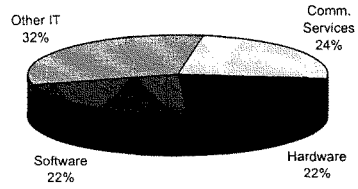
What is interesting to note in this year's study, however, is the shift of spending toward the "other IT" category (largely internal IT spending) from the hardware and software categories. In total, the other IT category picked up 600 basis points of budget support, all to the detriment of spending on hardware and software. And while we note that given our sample size, this shift is more directional than statistically significant, we do believe it reflects the shift in focus during tough economic times on improving utilization of internal resources over spending on capital projects or equipment.

Exhibit 18 Actual IT Budget Breakdown: 2002



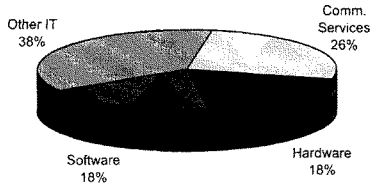
Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

Exhibit 19 Expected IT Budget Breakdown: 2002



Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

Exhibit 20 Expected IT Budget Breakdown: 2003

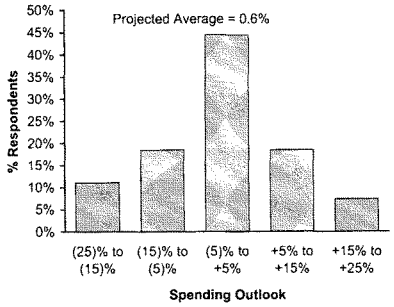


Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

Modest IT Budget Growth Expected in 2004 With an Economic Recovery

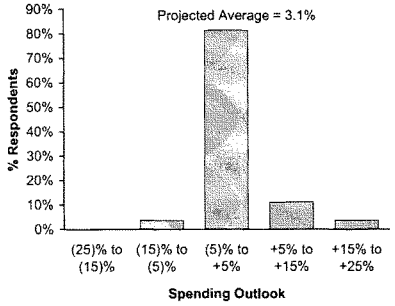
The participants in our 2003 study took on a normal distribution pattern in their outlook for IT spending for 2003, though expressed an outlook for 2004 modestly skewed to the positive. Specifically, nearly 45% of our participants expect their companies' IT budgets to remain flat (defined as ±5% versus 2002) in 2003 (see Exhibit 21), while over 95% expect 2004 to be flat to up versus 2003 (see Exhibit 22). The projected average change in IT budget for 2003 within our study group was 0.6%, while the average outlook for 2004 was 3.1% growth.

Exhibit 21 Projected IT Spending Trends: 2003



Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

Exhibit 22 Projected IT Spending Trends: 2004

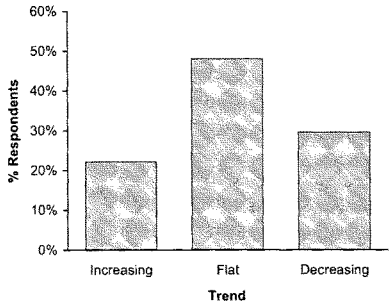


Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

Communications Spending Longer Term

Somewhat encouraging from our vantage point was the fact that 70% of our study participants noted the expectation that communications services would at least hold share within the IT budget. A subset, representing a little over 20% of the total base, noted an expectation for an increase (see Exhibit 23).

Exhibit 23 Trend of Communications Services as a Percentage of Total IT Spending

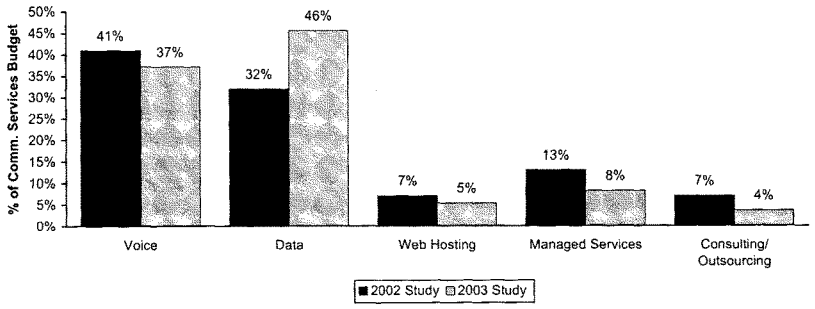


Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

The Voice-Data Equation

Within the communications services budgets of large enterprises is a heavy weighting toward transport voice and data services, with managed services and Web-hosting platforms garnering only $0.17 out of every dollar spent (see Exhibit 24). Our 2003 participants averaged 37% of their spending on voice services, 46% on data, and the remainder on managed services, Web hosting and consulting/internal oversight. By comparison, in our study last year, respondents noted that data transport services accounted for about 32%, a much lower percentage of the budget. The share for voice services, Web hosting, managed services and consulting/outsourcing all registered modest declines year-over-year.

Exhibit 24 Reported Communications Spending by Category



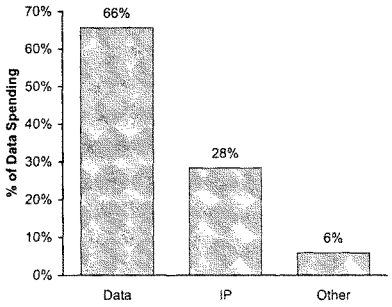
Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

Data Disaggregated

Within the overall data category, roughly two-thirds of the dollars are spent on non-IP services (see Exhibit 25). The anticipated acceleration of the shift to IP-based products as described in the results of last year's study has proven as sensitive to economic growth as expected: The results of this year's study show that little progress has been made in the upgrade to IP, with our sample reporting nearly identical category spending percentages across data and IP as for 2002 and far below the jump expected.

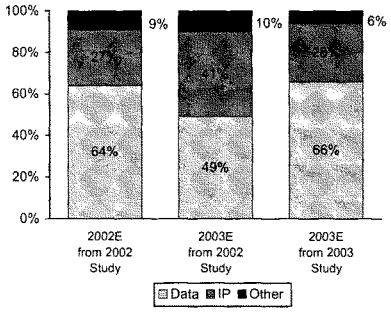
Specifically, last year our participants reported that 64% of their data services budgets would go to traditional data protocol services, with two-thirds of the remainder allocated to IP. They further articulated their expectation for 2003 was for a mix heavier in IP, with 41% of data spending on IP and only 49% on traditional data services. The results this year show that the migration never materialized, likely due to the severe cutbacks in the capital-project spending bucket in which communications hardware investments like IP PBXs fall (see Exhibit 26).

Exhibit 25 Data Spending by Category



Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

Exhibit 26 Data Services Spending Expectations: 2003 Study vs. 2002 Study

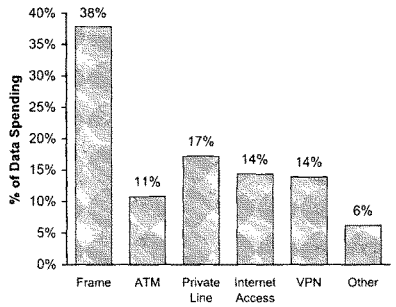


Source: Bernstein 2002 and 2003 Enterprise Telecom Decision-Maker Studies.

By far, the leading datacomm service purchased by large corporate customers is frame relay, accounting for an average of 38% of reported dollars spent by our study's respondents (see Exhibit 27). Accounting for the remaining datacomm spending are ATM, private line, Internet access and VPN services. Use of meshed frame relay and ATM networks for data needs was commonplace, though private line retains its niche where security needs are highest (for example, with financial services companies).

As was true last year, many of the companies in this year's study indicated that the migration to IP was a near-term event and would be undertaken first in new network builds — such as those associated with opening corporate offices and adding new field sites. The drivers of the anticipated shift to IP fall into four categories: (1) cost efficiency; (2) superior VPN support of an increasingly mobile workforce; (3) available service breadth over IP; and (4) improving reliability and security for IP services.

Exhibit 27 **Data Spending by Technology**

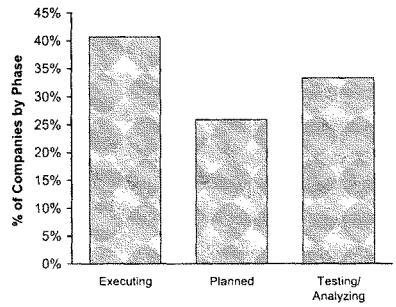


Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

Converged Networks Are a Reality

The move to converge voice and data over a single pipe is also very much a reality (see Exhibit 28). Two-thirds of our interviewees noted that their companies are either actively in the execution phase of such convergence or have fully planned the activity and are on the cusp of diving in. The remainder indicated that they are either testing or analyzing the proposition. While there were clearly companies actively integrating converged solutions across all geographies, often the focus of early deployments was on convergence of networks to foreign locales. Of the nearly one-third of our sample that indicated some hesitation, most cited concerns about the robustness of the technology and/or high current satisfaction with the security and reliability of their current architectures. Also affecting the go/no-go decision was the current state of IT budgets and the constraints on capital projects.

Exhibit 28 **Status of Enterprise Voice-Data Network Convergence**



Source: Bernstein 2002 and 2003 Enterprise Telecom Spending Studies.

Most of our study's respondents felt the return on investment for converging voice and data networks would be rapid — with a number expecting payback in as few as 18 months, and with a solid majority stating that full return would be evident within 2-3 years. While no specific carrier was expected to benefit differentially from convergence, Cisco was noted as the leading hardware beneficiary, with Avaya and Nortel also mentioned.

Un-Managed Services

Large enterprise customers appear to be seriously questioning the need to outsource network management services. Driving this trend appears to be dissatisfaction over both the value proposition and the degree to which the carriers are delivering against the promised benefit proposition.

Taking a step back, we were pleasantly surprised to find consistency across enterprise buyers for the definition of managed services:

1. Proactive alerting when problems are anticipated or detected.
2. Monitoring worldwide infrastructure, switches and routers.
3. Developing appropriate security protocols.
4. Providing access to online tools to manage the network.
5. Delivering personnel to problem sites anywhere in the world.

And, we found consistency in the articulation of the benefit proposition or critical success factors for managed services: proactiveness, predictiveness, seamless integration with the client organization, and day-to-day maintenance and reporting.

However, given this list of expectations, we found that increasingly companies are in-sourcing managed services functions because they believe they can deliver the same benefits internally at lower cost. The most frequent complaint heard was the failure of managed services partners to deliver against the promise of proactivity in alerting clients to problems before or as they are occurring. As a result, an increasing number of corporations appear to be buying off-the-shelf solutions from companies like IBM (the Tivoli package was named by several of our respondents) with the company's own internal communications group taking on the monitoring and securing functions.

The Wireless Migration Continues

While no quantitative spending information on wireless was available from this year's study, wireless access to data via handheld devices (such as Blackberries, PDAs and data-enabled handsets) and via new tablet-type devices seems poised to expand rapidly as field-sales-reliant companies begin spending on IT with an economic recovery. As described in greater detail below, both AT&T and MCI were faulted for not having a wireless offering, while Sprint received praise not only for having one, but also for Sprint PCS's perceived technological superiority.

Technology vs. Delivery

Summary

To the chagrin of both the RBOCs and IXCs, our study revealed that large enterprise customers view technology as only a transient competitive advantage in the telecom services market. Repeated comments from our respondents suggested that all of the major carriers had comparable service offerings (other than network breadth), and that differentiation was achieved primarily in areas of "soft skills," such as salesmanship, service delivery and customer care — attributes which are very difficult to quantify. IT managers seem to be increasingly balancing the desire to consolidate relationships to gain pricing and service leverage. The desire is to limit commitment, retain flexibility and maintain strong relationships with a backup provider, with the consolidation side currently winning the tug-of-war.

More important than a differentiated technology offering (such as AT&T's IGEMS platform, which few respondents had even seen), our interviewees are looking for improved overall service delivery, with an aggressive sales approach, competitive pricing, technical flexibility, and a general level of responsiveness far beyond that of several years ago. Based on the responses from our survey, we have developed standard "Harvey Ball" representations (think *Consumer Reports'* ranking system) of these dynamics to facilitate the comparison across companies.

General Perceptions

On general perceptions, AT&T has, by far, the strongest brand name and consistent history delivering quality service (see Exhibit 29). With the largest presence as a primary provider, AT&T is experienced and comfortable meeting enterprise needs, bringing its reputation to the table and inspiring confidence among decision-makers in mission-critical situations. Despite these strengths, however, more than a few of our study's respondents expressed caution about the company's long-term dominance, complaining of their frustrations attempting to penetrate the company's organization ("organizational density" in Exhibit 29) and difficulty negotiating with the company. To be fair, however, a number of participants also noted that AT&T has taken steps recently to address some of these criticisms.

In contrast, MCI was seen as relatively nimble and easy to work with, but needing to burnish its tarnished reputation as bankruptcy and its financial improprieties have raised red flags, particularly among companies for whom the carrier was not already a primary supplier. Nonetheless, there appears to be a clear consensus in the company's ability to emerge from Chapter 11 stronger, leaner and more rational.

In contrast to AT&T and MCI, enterprise buyers' opinions about Sprint depend heavily on whether the carrier is an existing supplier. For the largest companies in our study, Sprint flies below the radar due to its U.S.-centric network. For the broader base of participants, however, Sprint has significantly strengthened its reputation over the past year. As a result, Sprint was seen as having the greatest potential for registering near-term share gains of all the major telecom carriers.

Exhibit 29 **Carrier Comparison on Key Evaluation Metrics: General**

	AT&T	MCI	Sprint	RBOCs
Provider Visibility	◍	◍	◒	◍
Brand Strength	◍	○	○	○
Perceived Financial Strength	○	●	◎	◍
Perceived Near-Term Share Direction	◎	◒	◍	●
Perceived Mid-Term Share Direction	◒	◎	○	◎
Perceived Long-Term Share Direction	◒	○	◒	◍
Organizational Density	●	◍	○	●

Legend

◍ ◎ ○ ◒ ●

Best — Mixed Review — Worst

Source: Bernstein analysis.

By comparison, the RBOCs are seen as regional service suppliers, unproven in the enterprise space, unproven on anything other than a regional basis, and sporting organizations no more pleasant with which to interact than AT&T's. Nonetheless, the RBOCs are also seen as the healthiest companies in the industry.

Network

The hegemony of AT&T and MCI is most striking when the topic of network reach, reliability and redundancy are discussed with enterprise buyers. Though there appears to be relatively little differentiation between AT&T and MCI on these measures — they both get rave reviews — the contrast to Sprint and the RBOCs is startling (see Exhibit 30).

Exhibit 30 **Carrier Comparison on Key Evaluation Metrics: Network**

	AT&T	MCI	Sprint	RBOCs
Global Reach	◍	◍	◒	●
Reliability/Availability	◍	◍	○	○
Domestic Reach	◍	◍	○	◒

Legend

◍ ◎ ○ ◒ ●

Best — Mixed Review — Worst

Source: Bernstein analysis.

Within our interview sample, there was absolute certainty around the fact that no other carriers can deliver the global connectivity and breadth of solutions capabilities that AT&T and MCI can. Thus, for multinational companies, AT&T and MCI are seen as the only possible primary sources of communications services connectivity. Both win kudos for excellent domestic and international network reach, reliability, availability and redundancy.

In contrast, Sprint is seen as having a poorly defined global network strategy. However, it received both criticism and praise (from different participants) for its occasional arrival at the table with Equant as a partner. Domestically, Sprint was seen as having excellent network coverage in large metropolitan areas, but lagging AT&T and MCI in second-tier markets. Furthermore, feedback was mixed on the dependability of Sprint's network, with several respondents only comfortable having Sprint as a backup provider behind AT&T or MCI.

Not surprisingly, the Regional Bells are seen as having a long way to go before being considered players, with the common view being that they are at least two to three years away. Hurting the RBOCs is the prevalent belief that partnering causes IT nightmares (a well-worn "prove it's our problem" attitude was cited), and the RBOCs have no demonstrated ability to service large enterprise customers out of their home regions.

Sales

Sales is an area in which the carriers underwhelm enterprise telecom buyers. Perceptions of the sales function can be divided into five distinct areas: corporate attitude, price competitiveness, sales force quality, flexibility and continuity. However, as some of the criticisms of the carriers show, there is cross-fertilization from one category to another (see Exhibit 31). For example, despite being described as having the best quality (having knowledge, professionalism, depth of experience, etc.), AT&T's sales force was criticized for its lack of flexibility. And while we could interpret this as a slight on the company's willingness to develop custom solutions — a measure on which the company scored very well — we believe the criticism actually reflects AT&T's unwillingness to play in the gutter next to MCI on price.

Exhibit 31 Carrier Comparison on Key Evaluation Metrics: Sales

	AT&T	MCI	Sprint	RBOCs
Corporate Attitude	●	◎	○	◒
Pricing Competitiveness	◒	◍	○	●
Sales Quality	◍	◎	○	○
Sales Flexibility	◒	◎	○	nm
Sales Continuity	◒	○	○	◒

Legend

◍ ◎ ○ ◒ ●

Best — Mixed Review — Worst

Source: Bernstein analysis

Nonetheless, one of the most often-noted frustrations with AT&T, MCI, Sprint and the RBOCs is the relative complexity of the companies' pricing schemes and difficulty as negotiating partners. Adding some spice to the discussion was the fact that several of our respondents had just completed request-for-proposal (RFP) processes (some of which spanned as many as six months).

On a quality basis, AT&T's sales teams shine, broadly recognized for their professionalism, depth of knowledge and relative experience. The biggest complaint about AT&T was what was referred to as the company's "general sense of entitlement" to an enterprise's communications business, with an attitude of "the business is going to fall into our lap" not uncommon. In order to overcome this, AT&T must lose the old mentality and come to the table with more competitive offerings, because it can no longer rely on being the "king."

In contrast, MCI's performance and close contact throughout the past nine months pleasantly surprised our respondents, who praised the company for keeping them well-informed of its progress throughout the bankruptcy process. And while the comments surrounding MCI were far more favorable from MCI's largest customers, the general impression was one of a company trying very hard to retain business at the high end of the market. Specific feedback suggested MCI is "less rigid than AT&T...MCI is cafeteria style, where with AT&T [you have to buy] the whole meal."

Experiences with Sprint varied widely, with its sales force seen as far less experienced, subject to higher turnover and sporting a shallower bench than either AT&T or MCI. For the customers to whom Sprint marshals its top sales team to close a deal, the company was praised for bringing the right attitude, behavior and support to the table. Conversely, when Sprint doesn't put its all into winning a contract — speculated to occur when it suspects its chances of winning the customer's business to be less secure — customers say Sprint's team doesn't hold a candle even to AT&T's and MCI's B-teams. Similarly, and potentially a reflection of its shallower bench, Sprint was criticized for not attempting to maintain a sales presence with accounts for which it is not a current vendor.

The general impression of the RBOCs' sales capabilities was negative, with the RBOCs seen as unable to offer anything other than regional applications, unable to sell an integrated service offering, and lacking experience in how to function in an environment where monopoly pricing is neither acceptable nor competitive.

Service

In the area of service capabilities and delivery, we note that study participant's remarks ran the gamut for every carrier (see Exhibit 32), often directly reflecting the importance of the customer to the carrier. In the service category, AT&T appears to have a significant edge over other competitors. The breadth of AT&T's service offerings, depth of its technological capabilities and strong engineering, network monitoring and network management functions put it at the forefront of the service quality curve. Both AT&T and MCI possess the range of solutions that large businesses require, while Sprint and the RBOCs are seen as more limited.

Exhibit 32 **Carrier Comparison on Key Evaluation Metrics: Service**

	AT&T	MCI	Sprint	RBOCs
Service Breadth	◍	◍	○	○
Billing (Accuracy and Flexibility)	◒	◒	◒	nm
Service Provisioning (On Time and as Promised)	○	◎	◎	nm
Technical Flexibility	◍	◍	◒	●
Technological Advancement (Innovation)	◍	◒	◍	◒

Legend

◍ ◎ ○ ◒ ●

Best — Mixed Review — Worst

Source: Bernstein analysis.

The ability to customize solutions — and technical flexibility in general — was regarded as a core strength for AT&T and MCI, with Sprint seen as somewhat more regimented and attempting to force standardized solutions on customers. Interestingly, however, Sprint is given credit for being a technological thought leader by enterprise telecom buyers, forcing us to accept that there may have been a silver lining to Sprint's multi-billion dollar ION spending rat hole.

Our interviewees had criticisms for all of the carriers relative to service. AT&T falls short on its ability to deliver contracts on time and as promised. MCI is seen as potentially having jeopardized its long-term technological competitiveness by underspending on plant upgrades and R&D over the past year. Sprint was criticized for its perceived weaker network. And, the RBOCs were criticized for their lack of experience, integration skills, and inability to offer much else than regional access services.

More generally, every carrier received low marks for billing, with the most onerous problem being accuracy (poor) and difficulty in correcting errors (high). In addition, the inability to segment and customize billing to make it easier to comprehend and monitor was another often-cited weakness. The enterprise customer billing experience was compared (unfavorably) to residential phone billing — although the amounts were noted to be millions higher per month: "We have to yell at them, just like we do our phone company at home [to reach a resolution]." Interestingly, one manager noted an immediate payback in devoting an entire team of full-time staff members to resolving carrier billing problems.

Carrier Positioning

Summary

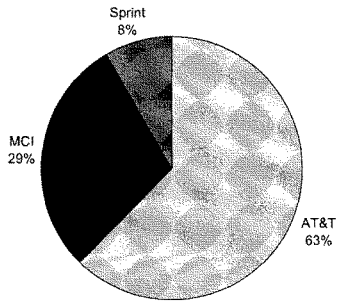
Surprising to us was the degree to which AT&T has solidified its position as the primary voice, data and managed service provider to the companies in our 2003 study. For both voice and data transport services, the company was described as the primary supplier for nearly two-thirds of our study's participants, with MCI garnering only 22-29% of the customers and Sprint most of the rest. For managed services, AT&T's share was slightly under 50% as primary supplier, with another 23% of respondents acknowledging AT&T as their secondary provider (often behind internal IT departments as their primary). The managed services results dwarfed every other supplier except IBM on the secondary side.

Of concern, however, was the degree to which AT&T's historical corporate arrogance and organizational impenetrability drive ill will with customers. These faults, in turn, lead many buyers to describe AT&T as a significant mid-term share loser despite their praise for the company's network, service and sales quality.

Voice and Data

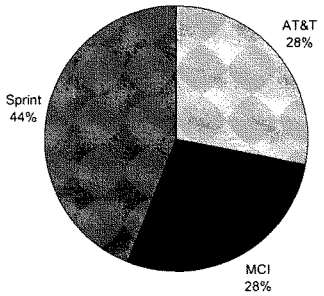
Among our study's participants, AT&T was the dominant voice and data provider, described by 63% of our interviewees as their current primary provider on both the voice and data sides (see Exhibits 33-36). In addition, of the remaining interviewees, 28-34% classified the company as their secondary provider for voice or data services. These results contrast with last year's study in which AT&T and WorldCom/MCI received roughly equal mentions (both about 40%) as primary providers for voice and data services, with Sprint receiving most of the remaining votes. From the exhibits, one could conclude that Sprint's share has actually fallen as a primary provider, but to be fair, we would note that our sample this year is more weighted to the upper end of the *Fortune* 500 than last years'.

Exhibit 33 Voice: Current Primary Provider



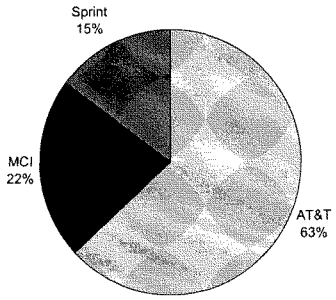
Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

Exhibit 34 Voice: Current Secondary Provider



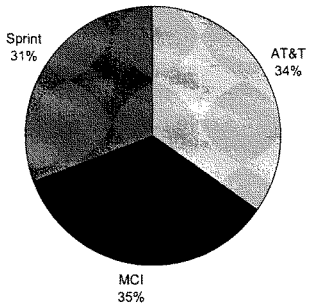
Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

Exhibit 35 Data: Current Primary Provider



Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

Exhibit 36 Data: Current Secondary Provider

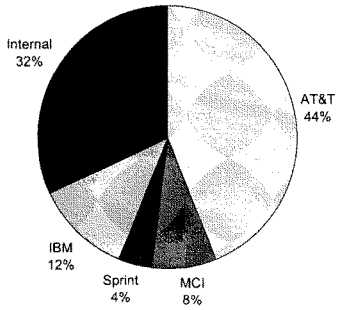


Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

Managed Services

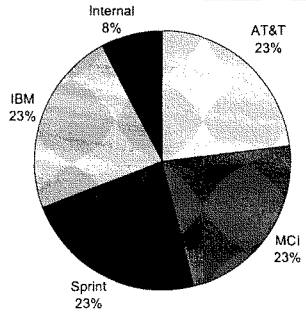
The findings surrounding managed services were interesting in that, on the one hand they confirmed our belief that AT&T "owns" this segment, while on the other, they raised concerns for us about the sustainability of any of the carriers' models in this market. On the quantitative side, AT&T was described by nearly 70% of the participants in our study as either a primary or secondary provider of managed services, giving the company a striking lead over any other competitor, including IBM (see Exhibits 37 and 38). By comparison, the next three competitors — IBM, MCI and Sprint — all appear to have either primary (few) or secondary (more) relationships with 27-35% of the companies in our study.

Exhibit 37 Managed Services: Current Primary Provider



Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

Exhibit 38 Managed Services: Current Secondary Provider



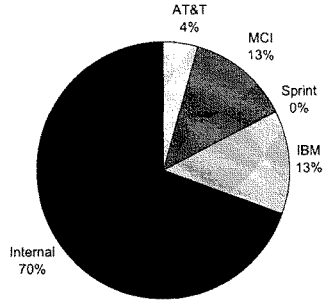
Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

Where our concern arises is in the commentary provided by our study's participants relative to their satisfaction level with any of their supplier options. By way of background, all of our respondents offered the similar definitions for "managed services," describing the offering as proactive monitoring and management of worldwide network service. The vast majority of our respondents believed they could do this more efficiently and effectively with their own staff, rather than outsourcing to one of the major carriers. The biggest complaint was a lack of proactivity in solving network problems — such as being able to predict and solve issues without impacting the business. One mentioned "they don't alert us to problems — we usually have to bring the problems to them." It seems that IT managers prefer to have internal control over the vital aspects of their network, rather than placing a significant business risk in the hands of an external provider.

Web Hosting

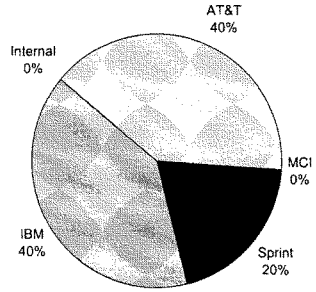
Interestingly, despite AT&T's contention that outsourced Web-hosting services are intertwined in a managed services offering, we found that most of the companies in our study choose to in-source Web hosting, with only 30% claiming to use an outsource primary supplier (see Exhibits 39 and 40). Nonetheless, when pressed for whether they maintain secondary supplier relationships, all noted they did — and among those, AT&T and IBM equally account for 80% of the market. Surprisingly (and likely a fluke of our sample size), MCI garnered no votes as a secondary Web-hosting supplier, though tied IBM as leader for 13% of the mentions for primary supplier (for reference, AT&T was mentioned by only one participant as his primary supplier).

Exhibit 39 Web Hosting: Current Primary Provider



Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

Exhibit 40 Web Hosting: Current Secondary Provider



Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study.

AT&T

Summary

AT&T is seen as the clear leader in enterprise telecom services, and was described as having successfully consolidated its position in the face of financial turmoil at its competitors. However, longer term, this positive, when taken in conjunction with MCI's emergence from bankruptcy, drives enterprise buyers to describe AT&T as the most vulnerable carrier, particularly to defections among companies with U.S.- or North America-only networking needs.

Exacerbating the situation is the increasing importance of wireless to IT managers. On this score, AT&T is seen as leaving both money and the potential consolidation of customer traffic on the table by not having an offer.

Strengths

Any conversation about AT&T either starts with or ultimately migrates to a discussion about the company's confidence-building name and heritage. Buyers universally noted their comfort level with the carrier and, specifically, the robustness and operating quality of the company's network. For global enterprise customers, AT&T and MCI are seen as the only choices with the company's differentiation in its ability to "deliver service anywhere" readily noted.

The company also receives high marks not only for its ability to offer a full suite of services that includes more than just connectivity, but also for its network-monitoring and management tools. It was also widely praised for its ability to deliver customized solutions. In addition, AT&T won top marks for the quality (knowledge and professionalism) of its sales personnel, particularly on accounts that have not been affected by the revolving management door (a negative noted for all the top carriers).

Weaknesses

The problems customers highlight in working with AT&T fall into three categories: organization (density, inflexibility and attitude), service delivery, and billing. At the top of the "what I hate about AT&T" list was the company's attitude, with more than one buyer describing AT&T generally, and its representatives specifically, as "arrogant." When pressed, respondents highlight their perception that the company operates with a sense of entitlement while often coming in with the highest prices. Making matters worse was the feeling that when issues arise, AT&T's organization is so dense (relative to MCI, for example) and has undergone so many reorganizations that finding the right person to resolve the problem is nearly impossible. Somewhat reassuring, however, was the observation that the company appears to be mending its ways. This point was made best by a major airline executive who said, "in my 18-year tenure as a telecom buyer, I have never seen AT&T so aggressive. [AT&T] is working like hell to hold onto what they've got and change their arrogant ways."

Other criticisms of AT&T centered on the difficulty in negotiating with the company and customizing contract terms and conditions. This last point offered an interesting contrast to the praise the company received in its ability to customize service solutions for customers. On the service delivery side, while the company won high marks for its network quality and reliability, AT&T was seen as less reliable in delivering projects on schedule,

especially versus MCI. One executive summarized the problem as follows: "AT&T has difficulty delivering timely service; installations are a problem...and that's not a recent thing. Their ability to react quickly is poor." Customers generally highlight billing as an area of great frustration; and AT&T received no better or worse marks for its billing and back-office systems than MCI or Sprint.

MCI/WorldCom

Summary

Based on our interviews, MCI's efforts to maintain its market position with *Fortune* 500 accounts appear to have been largely successful for the embedded base of business. This seems particularly true on the voice side, with the results less conclusive for data's share (though the opportunity appears to be there).

What was also clear from the conversations was that, while MCI has retained major customers (for reasons ranging from pricing and full-court-press sales efforts to the high barriers to switching), it has not picked up its fair share of the incremental growth in the market, as Sprint and AT&T have. Companies for which MCI is not the primary supplier were far more likely to notice significant turnover in (and, thus, degradation of) sales coverage, and to have a greater level of caution relative to doing business with MCI anytime in the near to medium term. The disparity in comments relative to the quality of the sales coverage for both AT&T and MCI and the nearly-100% correlation with whether or not the carrier in question was the "primary" provider drove us to note this issue as a key finding of our research.

Strengths

Like AT&T, MCI is considered to have one of the best global networks and is broadly perceived to be one of only two providers capable of handling truly global communication needs. By existing customers, its network is perceived (largely due to the lack of integration of the MCI backbone with WorldCom's) as having robustness and redundancy on par with that of AT&T. However, the lack of network integration presented an obstacle as well: multiple billing platforms driving errors.

On the sales and customer service side, one truism emerged: the larger the account, the better MCI's service reputation. Said another way, MCI appears to concentrate its resources on servicing its largest accounts at the expense of its smaller customers (smaller in this case being defined as companies in the lower half of the *Fortune* 1000).

Another perceived strength of MCI is the UUNet backbone, which was described as "one of MCI's diamonds" by a number of respondents. Of course, only time, improved disclosure and independently audited financials (preferably not by anyone having worked at Arthur Anderson) will tell whether UUNet is both a marketing and a financial diamond or just the former.

Not surprisingly — and supported by numerous data points — MCI has a reputation for being "price competitive," particularly on voice services. There was, however, some suggestion that the company's data pricing was not as competitive, all evidence to the contrary.

Weaknesses

The issues identified as most concerning for MCI center around trust, technological currency and, like everyone else, billing. Topping the list of MCI's weaknesses is the need to rebuild its tarnished reputation and the trust of its customers. Unlike the company's need to rebuild trust with the financial community for its misdeeds, the problem from the customer's standpoint is whether suppliers that got burned will do business with MCI again.

From a technological perspective, customers have noticed and remain watchful of MCI's unsustainably low capital spending levels (1-5% of revenues). They express concern over whether the company is keeping pace with its peers technologically. This worry was manifested in comments like "lack of money for R&D and other activities may come back to hurt them..." and "they stopped investing...built an IP-based network in the core, but [have] not deployed in the rest of the world."

In contrast to the praise MCI received for having retained its top sales talent throughout its financial difficulties, a number of interviewees noted the low workforce morale driving destructive behavior as in: "dull, not proactively selling, more order taking." There were also a number of customers who noted degraded technical service and sales support, but when pressed, attributed this more to a loss of personnel than underspending on capital and R&D.

From a services perspective, among noncustomers, MCI is seen as being stronger in voice than data. And, similar to AT&T, MCI is seen as leaving money on the table and falling short of being a one-stop shop by not having wireless in the bundle.

Sprint

Summary

Sprint appears to be the carrier benefiting most from the financial meltdown at MCI and the crisis of confidence in Qwest. Specifically, from our conversations with survey participants, the company appears to have been relatively successful at winning voice business at both Qwest's and MCI's expense, though the data picture remains a mixed bag. Even with its wins, however, Sprint is a "backup provider" for most customers, behind the primaries. One interesting finding was that, despite Sprint's having only weak awareness of its managed services capabilities, many customers for which Sprint is a secondary managed services provider seemed receptive to elevating the company to primary provider status over the next few years.

Strengths

Ironically, Sprint is perceived to be the healthiest company financially among the Big Three. Its network was described as "solid," with the company viewed as "forward thinking" and "technologically competitive." Though a number of participants noted that "robustness, backup and redundancy advantage goes to AT&T and MCI."

Nonetheless, where Sprint stands out from the pack is in its ability to offer not only national wireline network services, but also wireless. Sprint PCS was widely viewed as being at the technological forefront of the wireless industry and working hard to close its coverage holes. The company also won kudos for its sales teams, which were described as "hungry" and not exhibiting any of the arrogance noted for AT&T and, to a lesser degree, MCI. The company was also recognized for its willingness to be price competitive on data services.

Weaknesses

Sprint's greatest weakness appears to be its lack of global network breadth, a shortcoming the company has attempted to address on occasion through partnerships with international carriers. While some companies have been willing to overlook this negative by accepting Sprint and a partner (Equant was most often cited), most were not. The largest companies in our study — by definition, those requiring global networking — had far more reservations about using Sprint than the smaller participants. The sentiment on this subject was summarized by one of our participants as follows: "[Sprint is] primarily domestic with some international voice. They are a competitor you can use [domestically] for voice and frame. They are trying to get global but have no strong strategy."

The second issue of note was the perception that Sprint was weaker in the sales arena when it was fielding anything but its top team to win a bid. Translated, these comments were descriptive of a sales bench shallower and less experienced than those at AT&T and MCI. Customers (or potential customers) complained about the company's inflexibility, specifically citing Sprint's inability to deliver "out of the box" technical solutions or deviate from unacceptably complex pricing structures.

The RBOCs

Summary

Among the most startling results from our study this year were two findings about the RBOCs. First, despite the high-profile financial problems of Qwest and MCI, the RBOCs as a group did little to further their perceived capabilities to service the enterprise market. And, second, in only a year, Qwest has fallen from a leading "up-and-comer" to marginalized regional player.

Among the positive notes for the RBOCs were financial strength and likely share gain over the long term. Among the weaknesses were the carriers' propensity to default to monopoly pricing and service levels whenever they are not faced with direct competition. This behavior was seen as reinforcing the perception of the RBOCs as union/government-dominated organizations with a long way to go before they can claim a place at the enterprise-services table. The RBOCs also were faulted for their lack of global network reach — a critical element for about half of our study's participants — and for their technological inflexibility. On the lack of global reach, one respondent said, "we need endpoint to endpoint responsibility, without passing the buck (blame) between carriers."

Highlighting the persistent regional niche of the RBOCs, few of our interviewees were able to offer any thoughtful comparisons on the RBOCs outside of their companies' headquarters territory. Perceptions were colored by local service experience — pro and con — though the majority did not sense a meaningful difference in strategic approach, technological capacity, or even sales and service proficiency across the four RBOCs. Most responses were generalized perceptions of the group as a whole, but we were able to divine some meaningful strengths and weaknesses for each. The majority of participants seemed to believe that it would be impossible for the RBOCs to build the necessary infrastructure and sales capability from scratch, and that acquisition would be the most likely RBOC entrance strategy into the enterprise market.

Verizon

Strengths. Verizon has maintained its standing as the RBOC furthest ahead in penetrating the enterprise market. Its territory, encompassing most of the northeastern United States, has the highest percentage of business headquarters, giving Verizon significant in-region exposure to the *Fortune* 1000. Verizon was perceived by respondents to have become more focused on customer service in the past year, which respondents believed helped the company secure Section 271 approval to offer long-distance service. The company was praised for attempting to broaden its service offering while not overpromising services it cannot deliver. Verizon's greatest strength was seen as its wireless offering, which study participants expect to extend its recent share gains due to a sustainable advantage in network coverage and quality.

Weaknesses. Suffering from the same issues all the RBOCs seem to have, Verizon lacks experience in dealing in the competitive world: Now that it is able to offer long-distance services, it must learn how to effectively market and sell the integrated offering. Also unattractive for most large companies is the company's inability to present a single face when com-

peting for bundled services, instead offering partnerships generally perceived to be less reliable.

SBC

Strengths. Although Verizon may be slightly ahead in terms of enterprise penetration, SBC is a very close second. Interestingly, SBC is cited as the strongest of the RBOCs in data services, a possible legacy of its position as ILEC in California, the epicenter of the Internet bubble. One respondent summarized it as follows: "SBC has the best grasp of where the market is...laying network as fast as anybody." Another opined, "SBC may get there first...clearer direction and strategy, better vision" and "seems to understand [better than the other RBOCs] the need to operate like a business instead of a monopoly."

Weaknesses. The legacy of Ameritech's underinvestment in its network lives on with SBC. Enterprise buyers remember the service quality degradation immediately preceding and following the SBC-Ameritech merger and the disruption it caused. Concerns beyond service quality in the Ameritech region centered on the status of the company's integration of its numerous acquisitions and the turnover in sales representation it has caused. One respondent labeled SBC "unresponsive in a bidding situation," both in terms of product offerings that had been requested and on contract pricing.

BellSouth

Strengths. While smaller and not as visible as its peers, BellSouth received surprisingly high marks on service from our sample and was believed to have excellent pricing on point-to-point circuits. One respondent noted that BellSouth was "very good in its service deliverables, keeping commitments, bringing the right people. A pleasure to deal with — they know their stuff." Another stated BellSouth is the "ideal phone company...we never hear about any problems." The fact that the company has remained a pure and simple RBOC, without complicated acquisitions and "cobbling together" of networks could account for this relative customer service satisfaction.

Weaknesses. Unfortunately, not hearing from a company the size of BellSouth leads some customers to dub it a "stealth company," noting that due to its regional footprint and lack of aggressiveness in the enterprise market, the company flies below the radar of many enterprise telecom services buyers.

Qwest

Strengths. The most positive comments concerning Qwest were in regard to its technological savvy and vision for the future. Ownership of a competitive long-haul network was cited as a significant advantage. In addition, several participants mentioned seeing very aggressive pricing offers from Qwest, though the company's financial situation appears to have diminished any negotiating leverage it may have once had.

Weaknesses. Noted weaknesses for Qwest center on the company's well-publicized financial crisis and the impact it has had on the workforce's morale and intensity of customer service. Several respondents noted that Qwest had dropped the ball on commitments and contract delivery timing and that its workforce appeared "demoralized." Although there was praise for the company's technological proficiency, there was more than ample criticism of its sales and service. One manager summarized the company's situation as follows: "[Qwest was] impressive a few years ago...rising technology, a coming carrier, aggressive. We tried them in some smaller seg-

ments but there were servicing issues. Now with the financial issues, we stay away." Qwest's service and financial issues have left the company in a downward share spiral in the enterprise market off a relatively modest base.

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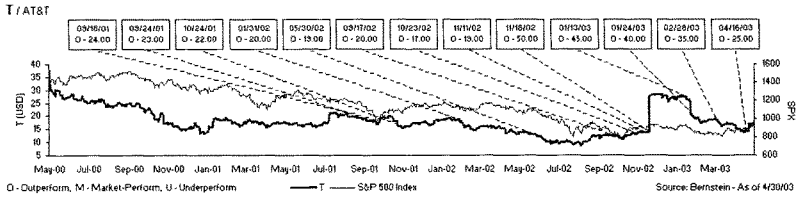
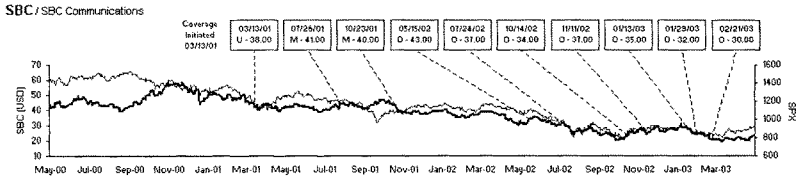
T / AT&T



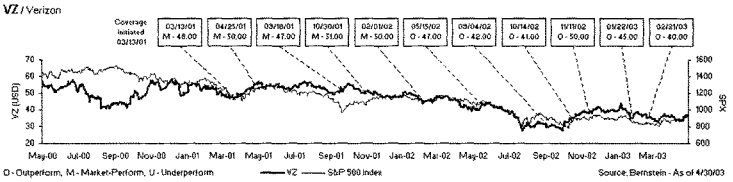
O - Outperform, M - Market-Perform, U - Underperform — T — S&P 500 Index Source: Bernstein - As of 4/30/03

SBC / SBC Communications

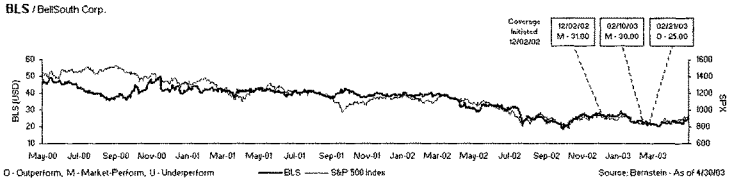


O - Outperform, M - Market-Perform, U - Underperform — SBC — S&P 500 Index Source: Bernstein - As of 4/30/03

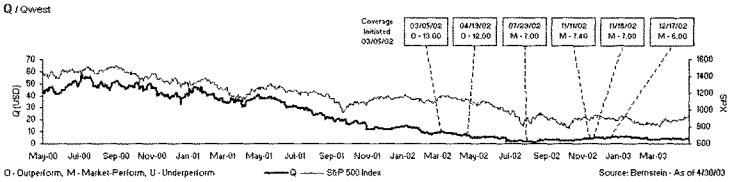
VZ / Verizon



BLS / BellSouth Corp.



Q / Qwest



Bernstein Distribution of Ratings

Outperform	51.3%
Market-Perform	42.0%
Underperform	6.7%

Source: Bernstein - As of 05/02/03

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BERNSTEIN RESEARCH

Voice over IP: Ripple or Tidal Wave?

After years of being "two years away," Voice over Internet Protocol (VoIP) is finally ready for prime time. Four factors have come together to make VoIP a reality:

- The capital cost for VoIP has fallen sufficiently to support attractive returns on capital for operators deploying the technology
- Consumer receptivity to RBOC voice telephony alternatives has grown dramatically, arguably in proportion to the rise in familiarity and dependence on wireless phones
- Broadband connections, the enabler for most VoIP services, are sufficiently widespread to provide a significant base of potential customers
- New flat-rate pricing plans have emerged to allow rapid and low-cost competitive market entry

The Regional Bell Companies are expected to lose nearly 17 million, or 15% of their primary consumer access lines over the next five years to VoIP providers, challenging their ability to deliver either topline or earnings growth despite improving share in the broadband and enterprise markets, and leadership positions in the expanding U.S. Wireless industry

The cable operators will be the key beneficiaries of the technological revolution, with VoIP ideally timed to offset moderating growth in the high-speed Internet access business. We expect VoIP to add more than two points to annual revenue growth for the major cable operators over the next five years

SEE THE LAST PAGE OF THIS REPORT
FOR ANALYST CERTIFICATIONS AND IMPORTANT DISCLOSURES

Portfolio Manager's Summary

Technology substitution has driven dramatic changes in the telecom landscape over the past decade. It drove the shift from mechanical to digital switching, electrical to optical transmission, and wireline to wireless usage patterns. However, few developments seen in the past have had as dramatic an impact on the Regional Bells' hegemony over the consumer market as will the adoption of Voice over Internet Protocol (VoIP) by the cable operators over the next five years.

We believe the likely losses by the Bells over the next five years will dwarf the cumulative consumer share loss suffered to wholesale carriers since the passage of the Telecom Act nearly eight years ago. Our bearish mid- and longer-term investment thesis on the Bells, and bullish outlook for the major cable MSOs, rests at least in part on our belief in this success by the cable operators in gaining consumer acceptance of their telephony offers. We project that the MSOs will secure almost 17 million cable telephony customers by 2008, or approximately 15% of the primary consumer wired access lines in the United States.

Our above-consensus expectations for cable telephony are driven by proprietary research suggesting very high latent demand, positive incremental economics likely to drive supply, and early indications that the MSOs will price the service at compelling discounts to the Bells' own voice offers.

Nonetheless, for the Bells, the share-loss curve for cable telephony will not accelerate until 2005, making 2004 a potential year of abating losses to wholesale competitors, growing business access lines with a recovery in employment and regulatory relief on many fronts. In short, 2004 will be a year of potentially improving fundamentals after a long stretch of erosion, the calm before the storm. Among the Bells, SBC (SBC, market-perform, target price $28) is best-positioned to enjoy the most significant near-term gains, having suffered the worst losses to wholesale competitors over the past three years. By contrast, Verizon (VZ, market-perform, target price $38) is seen as having the worst near-term exposure to cable telephony, with significant overlaps with both Cablevision and Time Warner, the two MSOs committing to 100% coverage of their footprints by year-end 2004.

For the cable MSOs, cable telephony appears ideally timed to sustain top-line growth, arriving just as the high-speed Internet access business begins to flag over the next few years. Indeed, VoIP telephony is a key building block in what we expect to be above-consensus revenue and EBITDA growth for the major operators. The $65 billion consumer wireline telephony business dwarfs the $35 billion video-distribution business, making even modest share gains a significant growth opportunity. Moreover, the extensive plant upgrades made over the past seven years leave cable's infrastructure ideally positioned to offer VoIP services at very low marginal cost. We believe Comcast (CMCSA, outperform, target price $38), which has more of the telephony opportunity still in front of it than peer Cox (COX, outperform, target price $40), is best-positioned to benefit among the major cable MSOs.

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April 26, 2004

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Exhibit 1 Financial Overview: Telecommunications

	Qwest	SBC	Verizon	BellSouth	AT&T
Price April 22, 2004	$4.25	$25.40	$37.76	$26.20	$18.03
52-Week Range	$3 - $5	$21 - $28	$31 - $41	$23 - $31	$16 - $23
YTD Relative Performance	(4.1)%	(5.1)%	5.1%	(9.9)%	(13.7)%
Stock Rating[1]	O	M	M	M	M
Revenue ($ million)					
2003	$14,288	$50,069	$67,752	$26,364	$34,529
2004E	14,109	51,083	70,956	27,161	31,631
2005E	14,260	64,484	73,454	35,449	29,592
2006E	14,095	66,568	74,999	36,232	28,205
2007E	13,766	68,828	76,781	37,015	26,827
2008E	13,460	71,527	79,271	38,123	25,661
Five-Year CAGR (2003-08E)	(1.2)%	7.4%	3.2%	7.7%	(5.8)%
EBITDA ($ million)					
2003	$3,749	$16,902	$27,430	$11,328	$8,853
Margin	26.2%	33.8%	40.5%	43.0%	25.6%
2004E	$3,966	$17,035	$27,892	$11,011	$6,779
Margin	28.1%	33.3%	39.3%	40.5%	21.4%
2005E	$4,494	$19,886	$28,269	$12,794	$6,054
Margin	31.5%	30.8%	38.5%	36.1%	20.5%
2006E	$4,522	$21,412	$28,436	$13,615	$5,281
Margin	32.1%	32.2%	37.9%	37.6%	18.7%
2007E	$4,406	$22,588	$28,570	$14,145	$4,560
Margin	32.0%	32.8%	37.2%	38.2%	17.0%
2008E	$4,182	$23,141	$27,892	$14,445	$3,960
Margin	31.1%	32.4%	35.2%	37.9%	15.4%
Five-Year CAGR (2003-08E)	3.3	6.5	1.1	5.0	(14.9)
EPS ($)					
2003[1]	$(0.38)	$1.55	$2.62	$1.95	$2.36
2004E	(0.35)	1.41	2.36	1.94	1.10
2005E	(0.03)	1.17	2.38	1.74	0.76
2006E	0.04	1.38	2.30	2.03	0.33
2007E	0.08	1.51	2.21	2.23	0.16
2008E	0.03	1.66	2.28	2.35	0.06
2003-04E Percentage Change	(7.9)%	(9.0)%	(9.9)%	(0.5)%	(53.4)%
2004E Consensus	$(0.40)	$1.37	$2.39	$1.94	$1.28
2005E Consensus	(0.18)	1.12	2.52	1.70	0.98
Market Cap. ($ million)	$7,569	$84,023	$104,557	$47,998	$14,316
2004E Net Debt ($ million)	15,261	7,419	38,793	5,926	10,056
EV ($ million)	22,831	91,442	143,351	53,924	24,372
2004E EV/EBITDA	5.8x	5.4x	5.1x	4.9x	3.6x
2005E EV/EBITDA	5.1	4.6	5.1	4.2	4.0
2004E P/E	(12.1)	18.0	16.0	13.5	16.4
2005E P/FE	(141.7)	21.7	15.9	15.1	23.7

1 BellSouth 2003 EPS Excludes Latin America.
O=Outperform; M=Market-Perform; U=Underperform.

Source: Corporate reports and Bernstein estimates and analysis.

Exhibit 1 Financial Overview (cont'd): Cable

	Comcast	Cox	Cablevision
Price as of April 22, 2004	$29.10	$31.56	$22.25
52-Week Range	$27 - $36	$28 - $36	$17 - $27
YTD Relative Performance	(13.8)%	(10.9)%	(7.4)%
Rating	O	O	M
Revenue ($ million)			
2003	$20,491	$5,759	$4,158
2004E	19,865	6,450	4,820
2005E	21,865	7,183	5,111
2006E	24,196	7,932	5,503
2007E	26,589	8,647	5,803
2008E	28,712	9,302	6,055
Five-Year CAGR (2003-08E)	7.0%	10.1%	7.8%
EBITDA ($ million)			
2003	$6,821	$2,117	$1,110
Margin	33.3%	36.8%	26.7%
2004E	$7,640	$2,411	$978
Margin	38.5%	37.4%	20.3%
2005E	$8,928	$2,726	$1,355
Margin	40.8%	38.0%	26.5%
2006E	$10,263	$3,056	$1,483
Margin	42.4%	38.5%	26.9%
2007E	$11,526	$3,360	$1,606
Margin	43.3%	38.9%	27.7%
2008E	$12,642	$3,613	$1,727
Margin	44.0%	38.8%	28.5%
Five-Year CAGR (2003-08E)	13.1	11.3	9.2
EPS ($)			
2003	$(0.04)	$(0.22)	$(1.00)
2004E	0.45	0.36	(2.71)
2005E	0.74	0.51	(2.17)
2006E	1.03	0.71	(2.37)
2007E	1.32	0.90	(2.58)
2008E	1.57	1.05	(2.84)
2003-04E Percentage Change	nm	nm	nm
2004E Consensus	0.40	0.43	(1.10)
2005E Consensus	0.71	0.71	(0.46)
Market Cap. ($ million)	$65,737	$19,883	$6,386
2004E Net Debt ($ million)	23,543	3,653	8,493
EV ($ million)	89,280	23,643	16,503
2004E EV/EBITDA	11.7x	9.8x	16.9x
2005E EV/EBITDA	10.0	8.7	12.2
2004E P/E	64.7	87.7	(8.2)
2005E P/E	39.3	61.9	(10.3)

Significant Research Conclusions

Overview

After years of being "two years away," Voice over Internet Protocol (VoIP) telephony is finally ready for prime time. Four factors have come together to finally make VoIP a reality. First, the technology has evolved to the point where high-quality service can now be deployed for less than $300 per subscriber. Second, consumer receptivity to RBOC alternatives has grown dramatically, arguably in proportion to the rise in familiarity (and reliance on) wireless telephony. Third, broadband connections — a pre-requisite for most VoIP — are now sufficiently widespread to provide a significant potential user base. And finally, new business models — featuring flat-rate pricing plans — have emerged that allow low-cost market entry, yet still allow for an attractive return on capital.

For the Regional Bell Operating Companies (RBOCs), any recent moderation in access line losses to wholesale competitors is at best the "calm before the storm." Indeed, a recent District of Columbia Circuit Court ruling on March 2, which overturned many aspects of the FCC's 2003 Triennial Review Order (TRO), only sets the stage for a more dramatic entrance by VoIP, which we believe will rapidly replace resale of the unbundled network element platform (UNE-P) as the primary threat to RBOC consumer market share.

Conversely, for the major cable operators, VoIP appears ideally timed to offset moderating growth of the high-speed Internet access business. The $65 billion consumer wireline telephony business dwarfs the $35 billion video-distribution business, making even modest share gain a significant growth opportunity. Moreover, the extensive plant upgrade investments made over the past seven years leave cable's infrastructure ideally positioned to offer VoIP services quickly and at a very low incremental cost (less than $300 per subscriber).

By the end of 2006, we expect the major cable operators to offer VoIP phone service almost ubiquitously to their subscribers throughout the United States. We project that cable voice services will reach 17% penetration of available homes passed over the next five years, with 16.8 million telephony subscribers by 2008 (including both circuit-switched and IP-based lines), from a base of only 2.3 million in 2003. For the RBOCs, this represents a loss of 15.0% of consumer primary access lines in the United States, a threat greater than all the losses experienced to date to UNE-P competitors.

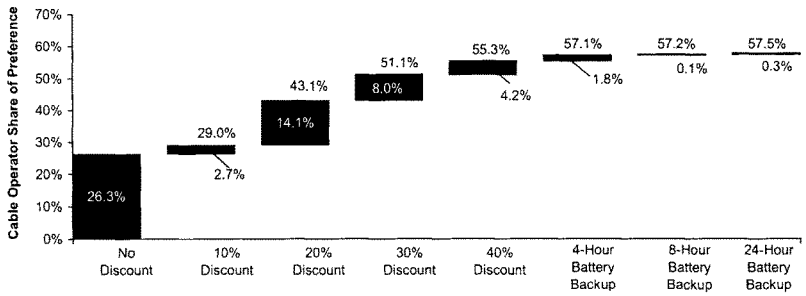
Sizing Consumer Demand for Cable Telephony

The broad availability of VoIP telephony arrives at a time when consumer receptivity to RBOC alternatives appears to be at a turning point. Wireless service has relegated fixed-line voice service to commodity status, leaving customers much more willing to make price-based decisions.

Our research suggests that consumers will be more receptive to cable voice offerings than many investors believe. A proprietary Bernstein research study in 2003 underscored this receptivity. Our Consumer Telephony Preference Study revealed that more than half of all customers surveyed indicated a preference for voice service from their cable operator if it would mean a 30% discount to the RBOCs' price. The study found that over a quarter of survey respondents expressed a preference for their cable op-

erator over their RBOC for voice telephony service even when no discount or battery backup capability is offered (see Exhibit 2).

Exhibit 2 **Results of Bernstein Consumer Telephony Preference Study: Share of Preference for Cable VoIP (Weighted-Average of All Cable Operators)**



Source: Bernstein Consumer Telephony Preference Study.

Early offerings from Time Warner Cable and Cablevision point to flat-rate pricing plans with discounts in the range of 30% versus the Bells. While flat-rate pricing will erode margins for all players, the RBOCs simply cannot afford to match cable on price, suggesting that material share gains for cable are all but inevitable.

Cable's high "share of preference" mirrors market penetration achieved in cable's most mature circuit-switched phone markets. Notably, Cox has achieved 35% share of consumer primary lines in its oldest markets (around five years old). In addition, at the time this publication was going to press, Time Warner Cable had reached over 12,000 subscribers in its relatively small Portland, Maine, system, a penetration rate of 10% of homes passed, and 12% of subscribers, in only nine months.

We therefore conclude that consumer acceptance of cable telephony — and therefore willingness to switch from their RBOC — is likely to be stronger than generally expected.

Low Capital Cost and High Marginal Returns

The attractive marginal economics of VoIP deployment are a second key reason behind cable operators' enthusiasm for the new service.

VoIP service is far less capital-intensive than its precursor, circuit-switched cable telephony. First, the equipment itself is much less costly, with a 100,000 line "softswitch" costing only a few million dollars, even after fully allocating engineering, installation, and fixed-interconnection costs. Second, VoIP equipment — unlike a Class 5 switch used in circuit-switched telephony — is relatively location-insensitive. That is to say, a softswitch can be located almost anywhere. For example, Time Warner's softswitch for Portland, Maine, is located in Western New York. And Cox will use a single switch in Atlanta to serve markets across the Mid-Atlantic. As a result, multiple markets can be served by a single softswitch installation, providing much higher capacity utilization during the ramp-up phase of the business, and much lower overall capital investment. Third and finally, the customer premise equipment — primarily a "media terminal

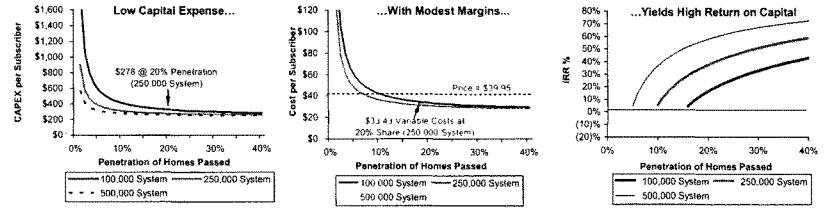
adapter" that is attached to a cable modem — is much less costly than the network interface required for circuit-switched telephony.

The result is a much lower cost profile for VoIP than for circuit-switch-based cable telephony. We estimate that each new VoIP subscriber costs less than $300 to provision.

In an effort to bring a VoIP offer to market quickly, most cable MSOs will initially rely on third parties to handle interconnection, termination and transport. For simplicity, that will most likely mean deals with the long distance carriers AT&T, MCI or Sprint. Only these carriers have interconnection agreements already in place across the country. Time Warner has, in fact, already entered into such an arrangement with Sprint.

The downside posed by such arrangements is that of high variable cost and commensurately low EBITDA margins. But even during this high-variable-cost "Phase I" stage, low capital-investment requirements mean that returns on incremental capital will be attractive. We expect returns ranging from up to 30% for a 250,000 home cluster, to as high as 50% for large clusters of 500,000 homes (see Exhibit 3).

Exhibit 3 VoIP Capital Expense, Variable Costs and IRR



Note: Assumes VoIP in sixteen clusters/systems. Assumes 38.5% marginal tax rate, four-year average asset life for depreciation tax shield

Source: Bernstein estimates and analysis.

As volumes increase, expect operators to take this traffic onto their own leased lines, reducing the variable cost of providing service dramatically, and further improving returns.

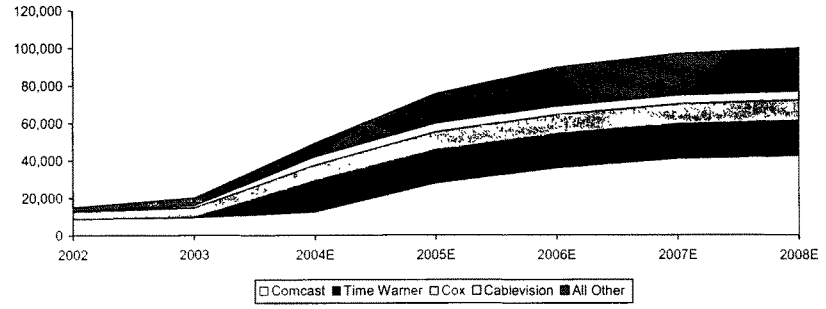
VoIP Cable Telephony Rollout Pace Is Accelerating; AT&T's Entry Will Stimulate Market

These attractive marginal economics go a long way towards explaining cable's enthusiasm for VoIP. Over the past few months, almost all of the major cable operators have jumped on the VoIP bandwagon and have announced accelerations of their VoIP rollout plans. Many now expect to have VoIP service available to most or all of their footprints by the end of 2005. Notably, Cablevision has been the most aggressive in rolling out VoIP: Its Optimum Voice service was available to 100% of cable modem subscribers by the end of 2003. Time Warner Cable has also announced new rollout plans, and is scheduled to have almost all of its markets provisioned by the end of 2004, with a midyear launch of the service in New York seen as likely. Cox and Charter have both recently increased the number of markets they plan to launch in 2004. Only Comcast, which appears to prefer waiting until it can pursue an all-facilities-based strategy — bypassing the interconnection-based market entry strategy described above — is likely to move more slowly, with most of its major market launches expected during 2005 and 2006.

We estimate that cable telephony service (either VoIP or circuit-switched) will be available to 75 million homes by the end of 2005, up from

20 million today, and will be available to almost 90% of homes by the end of 2008 (see Exhibit 4).

Exhibit 4 Cable Telephony Homes Passed (Thousand)



Source: Bernstein estimates and analysis.

AT&T's recent announcements that it will begin offering VoIP service is likely to raise awareness of lower-priced, flat-rate calling plans (through advertising, consumer advocacy press, etc.), and help "legitimize" the market perception of flat-rate VoIP-based calling plans.

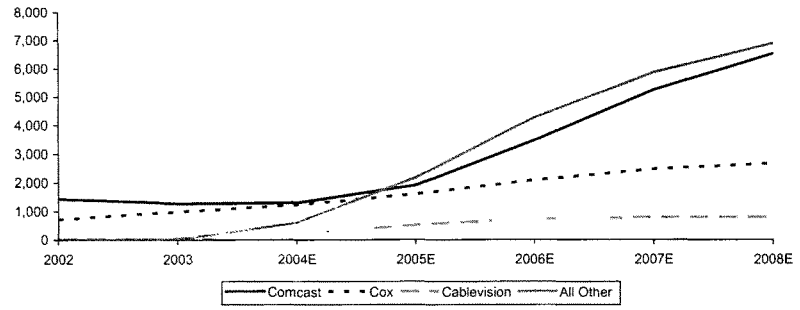
Although AT&T's VoIP offering will compete directly with cable, the value proposition, ironically, will be limited to cable modem subscribers only (at least today). For DSL subscribers — the other technologically reachable segment — the value proposition is much weaker, since a DSL line currently requires that a customer retain its primary line phone service from the RBOC (with the exception of Qwest).

The cable operators' physical plant provides a significant advantage over the long distance carriers', however. The ability of the cable operator to preempt through voice service bundling and price is significant. Moreover, cable continues to enjoy the unique advantage of what is essentially free advertising for its services, by virtue of its control of the video programming into the home.

Faster Rollout Means Faster Growth for Cable...

Our outlook for accelerated rollout schedules, coupled with strong consumer demand, result in our having a faster-than-consensus growth outlook for cable telephony subscribers. We expect cable phone penetration of approximately 17% of addressable homes, or 16.8 million cable phone subscribers by 2008 off a base of 2.3 million in 2003 (see Exhibit 5).

Exhibit 5 **Cable Telephony Subscribers (Thousand)**



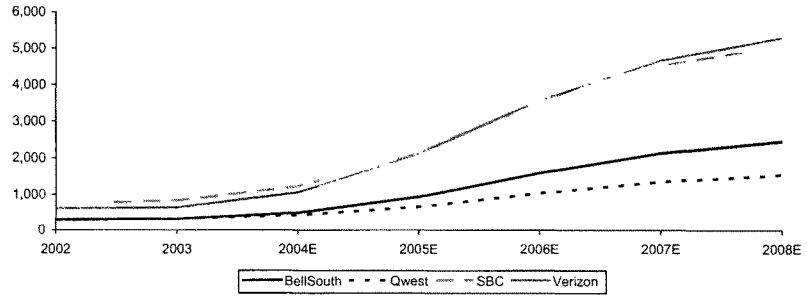
Source: Bernstein estimates.

The upside for Cablevision is especially great, given its early start in late-2003. Moreover, its early market entry should pay dividends in the form of higher eventual market share. Cox should benefit from its existing knowledge base in circuit-switched telephony, and capture higher eventual market share than peers (although the change in growth rate is more modest as Cox has already captured a large proportion of the upside from telephony). Comcast is on track to be among the last to deploy VoIP telephony on a large scale, but its large, well-clustered systems are likely to give it a strong advantage in aggressively pushing the service.

...And Significantly More Risk to the Bells

Faster subscriber growth for the cable operators translates directly into faster access-line losses for the RBOCs (see Exhibit 6). Indeed, line losses to cable telephony are likely to dwarf share losses seen during the height of AT&T's and WorldCom's UNE-P assault. The first wave of line losses to cable, resulting from circuit-switched rollouts at the old AT&T Broadband systems and at Cox, has to a large extent run its course, although penetration in those markets continues to increase.

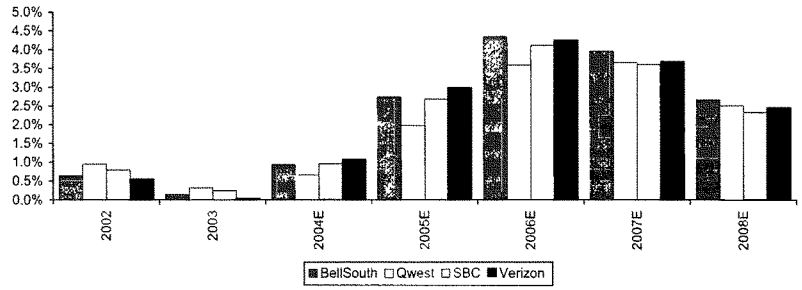
Exhibit 6 **RBOC Cumulative Line Losses to Cable Telephony (Thousand)**



Source: Bernstein estimates.

Because of different deployment schedules at individual cable operators, and different overlaps between the territories of RBOCs and MSOs, cable VoIP will impact each RBOC slightly differently. In the early going, Verizon is expected to feel the greatest impact. It has the most exposure to Cablevision and Time Warner Cable, the two most aggressive MSOs in deploying VoIP technology. Longer term, however, the cumulative share losses will likely converge with no individual Bell appearing significantly more disadvantaged than the others. Relative to the timing of the impact, we see 2005 as the first year of material telephony share losses, with the rate peaking in 2006 at over 4% of primary lines lost (see Exhibit 7).

Exhibit 7 RBOC Incremental Lines Lost as a Percentage of the Total



Source: Bernstein estimates.

All-You-Can-Eat Pricing: A Double-Edged Sword

Cable telephony rollouts will impact pricing as much as they do subscriber share. Existing and planned VoIP rollouts are characterized by the introduction of "all-you-can-eat," or flat-rate pricing plans, featuring a single price for unlimited local and long distance minutes. Calling features such as call waiting and caller ID — currently significant, pure profit centers for the RBOCs — are generally included for no incremental charge (see Exhibit 8). These packages are expected to accelerate the trend begun by the UNE-based long distance competitors towards flat-rate-pricing plans.

Exhibit 8 Comparison of All-You-Can-Eat Pricing Plans

	RBOC Flat-Rate Pricing Plans			
	Verizon Freedom Package	SBC All Distance Package	BellSouth Answers Package	Qwest Choice
Market	New York City	California	Atlanta, GA	Colorado
Offer	$59.95/Month	$48.95/Month	$54.99/Month	$45.99/Month
Notes:	Non-Quality-of-Service VoIP Plan Launch Scheduled for 2Q:04.	Currently Offers VoIP for Business Customers.	Currently Offers VoIP for Business Customers.	VoIP Offering Launched in MN; No Pricing Details. Launch to All 14 of Its States in 2004.

	Long Distance Flat-Rate Pricing Plans	
	AT&T One Rate	MCI Neighborhood
Market	New York City	New York City
Offer	$54.95/Month	$49.99/Month
Notes:	CallVantage VoIP Plan Launched in NJ and TX at $39.95; Plans Announced for 18 States.	Currently Offers VoIP for Business Customers.

	Cable Flat-Rate Pricing Plans			
	Cablevision	Time Warner Cable	Cox	Comcast
Status	Launched to Entire Footprint, HSD Subs Only	Launched	Launched	In trials
Current Markets	New York	Portland, ME and Raleigh, NC	Roanoke, VA	Trial in Coatesville, PA
Offer	$34.95/Mo. Flat Rate W/ HSD Service	$39.95/Mo. Flat Rate	$49.95/Mo. Flat Rate	TBD
Announced Launches	Currently No Plans to Expand Availability to All Subs.	Expects to Launch Most of Footprint in 2004 (31 Markets in 27 States).	Additional Markets Planned in 2004.	Additional Trials in Philadelphia, Springfield, MA, Hartford, CT and Indianapolis, IN in 2004. Expect Broad VoIP Launch in 2005.

Source: Corporate reports.

Flat-rate pricing plans are likely to accelerate price erosion and increase churn in the local/long distance voice market. Pricing is much more transparent to the consumer than in the per-minute pricing era, when prices were obfuscated by time-of-day rate bands, distance promotions, and complex taxes. With flat-rate pricing, prices are immediately comparable across carriers. This will erode returns for all telephony operators.

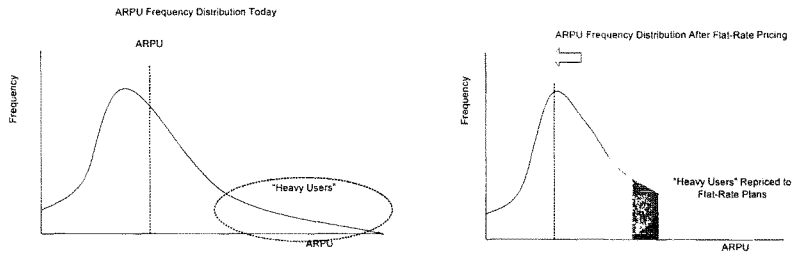
For cable operators, the key advantages of the all-you-can-eat pricing model are speed-to-market and lower costs. Per-minute pricing requires a massive IT infrastructure to support integrated call detail recording, customer service, billing and remittance processing systems. None of that is necessary in a flat-rate world. In addition, as much as half of incoming calls to phone company call centers relates to call detail on bills. By replacing per-minute pricing with a single-line item, operators radically reduce the cost of customer service.

This simpler business model thus accelerates the near-term prospects for cable telephony, but possibly at the cost of the long-term profitability of the telephony market overall.

Pricing Impact on the RBOCs Will Be Painful

Flat-rate pricing will have a direct impact on average-revenue-per-user (ARPU), which will cut into revenue and earnings even without any decrease in the number of subscribers. The downward pressure on ARPU results from the re-pricing of the "heavy-user" segment of the revenue curve down to the highest available all-you-can-eat price offered (see Exhibit 9).

Exhibit 9 Implications for RBOL Consumer Voice ARPU



Source: Bernstein analysis.

The shift towards all-you-can-eat pricing plans can thus be expected to further pressure RBOC revenues and margins, and is illustrative of the broader "incumbency dilemma" facing the Bells. Efforts to retain share — especially through price cuts to their huge installed base — can be expected to cost vastly more than they save in retained market share. This very dilemma defined the slow erosion of AT&T's once mighty consumer long distance business during the 1980s and 1990s. There, the annual and inexorable losses of consumer market share were tiny by comparison to the precipitous losses that would have been incurred by price cuts to the huge installed base in order to keep them. AT&T was, therefore, left with the unenviable task of managing to a slow and steady decline, or "death by a thousand cuts."

Regulatory Lines Will Have to Be Redrawn for VoIP

At the heart of the debate over how VoIP will be regulated are public policy goals such as an equal competitive footing for market participants, methods by which carriers compensate one another for transiting each others' networks (inter-carrier compensation), continued funding for universal telephone service, access for law enforcement agencies (CALEA), and enabling 911 service.

The regulatory framework for VoIP remains fluid, but is not likely to significantly alter the deployment timetable for cable-based VoIP. While the exact designation the FCC will assign to cable telephony service remains a question, the likely regulations to which the service will be subject are more predictable. Specifically, we believe VoIP services that transit the Public Switched Telephone Network (PSTN) will be subject to the same inter-carrier compensation rules as traditional phone calls. In addition, where a phone number is assigned compliant with the North American Numbering Plan, assessment of universal service subsidies will likely be mandated. And, lastly, for services that function as, essentially, switched line replacement services, CALEA compliance will be enforced.

Despite the expectation that VoIP service providers, and the cable MSOs, specifically, will be subject to telecom service regulations, we do not expect such regulation to slow either the deployment or adoption of IP-based services or impact expected returns (our return analysis presented above already assumes inclusion of these "taxes"). Indeed, recent moves by

the RBOCs to embrace VoIP can be viewed partially as regulatory maneuvers to ensure that the FCC treats all forms of telephony equitably.

Investment Conclusion

For the cable operators, VoIP telephony represents an incremental source of revenue and earnings growth. The residential telephony market is vastly larger than the video services market (approximately $65 billion versus approximately $35 billion) so even modest market-share gains for the cable operators can translate into a meaningful impact on top-line growth. We forecast that telephony will contribute more than 2% to our 9-10% 2004 to 2008 revenue CAGR for Comcast.

The cable operators who have the least exposure to telephony (Cablevision, Time Warner and Charter) have been the most aggressive in rolling out VoIP service, and have the most to gain in the short term, as they start from essentially zero. In the longer term, the operators who have existing telephony businesses (Comcast and Cox) can leverage their expertise into higher eventual telephony penetration, neutralizing the advantage of the early entrants. All operators in the sector will benefit from an acceleration in overall growth, and we recommend investors overweight the cable sector.

For the RBOCs, the advent of additional competition from cable telephony exposes them to both additional share losses and price erosion. Access lines lost to cable IP-based telephony could dwarf the losses to UNE-based competitors. The RBOCs most impacted by cable VoIP deployments initially will be those most exposed to Cablevision, Time Warner and Charter. Eventually, RBOCs are likely to experience equal degrees of competitive impact, as RBOC footprints overlap more or less randomly with those of the many cable operators. We remain cautious on the Bells, and believe that increasing competition from wholesale-based competitors, wireless substitution and cable telephony outweigh the potential benefits of growing employment, abating share loss to wholesale-competitors and an improving regulatory landscape. Thus, we recommend investors market-weight the telecom sector to balance the near-term improvements in fundamentals with the longer-term risks from cable.

Valuation: The Bells

There are few value plays in the telecom services sector and the Bells are not among them. On an earnings basis, both SBC and Verizon trade above their long-term average relative price-to-forward earnings multiples. BellSouth trades essentially in line with its relative earnings multiple and Qwest has no earnings and thus no multiple against which to compare. Similarly, on an EV/EBITDA basis, none of the firms look particularly cheap, with all trading in the 5.0-6.0x range on both 2004 and 2005 estimates of EBITDA. Finally, only on a discounted-cash-flow basis do any of the Bells screen attractive, and then only when long-term cash flow generation is considered. On near-term multiples of equity free cash flow, the Bells are trading at multiples in the 10x to 12x range. The only metric against which the Bells appear attractive is their dividend yield spread to the S&P 500, against which metric both SBC and Verizon — the two most expensive Bells on earnings and EBITDA — screen attractive at 1.85 and 0.87 standard deviations above their five-year averages, respectively.

The MSOs

We value the MSOs on a sum-of-the-parts basis. We value the core cable businesses on a blend of forward 12-month EV/EBITDA multiple, and EV/EBITDA multiple relative to the S&P 500 price to forward earnings. We value other consolidated and nonconsolidated operations (including entertainment and sports cable networks) and nonpublic equity investments on various bases as appropriate, generally based on their own industry norms, primarily including EV/EBITDA multiples and value per subscriber. Publicly traded investments are carried at current market value.

Of the cable operators under our coverage, we rate both Comcast and Cox outperform. Comcast is our top pick, with its combination of strong fundamentals and attractive valuation. On a cable-only basis, Comcast currently trades at 8.9x current year EBITDA, a discount to Cox's multiple of 10.2x, its own valuation history, and relative to the S&P 500. Comcast also looks attractive based on free-cash-flow multiples; with unlevered FCF expected to grow at an average 15% per year from 2005 to 2008, we believe there is significant upside to Comcast's current 12x multiple on 2005 unlevered free cash flow. Cox is also attractive, currently trading below one standard deviation less than its historical average valuation relative to the S&P 500. We have reservations about Cablevision, particularly due to the ongoing risk associated with its Voom DBS business; we rate the stock market-perform.

Risks

The most significant risk to our negative midterm outlook on the Bells and an important but not necessarily paramount one to our bullish case on the cable operators is that cable telephony is either slower to be deployed by the MSOs or gains share more slowly than currently anticipated. In the absence of cable telephony share losses in the range predicted, the Bells have the potential to show sustainable earnings growth and could likely avoid the significant expenditure currently anticipated (but not necessarily included in full in our models) for a midterm Fiber-to-the-Premise or Fiber-to-the-Curb deployment to a significant portion of their footprint.

Introduction: The Three Flavors of VoIP

Overview

At its essence, VoIP is a service, not a technology. In this Black Book, we focus exclusively on consumer VoIP telephony services, and their impact on the Regional Bell Operating Companies (RBOCs or Bells) and the major cable operators (Multiple System Operators, or MSOs). We deal with the technology aspects of VoIP at a high level only, with a focus on how this technology directly affects the economics of the RBOCs and MSOs.

In this introductory chapter, we describe the elements of a VoIP system, and identify three unique "flavors," or business models, of consumer VoIP. Each is defined by a different "architecture," based on how the call is routed to its destination. These routing alternatives vary as to whether the call travels over the public Internet, a private network, or over the traditional public switched telephony network (PSTN). Each model carries with it very different economics, and each offers different service characteristics for consumers. We focus in particular on cable's unique version of VoIP, in both early "first-to-market" resale deployments like Cablevision's or Time Warner Cable's, and in longer-term facilities-based models like that which we expect from Comcast.

We further note that, rather than being simply a cheaper version of telephony, VoIP could well evolve into a premium service, with features and functionality beyond that available over the traditional circuit-switched architecture of the Bells.

Background: What Is VoIP?

Voice over Internet Protocol (VoIP) technology takes a data-centric view of voice communications. Rather than providing a dedicated circuit — as would a circuit-switched telephony network — a VoIP system carries voice in packets that are added to existing data streams, largely reusing equipment and facilities already in place to serve the public Internet or an existing high-speed data business. In its simplest form, a VoIP network requires little more than a telephone connected to a compatible broadband modem.

The designation "VoIP" refers to a call packetization scheme — the method by which information is broken into units for transmission over a communications network — and does not necessarily suggest that the voice call itself is routed over the public Internet. IP-based voice signals are converted into digital packets, sent over a routed network (alongside other voice and data packets), and then reassembled at the termination point.

VoIP is being deployed in both the consumer and business markets. On the business side, the key benefit is the ability to commingle voice and data traffic on a corporation's existing local area networks and wide-area network to make network management more efficient and, of course, minimize the expense of managing redundant network facilities. On the consumer side, the benefit of all flavors of VoIP is expense reduction, potentially including the bypass of long distance toll charges.

From a service provider's perspective, VoIP offers three significant advantages over circuit-switched telephony. First, VoIP equipment is much lower-cost than that required for circuit switching. Second, the placement of

VoIP's switching equipment is less location-sensitive, making it possible to share equipment across wider areas, and in much smaller markets, than is practical with circuit-switching. And third, VoIP offers the potential of greatly expanded feature/functionality relative to circuit-switching.

On the downside, because IP doesn't dedicate a connection path, quality issues arise when packets are lost or delayed during transmission. Until recently, these service-quality concerns had stalled adoption and deployment of VoIP services by major service providers. In addition, the IP protocol was initially limited in its ability to support the vertical services consumers and businesses demand, such as directory assistance, caller ID, call waiting and CENTREX. With new routing and voice-sampling algorithms, the quality and feature issues now appear to be largely resolved, driving an acceleration in the rate of both demand and supply for VoIP services.

The Elements of a Cable VoIP System

For cable operators who have already made the investment in two-way capable networks (required for the high-speed Internet access business), the incremental investment necessary for telephony using VoIP is relatively small. In the subscriber's home, a cable modem with a built-in phone jack (a media terminal adapter, or MTA, that packets the voice signal) replaces the current modem, typically at a total cost of around $100, or perhaps $50 more than a regular cable modem. Installation is relatively straightforward: The subscriber plugs the MTA into his or her broadband modem and plugs the phone into the MTA (or, instead, connects the MTA into a phone jack in the wall, thereby "lighting" the rest of the phone jacks in the house).

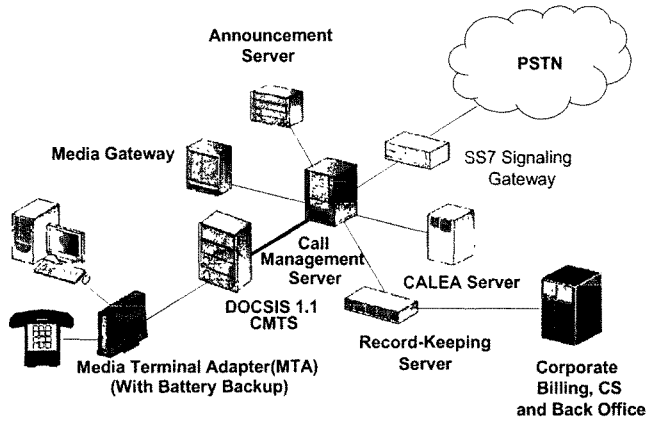
In the cable headend, the data stream terminates at a cable modem termination system (CMTS), which is already required to provide high-speed Internet access service. In some cases, the CMTS chassis requires new line cards — at an estimated cost of $38 or so — to upgrade from a first-generation DOCSIS 1.0 CMTS to a newer DOCSIS 1.1 or 2.0 CMTS,[1] a transition that is already largely complete at most cable operators. The DOCSIS 1.1 standard allows the prioritization of voice packets over nonvoice packets, eliminating the latency and echo effects that plagued early VoIP implementations (and that still characterize basic VoIP services like that of Vonage).

The Softswitch

At the center of any VoIP network is a "softswitch"— really a router with software emulation of a switch (hence the name). In a distributed softswitch architecture, individual devices or servers handle the various tasks of a Class 5 telephony switch. A call management server at a regional switching center is at the center of a cluster of special-purpose servers that emulate the functions of an integrated telephony switch. In order to hand off a call to the public phone network for call completion, a signaling gateway server translates the data stream to Signaling System Seven (SS7), the lingua franca of the Public Switched Telephony Network (PSTN). In a full emulation of PSTN, additional functions include call detail recording — in the form of a record-keeping server — enabling law enforcement access to the network (a CALEA server), etc. (see Exhibit 10).

1 DOCSIS 1.1 (Data Over Cable System Interoperability Specification) is a standard that enables prioritization of voice packets to prevent latency, developed by CableLabs, an industry-funded R&D consortium.

Exhibit 10 **Elements of a Modular VoIP Telephony System**



Source: Sanford C. Bernstein.

In an *integrated* architecture (increasingly the choice of most operators), a single device provides all these various functions, including call setup, signaling, call routing, etc. (Early leaders in this equipment market are Siemens, Nortel, Cisco, and Cedarpoint.)

Location Insensitivity Lowers Cost

The softswitch can be located almost anywhere. Indeed, location-insensitivity is a key advantage of VoIP. Because more than one cluster can share the same softswitch — for example, Time Warner's VoIP deployments in Syracuse, NY, and Portland, ME, are both using the same Cisco softswitch located in upstate New York, and a single softswitch in Kansas City will serve their Memphis and Milwaukee systems in addition to Western Tennessee — it is economically viable to offer service in much smaller markets than would be possible with circuit-switched telephony (where a Class 5 switch would generally be required in each market). Moreover, the ability to share a softswitch — already a lower-cost device than a Class 5 switch — means that fewer are needed, and capacity utilization is inherently better.

Investors should note that distance-traveled for switching does not compromise the quality of the connection in any way. Indeed, long call transit routes are also common in calls over the circuit-switched network. For example, business travelers using a New York-based mobile phone while traveling in Los Angeles will typically have their calls routed through a switch in New York, even if they are calling the relatively short distance to San Francisco.

The Product Advantages of VoIP

VoIP has numerous product advantages over the traditional circuit-switched telephony service. Although VoIP is currently being positioned as a discounted phone service (for simplicity), many VoIP-enabled services may one day garner premium prices.

The fact that VoIP is a software-defined product means it is much easier to enable new features and functions than is true of the hardware-based circuit-switched platform. For example, turning on or off second phone lines at specific times of day (say, in a teenage daughter's room after 10 p.m.), enabling unique ring tones for different inbound callers, blocking calls from specific users, or dynamically provisioning second lines are all capable of being provisioned by the user through a Web interface. The integration of video telephony — the long-imagined picture phone — is vastly easier on a network that is already designed to deliver streaming content — i.e., video.

Similarly, sound quality can be "dialed" up or down as needed, potentially to levels well above those possible in today's circuit-switched network. The sound quality of a VoIP call is directly attributable to the number of samples per second taken in the packetization process and coding scheme (codec) employed. Bell Labs has mathematically demonstrated that the minimum number of samples per second required to faithfully reproduce a signal is equal to twice the highest frequency being reproduced. Traditional analog voice is sampled 8,000 times per second, allowing frequencies up to 4kHz — lower than the highest frequencies in the human voice, and well below those in music (high-quality speakers, for example, deliver frequencies up to 20kHz). In turn, each sample is encoded to 8 bits, so a traditional voice call therefore consumes 64Kb/s, a traditional DS0 ("DS-zero") in telecom parlance. Cellular telephone systems generally sample far less frequently, often only 1,200 times per second (requiring only 9.6Kb/s), and therefore truncate even more of the upper frequencies of the human voice, resulting in noticeably poorer sound quality.

By contrast, sampling rates in a VoIP world can be adjusted to fit the need of the user. We believe the cable MSOs will settle on codecs providing sound quality indistinguishable from that offered on the RBOCs' circuit-switched networks, and will eventually offer services that sound considerably better. At the same time, Internet telephony — those forms of VoIP that travel over the public Internet, rather than a dedicated network, as described below — are likely to initially employ lighter codecs (to reduce latency), to the detriment of voice quality.

Three Flavors of VoIP

While the technology behind VoIP is relatively consistent, as described above, there is greater diversity in VoIP business models. The key issue is the way calls are actually routed once they are encoded as Internet packets. These routing alternatives vary, based on whether they travel over the public Internet, private networks, or over the traditional public switched telephony network, and where in the call they jump from one of these networks to another.

It is useful to think of consumer VoIP-based voice services in three flavors:

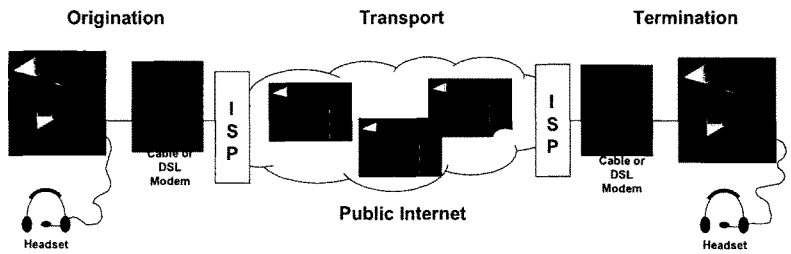
- **Computer-to-Computer telephony** (e.g., Skype, Pulver.com, or voice-enabled Instant Messaging) is originated on a computer, is transported via the public Internet, and is terminated on another computer.
- **Internet telephony** (e.g., third-party carriers such as Vonage) originates via computer — or phone connected to a modem — is transported via the Internet, and terminates on traditional phone lines (the PSTN).
- **Cable telephony** originates via phone (connected to a modem), but is generally transported via the public switched telephony network, and is terminated on traditional phone lines.

All three are "VoIP," but each is technologically distinct.

Type 1: Computer-to-Computer Telephony

Computer-to-computer (C-to-C) based telephony is a software-based solution offering users the ability to bypass domestic and international long distance toll and local access fees by leveraging their existing high-speed Internet service provider (ISP) connection to the Internet (see Exhibit 11).

Exhibit 11 Computer-to-Computer VoIP Telephony Schematic



Source: Sanford C. Bernstein.

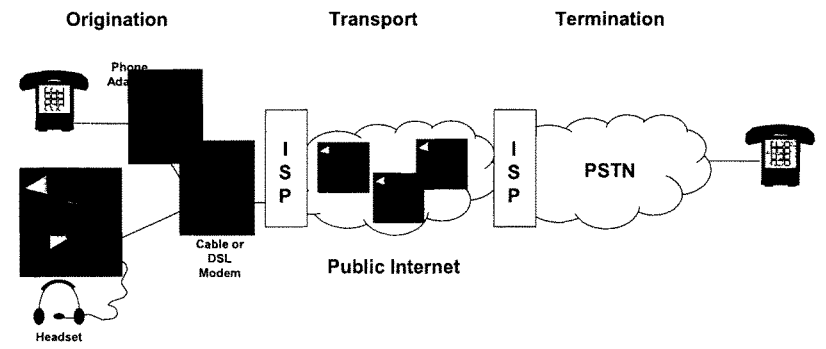
Using this technology, the originating caller attempts to establish a voice "session" with the intended recipient through an instant-messaging-like interface, whereby the availability of the recipient (on-line *and* available) is queried, interest in a voice conversation confirmed, and the "connection" established.

Pitfalls of the C-to-C VoIP medium include lower voice quality than found on the circuit-switched telephone network — the quality is subject to significant latency and jitter as the public Internet becomes congested at peak times — and lack of backup power in the event of a blackout (unless both parties' PCs and cable modems are connected to uninterruptible power supplies). The current leader in C-to-C VoIP is Kazaa/Skype, though AOL's version 9.0 software does include voice Instant Messaging, and is likely to play a growing role.

Type 2: Internet Telephony

Internet telephony shares many features with C-to-C VoIP, except that: (1) The call typically terminates on the public switched telephony network (PSTN), and (2) the caller can originate the call through a standard telephone handset connected to an analog-to-digital telephone adapter, in turn connected to the customer's cable or DSL modem rather than only through a PC. Once originated, an Internet telephony call travels over the public Internet (in order to bypass long distance toll charges) to a local Point of Presence (POP) in the terminating market. From the POP, the call is routed through an ISP (Internet Service Provider) onto the public switched telephony network (most likely the RBOCs' local network, but possibly that of another local operator) and terminated at the recipient's premise. Exhibit 12 provides a schematic of the most common Internet telephony networks. Vonage and Packet8 (EGHT) are the two leading providers of Internet telephony service today.

Exhibit 12 **Voice over the Internet Schematic**



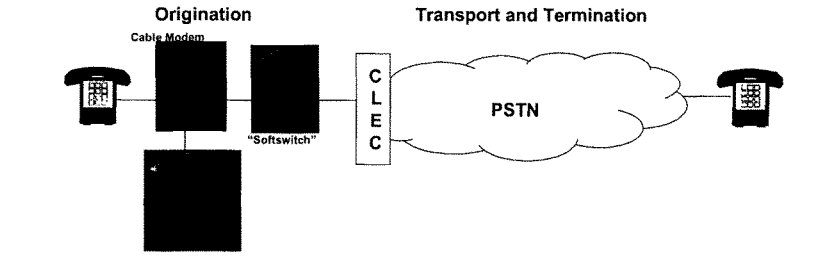
Source: Sanford C. Bernstein.

Type 3: Voice Over Cable

Cable's version of VoIP represents the second generation of cable telephony, following circuit-switched deployments of cable telephony by Cox and AT&T Broadband (now Comcast). To-date, nearly every major cable MSO has stated its intention to launch a VoIP service in the next year, with Cablevision leading the pack with its 3Q/4Q:03 New York Metro area deployment.

VoIP cable telephony is distinguished from the two services described above in that, upon leaving the cable MSOs network through a softswitch, it is handed off to the PSTN at the earliest possible point (see Exhibit 13). Cable's version of VoIP does not travel via the public Internet. Because voice packets can be prioritized ahead of other data traffic on the cable operator's own network (the DOCSIS 1.1 Packet Prioritization standard), the sound quality for VoIP via cable is likely to be indistinguishable from that of a traditional circuit-switched RBOC voice call.

Exhibit 13 **Cable VoIP Telephony Schematic - Phase 1**



Source: Sanford C. Bernstein.

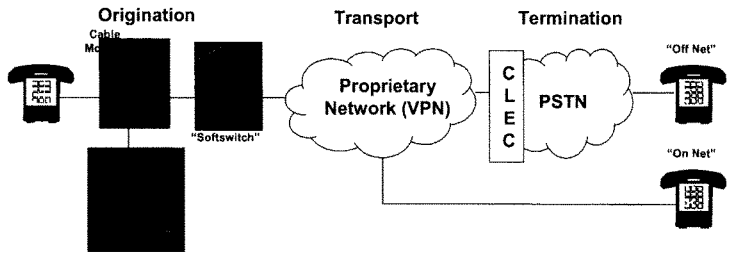
Nearly every major cable MSO intending to deploy VoIP has already begun to deploy DOCSIS 1.1 equipment in their headends, and most legacy cable modems can be passively upgraded to the new standard via software "pushed" from the headend. The other forms of VoIP described above do not support the DOCSIS 1.1 prioritization methodology and, thus, cannot deliver voice quality at parity with cable VoIP.

Cable VoIP: Phase 2 (After They Get to Scale)

The easiest approach for cable telephony providers today — and therefore the first to be adopted — is to partner with a CLEC for interconnection to the long distance and incumbent local networks. Typical carriage and interconnection charges are in the range of approximately $0.01 per minute for wholesale long distance fees, and $0.006 for terminating access fees (higher if the traffic is intrastate versus interstate).

However, longer term, as the cable companies develop critical mass in their telephony businesses, they will seek to avoid paying wholesale long distance and, where possible, local access charges for terminating traffic. As a result, cable companies will likely build (actually, lease) private networks for carrying their traffic (see Exhibit 14). Indeed, Cox has already made this leap in its circuit-switched telephony business, and now transports its own traffic, and even terminates on-net traffic (i.e., from one Cox customer to another) without interconnection.

Exhibit 14 Cable VoIP Telephony Schematic – Phase 2



Source: Sanford C. Bernstein.

Consumer Demand: Bernstein's Consumer Telephony Preference Study

Overview

Consumer demand for cable telephony is likely to be much stronger than most investors expect. Our 2003 Bernstein Consumer Telephony Preference Study found that consumers are highly receptive to Bell-alternatives for their wired phone service, setting the stage for significant share gains for the cable operators.

Indeed, 26% of households participating in Bernstein's 2003 Consumer Telephony Preference Study reported a preference for their cable operator over their RBOC for voice telephony service even at no discount to their RBOC's monthly price; and, more than half reported a preference for a cable telephony service over an equivalent RBOC offering if a 30% discount were offered. Battery backup powering and further discounts to 40% increased preference for cable voice telephony in our study to almost 60%.

The findings of the study — particularly cable's surprisingly high preference marks even when no discount on price or battery backup are offered — reinforce our bullish view on the cable sector and longer-term caution on the Bells. We forecast that cable will achieve 17% penetration of telephony homes passed, or 15% share of RBOC primary consumer lines, by 2008.

Among cable operators, Time Warner Cable and Cox tended to garner a greater share of preference than other MSOs. Perhaps not surprisingly, Comcast's AT&T Broadband brand name continues to have strong currency in telecommunications, and is preferred to Comcast. Charter commands a lesser share of preference. Among the RBOCs, BellSouth shows a marginally lower vulnerability to inroads from the MSOs than do Verizon and SBC, although that advantage dissipates at higher cable discounts. These differential shares of preference may manifest themselves as a requirement to offer greater or lesser discounts in order to protect market share in-region.

Cable's high "share of preference" mirrors actual results in Cox's most mature circuit-switched markets — where share is now approaching 35% of homes passed — and in Time Warner's Portland, Maine, market, where Time Warner Cable has taken about 10% market share in only nine months.

Despite similarity to real world results, we emphasize that self-reported willingness to switch ("share of preference") is not a direct predictor of market share, as inertia inevitably plays as large a role in behavior as preference. As such, our "share of preference" calculations should not be taken as forecasts of eventual market share, but instead as rough indications of market opportunity and latent demand.

The Bernstein Consumer Telephony Preference Study: Research Design and Objectives

In an effort to gauge the magnitude of the market opportunity for cable-based VoIP telephony services, Bernstein's U.S. Cable and Satellite and Telecom Services teams jointly fielded a proprietary consumer research study of consumer receptivity to, and cross-elasticity for, cable VoIP residential telephony, the Bernstein Consumer Telephony Preference Study.

The study, which was jointly conducted by Sanford C. Bernstein and an independent research organization, Millward Brown Market Research, employed a "discrete choice" design — a variant of conjoint analysis — that forced more than 700 consumer respondents from around the country to "choose" between simulated offers from their specific cable operator and their specific RBOC (Regional Bell Operating Company). Subscribers to direct broadcast satellite (DBS) services were excluded from our sample, as were subscribers to UNE-P based local telephony service providers (e.g., AT&T or MCI).

Recruitment of participants was by mall intercept. Respondents were instructed to assume they could keep their existing phone number (Local Number Portability, or LNP), and their existing telephones. Note that our sample was designed to achieve statistical significance for each cable brand and each RBOC, but — for reasons of cost — not necessarily for each possible combination of each cable operator and RBOC. (For detail on research design and questionnaire, see "Appendix to The Bernstein Consumer Telephony Preference Study," at the end of this report.)

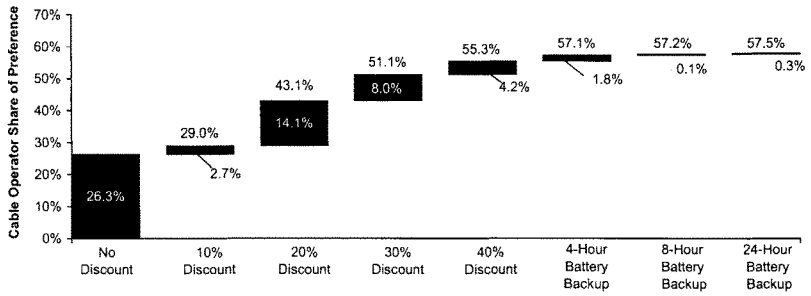
The objective of the study was to determine customers' self-reported willingness to switch at various price points. A range of possible price discounts (from zero to 40% in 10% increments), powering options (from no battery backup to 24-hour battery power), and bundling alternatives were tested.

Findings: Customers Show Ample Willingness to Switch

Perhaps the most striking finding of the study is that more than a quarter (26%) of study respondents report that they would opt for an offer from their cable operator at no discount to their incumbent RBOC's price, even without battery backup in the event of a blackout. Our baseline assumes that the incumbent RBOC is offering a bundle of local and long distance voice services on a single bill with vertical features (Custom Local Area Signaling Services, or CLASS services) such as call waiting, caller ID and call forwarding included as part of the bundle.

Not surprisingly, discounts relative to the RBOC price substantially increase preference for a cable voice offering. More than half of all respondents (51%) report a preference for a cable voice service if offered a 30% discount to the prevailing RBOC bundled price, again without battery backup. Adding battery backup and increasing the discount to 40%, adds modestly to "share of preference," bringing the maximum share of preference to 57.5% (see Exhibit 15). The finding illustrates striking price sensitivity, or alternatively, a decided lack of loyalty, for basic phone service. Customers appear to view their phone service as a relatively undifferentiated commodity.

Exhibit 15 **Share of Preference for Cable VoIP: All Attributes (Weighted Average of All Cable Operators)**



Source: Bernstein Consumer Telephony Preference Study.

The Numbers Look High, But Real-World Experience Suggests They May Not Be Unreasonable

Though the 30-40% discounts tested in our study sound high, they are in line with those being offered in early cable VoIP rollouts. As a reference, Time Warner Cable's $39.99 all-you-can-eat price in Portland, Maine, is a 33% discount to Verizon's $59.99 Freedom plan. Cablevision's $34.99 plan represents a 42% discount.

As a rough "sanity-check" on our numbers, it is instructive to refer to Time Warner's experience in Portland, Maine. As of early March 2004, Time Warner had taken over 10,000 subscribers since its launch in May 2003, in a market of between 85-90,000 total cable subscribers — a penetration rate of 12% of basic video subscribers in nine months.

Cox's experience in circuit-switched telephony provides a second benchmark. In roughly five years since the launch of its first telephony markets (Orange County, California), it has achieved roughly 35% market share of homes passed (41% of basic subscribers) while providing only modest discounts versus the RBOCs' prevailing prices (ARPU remains around $50). By comparison, our study showed a 28% telephony share of preference for Cox without discounting, and a 49% share of preference at a 30% discount (see later in Exhibits 19 and 20). Although the technology is different (circuit-switched versus IP), it is unlikely that most customers are aware of — or moved by — the distinction.

Cablevision has also reported strong early results. In the first four months since launching its VoIP service to high-speed data customers in September 2003, Cablevision reported 29,000 subscribers acquired (2.7% of its 1.1 million cable modem subscribers, who represented its available market at the time). However, Cablevision's results may cloud the industry-demand picture more than it clarifies it. Cablevision's decision to market its service as a second-line service — while largely a regulatory rather than consumer distinction — has temporarily precluded its ability to offer customers the porting of their old number, something that participants in our study were expressly told to assume. At the Western Cable Show in Anaheim, California, last December, Gerry Campbell (SVP Voice Services at Time Warner) indicated that 80-90% of Time Warner's Portland customers are opting to keep their existing phone number, suggesting that demand for

Cablevision's VoIP service may be dampened without LNP. It expects to expand the feature/functionality of the product to full primary line replacement status later this year.

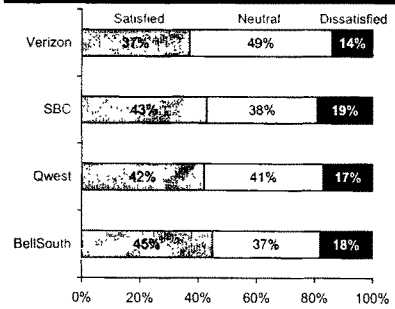
Dissatisfaction and Lack of Differentiation Means Most of the Market Is "Up for Grabs"

The willingness of more than a quarter of all respondents to switch their phone service to cable, even without a discount, was perhaps the most surprising finding of our study. We presume that this finding reflects a latent dissatisfaction (or even antipathy) toward the RBOCs among a sizable portion of their subscriber base. To test the size of this segment — which we refer to as "RBOC Dissatisfieds" — we analyzed its sensitivity to RBOC discounts below the cable MSO's offered voice pricing. Even at an RBOC pricing discount of 30%, more than 17% of respondents continued to indicate their preference for the cable operator. Those must be some very dissatisfied RBOC customers!

A similar antipathy towards cable operators mirrors that held towards the phone companies. In fact, a quarter of our study's respondents remained steadfast in their preference for the RBOC even in the face of simulated discounts of 40% from *both* their cable operator and a long distance provider. This may explain why our study indicates a relatively limited gain in share-of-preference for the cable MSO at discounts above 30%. Just as there is a segment of the market that is unswayed by RBOC discounting, there appears to be a segment that wouldn't give the cable operator their telephony business at *any* price.

These polarized views are evident in self-reported satisfaction levels in our study. Both the RBOCs and the cable MSOs have a sizable group of customers at the extremes of the satisfaction spectrum (see Exhibits 16 and 17).

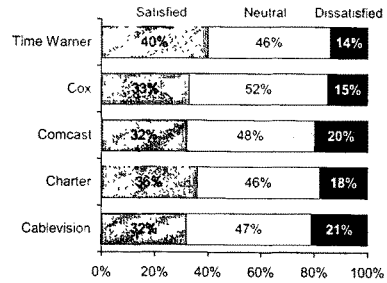
Exhibit 16 Self-Reported Customer Satisfaction: RBOCs



Note: "Top-Two-Box" satisfaction (9 or 10 of 10-point scale), and "Bottom-Five-Box" Dissatisfaction (1-5 on 10-point scale).

Source: Bernstein Consumer Telephony Preference Study

Exhibit 17 Self-Reported Customer Satisfaction: Cable MSOs

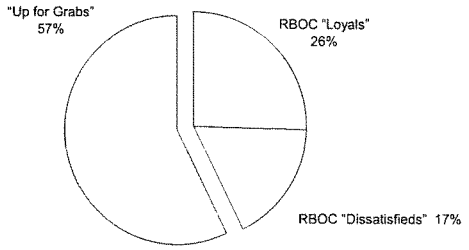


Note: "Top-Two-Box" satisfaction (9 or 10 of 10-point scale), and "Bottom-Five-Box" Dissatisfaction (1-5 on 10-point scale).

Source: Bernstein Consumer Telephony Preference Study.

Combining these two analyses highlights the fact that over half of the market is "up for grabs" and likely susceptible to aggressive discounting and churn (see Exhibit 18).

Exhibit 18 Most of the Market Is "Up for Grabs"



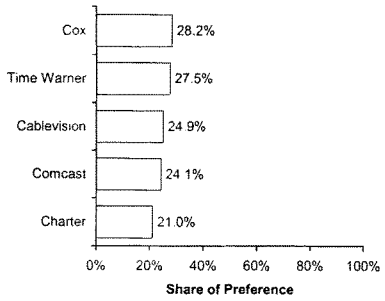
Source: Bernstein Consumer Telephony Preference Study.

Different Cable Operators Elicit Different Loyalties

While the direction of our core findings was similar for all cable operators and RBOCs, there were a few meaningful differences between the individual companies.

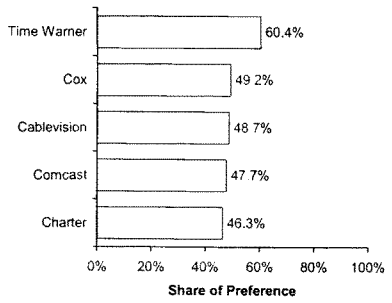
Among cable operators, Cox and Time Warner Cable drew the greatest share of preference (or alternatively, had to offer more limited discounts in order to garner a given share of preference). By contrast, Charter and Comcast appear to need greater discounts to garner the same share (see Exhibits 19 and 20).

Exhibit 19 Cable Operators: Share of Preference at No Discount



Source: Bernstein Consumer Telephony Preference Study.

Exhibit 20 Cable Operators: Share of Preference at 30% Discount

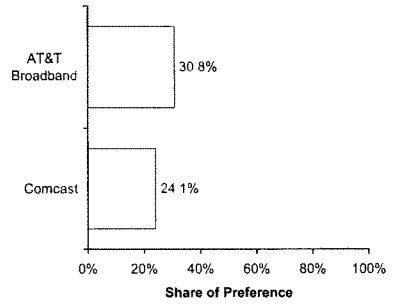


Source: Bernstein Consumer Telephony Preference Study.

Of particular note within the cable operators was the disparity between Comcast's now-retired AT&T Broadband brand name and the Comcast name (among survey respondents in AT&T Broadband markets only). Not surprisingly, we found that the AT&T brand still carries a great deal of currency as a telephony brand; AT&T Broadband (despite a poor reputation

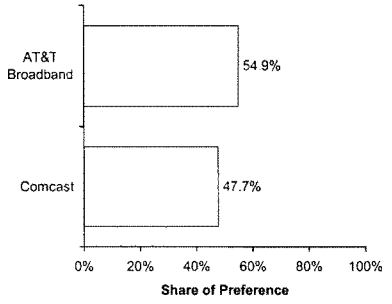
for customer satisfaction overall) had the highest share of voice service preference of any cable brand. This result echoes studies from the telecommunications industry for many years after the AT&T divestiture in 1984 that found that many (even most) customers believed AT&T still provided their local service (see Exhibits 21 and 22).

Exhibit 21 Share of Preference: Comcast and AT&T Broadband Brands (At No Discount)



Source: Bernstein Consumer Telephony Preference Study.

Exhibit 22 Share of Preference: Comcast and AT&T Broadband Brands (At 30% Discount)



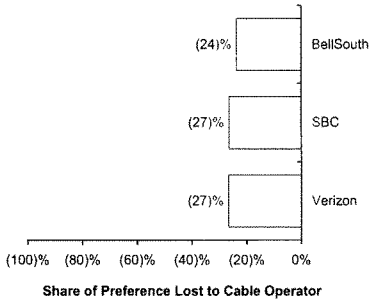
Source: Bernstein Consumer Telephony Preference Study.

No Clear Pattern to RBOC Vulnerability

It is difficult to discern a pattern in vulnerability among the RBOCs. If no discount is offered, BellSouth customers were less likely to report a preference to switch to a cable operator than were customers of Verizon or SBC. On the other hand, when faced with a significant discount (30%), the order reverses: BellSouth customers reported the highest preference for the discounted cable offering. This anomaly possibly reflects a perception (not without basis) that BellSouth's service is good, but its prices are high; that is, there could be a latent dissatisfaction with BellSouth's pricing that is only evident when customers are faced with a "better offer" (real or, in this case, simulated).

In all cases, the absolute numbers are striking. A simulated discount of 30% off of RBOC prevailing rates is sufficient to garner an incremental 25% share of preference for the cable companies among current RBOC customers on top of the 26% who indicate they would prefer to switch to cable even without a discount. Although share losses in the real world will likely be considerably smaller — and happen gradually — the results nevertheless speak to a critical pending decision for the RBOCs: How aggressively will they be forced to discount their voice service offers in order to stem share erosion when faced with a cable telephony foe? (See Exhibits 23 and 24.)

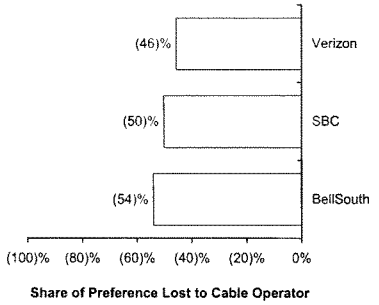
Exhibit 23 RBOCs: Loss in Share of Preference (Cable at No Discount)



Note: Qwest excluded due to insufficient sample size.

Source: Bernstein Consumer Telephony Preference Study.

Exhibit 24 RBOCs: Loss in Share of Preference (Cable at 30% Discount)



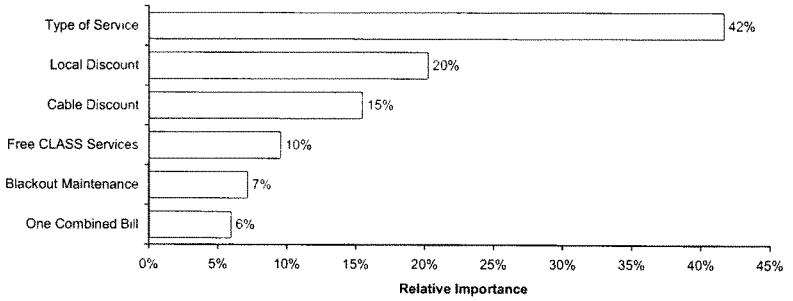
Note: Qwest excluded due to insufficient sample size.

Source: Bernstein Consumer Telephony Preference Study.

Beyond Price

As noted previously, the higher-than-expected willingness to switch even without discounts points to strongly held preferences for different classes of service providers (RBOCs, long distance carriers, and cable operators). Indeed, "type of service" ranks as the most highly correlated variable among those tested, accounting for 42% of preference choice (see Exhibit 25). This appears to reflect a latent, pre-existing segmentation in the market; there are significant pools of customers who hold relatively strong preferences for one or another type of service provider, regardless of price. (Interestingly, the relative importance of the various attributes is similar for the customers of each specific RBOC and cable MSO.)

Exhibit 25 Attribute Importance



Source: Bernstein Consumer Telephony Preference Study.

Nevertheless, "discounts" offered by either the RBOC or the cable MSO are highly correlated with preference, ranking second and third, respectively. Indeed, if we included "free CLASS services" — essentially another

type of discount — then "discounts" collectively supplant "type of service" as the primary variable.

Interestingly, "single bill" is relatively unimportant to consumers. This confirms our prevailing view of bundles: Their power to sway consumers rests almost entirely on the discounts that generally come along with them. Without discounts, bundles tend to be shunned by most consumers. From an economist's point of view, then, bundles can be said to have negative utility; that is, customers generally need to be paid for the disadvantage of taking them. When coupled with significant discounts, however, they can be quite powerful.

Battery Back-Up Power Is Only Moderately Important, and Only If Discounts Are Minimal

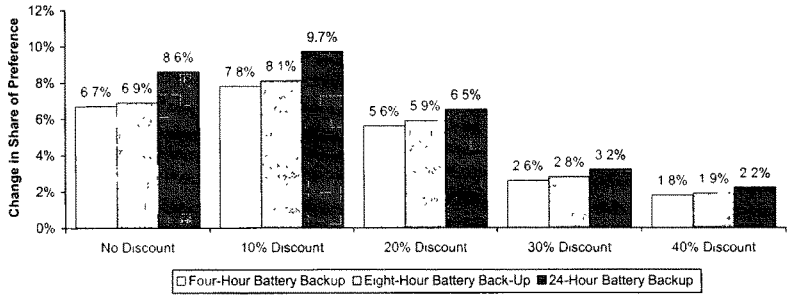
An important consideration for cable operators offering VoIP services has been whether or not to offer powering in the event of a blackout. Battery backup can be provided at the customer premise for relatively modest cost (perhaps $40 per customer), while full network powering can be quite costly (perhaps $15,000 per 500 customer node, or $30 per potential customer).

We tested consumer receptivity to offers — at a range of prices — with battery backup providing four hours, eight hours, or 24 hours of power. Our research suggests that backup power ("Blackout Maintenance") is only moderately important, and becomes almost irrelevant if the service is offered at a discount. (Note that the consumer testing phase of our research pre-dates the summer of 2003 blackout that affected much of the Eastern United States.)

The result suggests that customers are, in fact, making rational trade-offs — they only expect a fully comparable product if they are paying full price or only getting a small discount, but they are willing to forgo certain functionality if the price is right. Much has changed over the past 10 years to reduce consumer dependence on wireline powering. First, wireless phones have reached near-ubiquity, with many customers turning first to their cell phone in an emergency. And, second, as many as 20% of all homes have only cordless telephones, which are unusable in a blackout.

Importantly, there is virtually no difference — at any price point — between four-hour backup and 24-hour backup, suggesting that even minimal protection is perceived to be sufficient for most respondents. (It is also quite possible that there is a significant group of customers for whom emergency powering is very important, but who would not be interested in cable VoIP at any price and therefore show up in our "RBOC Loyals" segment. In that case, catering to their needs would be a waste of money.) (See Exhibit 26.)

Exhibit 26 **Additional Share of Preference for Cable Operator Based on Battery Powering Options**



Source: Bernstein Consumer Telephony Preference Study.

In this light, Cablevision's low-priced offering in New York — which offers battery backup as an option at extra expense — makes sense. Its $34.99 all-you-can-eat service is being offered at a 41% discount to Verizon's comparable $59.99 Freedom plan. At that discount, our research suggests that battery backup would add trivially to market share (although other features, including local number portability and e911 compliance, may prove much more significant). By contrast, Cox is pricing its VoIP service in Roanoke, Virginia, at a much more modest discount ($44.95 per month including battery backup at the customer premises versus Verizon at $59.95). As such, battery backup powering may be justified.

Consumer Research Is an Imperfect Predictor of Eventual Market Share

While the Bernstein Consumer Telephony Preference Study was carefully designed and executed with the intention of testing consumer receptivity to what will undoubtedly be a plethora of cable telephony offers over the coming two years, it was not intended to predict the cable MSOs' ultimate market share of the consumer voice telephony market. We emphasize that self-reported willingness to switch — "share of preference" — is only a weak proxy for what consumers will actually do (after all, it is much easier to check a box than to actually change service providers). The nature of the research — which entails side-by-side comparisons of competing offers — also assumes awareness of all competing offers available, a condition that rarely exists in a crowded marketplace. As such, our "share of preference" calculations should not be taken as forecasts of eventual market share, but instead as rough indications of market opportunity. We also remind investors that initial marketing plans from some cable operators call for marketing only to high-speed Internet subscribers (since a cable modem is a pre-requisite for cable VoIP service), initially reducing the size of the available market.

Conclusion

Among the drivers of our caution on the U.S. Telecom sector (from the perspective of the incumbent players) is our belief that the cable MSOs will be very successful in their efforts to win a material share of the consumer te-

lephony market. That belief is driven, in part, by the finding that consumers show a significantly higher-than-expected share of preference for their cable operator for primary phone service. The relative willingness of consumers to switch from their incumbent RBOC — even if undoubtedly lower than the indicated "share of preference" indicated in our study — illustrates the vulnerability of the Bells to both share losses and price erosion from cable telephony. Conversely, the surprisingly high demand for cable telephony exhibited by our study's participants benefits all cable operators in two ways: First, market share gains may be greater than many investors expect; and, second, cable operators may find they require smaller discounts (relative to the Bells' prevailing prices) to win share than previously expected. Either could drive greater revenue and higher margins than expected. As we have noted in prior research ("Cable's Usage Based Segments: Not All Subscribers are Created Equal," November 24, 2003), telephony is also a critical element in a bundled offering to the most valuable subscribers, and has substantial benefits in reducing churn in the related businesses of high-speed Internet access (HSI) and video. Cable operators with the most limited telephony businesses today — Cablevision and Time Warner Cable — have the most to gain, as they start from an immaterially small base today. On the other hand, Cox and Comcast, the two operators with the largest phone businesses, are seen as better able to exploit the opportunity, neutralizing the advantage to the nonplayers. Relative to the Bells, Verizon is seen as at greatest near-term risk given its overlap with the fastest-deploying MSOs, Cablevision and Time Warner. Longer term, assuming Cox and Comcast reinvigorate their own telephony push later in 2004, SBC is seen as being most disadvantaged.

The All-You-Can-Eat Business Model: A Double-Edged Sword

Overview

The first wave of cable VoIP service launches, from Cablevision, Time Warner and Cox, have borrowed more than just the Internet's technology, they have emulated its pricing model — "all-you-can-eat" for a fixed monthly fee. While there is no technological linkage between VoIP and the flat-rate model, the two have become inextricably tied, and the combination is a powerful one.

Among cable operators, "all-you-can-eat" pricing is at the center of a trend towards simpler and faster implementation of VoIP service. These new stripped-down deployments rely on unlimited-use pricing plans to minimize customer service demands and back-office integration requirements, and they replace elaborate billing systems with a single line item on existing bills. System powering and system architecture are also simpler than previous business models. The net result is a lower-cost, easier-to-deploy platform. The RBOCs, UNE-P-based long distance operators, and even wireless carriers aiming at wireline replacement have all begun offering similar plans.

But the new business model comes at a cost. "All-you-can-eat" pricing threatens to significantly erode overall industry pricing for voice services, and will likely stimulate churn by making it much easier for consumers to price-compare across carriers. The RBOCs will face a particularly stiff headwind, as the re-pricing of the most valuable "heavy users" will compound the economic impact of share losses to VoIP providers.

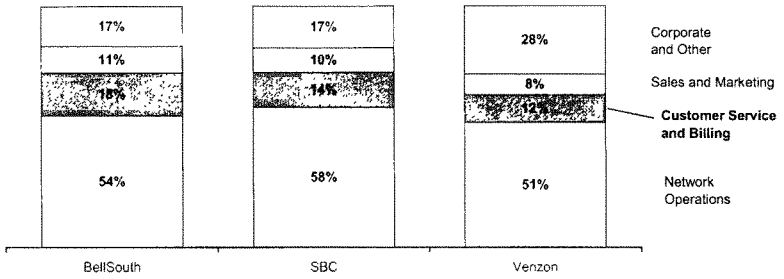
These trends will erode pricing — and returns — for *all* telephony operators.

The Legacy of High Network Costs

For almost a century, leveraging the fixed costs of the network itself was the *raison d'être* of virtually every operating decision for phone companies. The entire concept of charging by the minute reflects the assumption that network resources are scarce and should therefore be rationed.

Since then a huge cost infrastructure has grown around this minute-based billing model. As network costs have fallen, however (a function of advancing technology and increased capacity), the cost of this back-office infrastructure has outstripped the usage-sensitive portion of network costs that it was designed to ration. Today, a typical RBOC's customer service and billing operations account for 12% or more of total expenses (see Exhibit 27). Additional costs stem from a massive IT infrastructure that exists largely in support of the same minute-based philosophy, providing seamless views to customer service representatives and billing and remittance processing systems, all revolving around this charge-by-the-minute philosophy.

Exhibit 27 RBOC Cost Structure



Source: ARMIS and Bernstein analysis.

For cable, building and supporting this infrastructure is enormously costly, with hundreds of millions of dollars in capital for billings systems, customer-service interfaces, and massive integration consulting expenses. Cablevision, Time Warner Cable, and others are therefore turning to all-you-can-eat as a mechanism for avoiding these costs.

Cox and Comcast, by virtue of their significant installed circuit-switched phone businesses, are much more heavily invested in the status quo. They could, therefore, be expected to be cautious about the prospect of stranding this investment in favor of a flat-rate pricing plan. However, Cox is offering all-you-can-eat pricing in Roanoke, Virginia, its first VoIP market, and Comcast is seriously considering all-you-can-eat options.

Flat-Rate Proliferation

Last year, Verizon introduced Verizon Freedom for $59.95 per month, an unlimited local and domestic long distance pricing plan. MCI introduced a similar program called The Neighborhood. Among cable operators, Cablevision and Time Warner Cable are currently offering only flat-rate plans (Time Warner provides call detail to subscribers via the Web) (see Exhibit 28). As a result, both MSOs stand to avoid not only the variable costs associated with customer service, but also the fixed costs associated with the billing platform itself.

Exhibit 28 RBOC, Long Distance and Cable All-You-Can-Eat Bundles

RBOC Flat-Rate Pricing Plans

	Verizon Freedom Package	SBC All-Distance Package	BellSouth Answers Package	Qwest Choice
Market	New York City	California	Atlanta, GA	Colorado
Offer	$59.95/Month	$48.95/Month	$54.99/Month	$45.99/Month
Notes:	Non-Quality of Service VoIP Plan Launch Scheduled for 2Q:04.	Currently Offers VoIP for Business Customers.	Currently Offers VoIP for Business Customers.	VoIP Offering Launched in MN; No Pricing Details. Launch to All 14 of Its States in 2004.

Long Distance Flat-Rate Pricing Plans

	AT&T One Rate	MCI Neighborhood
Market	New York City	New York City
Offer	$54.95 / month	$49.99/month
Notes:	CallVantage VoIP Plan Launched in NJ and TX at $39.95; Plans Announced for 18 states.	Currently Offers VoIP for Business Customers.

Cable Flat-Rate Pricing Plans

	Cablevision	Time Warner Cable	Cox	Comcast
Status	Launched to Entire Footprint. HSD Subs Only	Launched	Launched	In trials
Current Markets	New York	Portland, ME and Raleigh, NC	Roanoke, VA	Trial in Coatesville, PA
Offer	$34.95/Mo. Flat Rate W/HSD Service	$39.95/Mo. Flat Fate	$49.95/Mo. Flat Rate	TBD
Announced Launches	Currently No Plans to Expand Availability to All Subs.	Expects to Launch Most of Footprint in 2004 (31 Markets in 27 States).	Additional Markets Planned in 2004	Additional Trials in Philadelphia, Springfield, MA, Hartford, CT and Indianapolis, IN in 2004. Expect Broad VoIP Launch in 2005.

Source: Corporate reports.

Over the longer term, flat-rate pricing plans are likely to accelerate the overall erosion of the local/long distance telephony business. Indeed, we would point to Sprint's transition to flat-rate-per-minute pricing, when Candice Bergen first touted $0.10 per minute all the time, as the first and most critical step in the transition from oligopoly pricing to damaging price competition. Prices had previously been obfuscated by time-of-day rate bands, distance promotions, and complex taxes. With the advent of flat-rate-per-minute pricing, prices were immediately comparable and easily discounted. All-you-can-eat pricing can be expected to have a similar impact.

A New, Faster Timetable for Cable

For cable operators, a key advantage is speed-to-market. Flat-rate pricing can shave as much as a year off of previously assumed cable VoIP timetables.

Until recently, 2004 was expected to be a testing year for VoIP. Comcast's position as the industry's *de facto* leader had drawn a great deal of attention to its VoIP trial in Philadelphia during 2003. Its announced timetable of technology testing in 2003, followed by market testing in early 2004 in additional markets, had led to an expectation that meaningful revenues from VoIP would not arrive until 2005. Unspoken at the time (simply because it was assumed) was that the model being tested was a call-detail-based system that would replicate the current circuit-switched business model on a lower-cost technology platform.

However, Cablevision and Time Warner are not bound by the same traditions. Cablevision has initially avoided the costs of backup powering and other FCC mandates for primary-line service (including CALEA, the Communications Assistance to Law Enforcement Agencies Act of 1994 requirement to provide wiretap access for the FBI and CIA) by positioning its voice service as a second-line replacement. In contrast, Time Warner Cable deployed a more advanced model in Portland, Maine, with a full complement of primary line capabilities, including compliance with CALEA and e911 requirements. By doing so, it gained the benefit of being able to offer local number portability (LNP), whereby its subscribers can retain their existing phone numbers when they opt to switch to Time Warner's competitive service. Time Warner Cable expects to deploy VoIP services to almost its entire footprint by the end of 2004.

We expect that Time Warner will, with Cablevision, lead the industry in the most aggressive deployment of flat-rate VoIP.

All-You-Can-Eat Pricing: A Double-Edged Sword

It is hard to argue with the assertion that flat-rate pricing will radically lower operating costs for cable operators. Prior analyses of the long distance carriers suggests that as much as half of all customer service call volume is generated from call-detail-related inquires ("I didn't make that call," or "who is at that number?"). We estimate that, for the Bells, the comparable number is approximately one-third. An Internet-like billing model of flat-rate pricing would radically reduce these customer service costs, and all but eliminate incremental billing cost by adding a single line-item to an existing bill.

A near-term risk, however, is that flat-rate pricing will prove most attractive to super-heavy voice users, driving access and interconnection costs well above the potential customer-service savings. Assuming a $0.006 terminating access charge for each minute (most MSOs will probably opt to pay for interconnection, rather than building their own facilities, as the cheapest route to market entry), and a $0.01 per minute wholesale long distance rate (for transport only), a $34.99 per month plan would break even at 3,180 minutes, or 53 hours, of use per month (assuming 50% of usage is LD), a high but not unreachable number for a small, self-selected segment. As noted in a previous chapter, ("Introduction: The Three Flavors of VoIP" as penetration grows, MSOs can move traffic onto leased lines, reducing variable cost significantly. Cox has already done so with its CBR business, and now terminates almost 20% of its own calls without any interconnection.

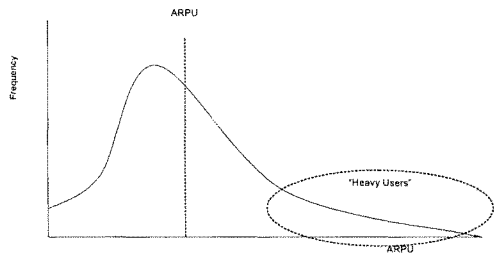
Impact on the RBOCs: Price Erosion Impacts May Be Worse Than Share Loss

The advent of all-you-can-eat voice telephony models and single line-item telephony billing also represents a double-edged sword for the RBOCs. On the one hand, the demise of detailed billing represents a possible longer-term catalyst for customer service process reengineering, as a declining share of inbound calls result from billing-related inquiries. On the other hand, however, the pricing transparency resulting from fixed-price-service offers will inevitably drive aggressive price competition, opening the door for smaller competitors, and eroding the returns for all players. With network operating cost structures that are fixed on anything other than a long-term basis, it is difficult to see how the RBOCs adjust rapidly to falling price recovery per line.

There is a second troubling aspect of all-you-can-eat pricing for the RBOCs: the elimination of heavy users. In today's usage-based system, heavy users — especially of long distance service — contribute a vastly dis-

proportionate share of the revenues. As a result of the "long tail" of the frequency distribution, the mean ARPU for incumbents is well above median averages (see Exhibit 29).

Exhibit 29 RBOC ARPU Frequency Distribution Today

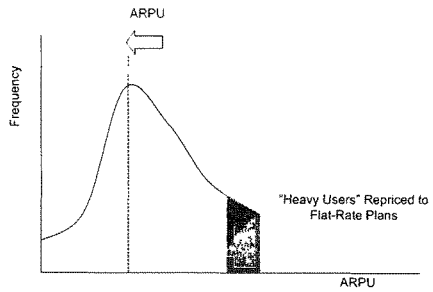


Source: Bernstein estimates and analysis.

Costs, moreover, are largely fixed. As a result, contribution is overwhelmingly skewed towards the heaviest users.

It is exactly these users — by virtue of their outsized bills — for whom flat-rate plans are most appealing. Whether they are lost to competitors' flat-rate plans, or whether they choose one from the RBOCs themselves, their disproportionately high contribution is lost (see Exhibit 30). With this loss, the "long tail" is truncated, and mean and median averages converge. Like the opposite of Lake Woebegone, there is nobody left above average.

Exhibit 30 RBOC ARPU Frequency Distribution After Flat-Rate Pricing



Source: Bernstein estimates and analysis.

Implications for Consumer Voice Pricing

This truncation of the curve will initially apply to local and domestic long distance only (since none of the flat-rate plans currently include international calling, and the current bi-lateral tariff processes that define that market suggest that unlimited usage pricing plans remain a long way off). Heavy interna-

tional callers represent the very extreme of the heavy user value distribution.

But the impact of VoIP will reach these customers as well. Public Internet voice services such as Skype, Pulver.com, and voice-based instant messaging (IM) services all threaten to substitute for calling occasions, even as they leave measured market share untouched. Calling destinations where technology adoption is relatively advanced (e.g. Korea, or parts of India) and where international calling rates are still very high (in many cases, $1 per minute or more) are obvious candidates for this form of arbitrage. In fact, such shifts occur regularly in telecom: email for international fax traffic (once said to account for as much as 50% of all trans-Pacific communications revenues) and wireless for wireline.

Exhibit 31 shows the impact of unlimited usage and feature bundling on our current five-year forecast for average realized local revenue per access line per month for the RBOCs (weighted-average of retail and wholesale local revenue per reported access line).

Exhibit 31 RBOC Revenue per Access Line per Month

	2003	2004E	2005E	2006E	2007E	2008E	CAGR 2003-08E
Local	$38.22	$36.65	$35.09	$33.71	$32.80	$32.01	(3.5)%
Long Distance	$14.03	$11.60	$9.68	$8.14	$6.89	$5.87	(16.0)%
x Steady-State LD Penetration	50%	50%	50%	50%	50%	50%	
= Effective LD ARPU Contribution	$7.01	$5.80	$4.84	$4.07	$3.45	$2.94	(16.0)%
Bundled	$45.23	$42.45	$39.93	$37.78	$36.25	$34.94	(5.0)%

Note: Local includes basic rate service plus vertical feature and second-line penetration and pricing assumptions and access.

Source: Corporate reports and Bernstein estimates.

Impact on the Cable MSOs: Pricing Under the RBOC Umbrella

For cable operators, the shrinking voice pricing umbrella (caused by declining RBOC ARPUs) poses less of a threat, simply because their existing telephony businesses are relatively small. Only Cox, and to a lesser extent Comcast, will have to manage through price erosion as a material offset to the revenue and EBITDA gains arising from VoIP telephony. As we note later in this report, the marginal economics of VoIP — even at relatively low ARPUs — are quite attractive.

Operators like Time Warner Cable, Cablevision and Charter are likely to enjoy relatively stable pricing. By entering with pricing that is 30% or more below prevailing RBOC rates, these operators have set benchmarks unattainably low for the incumbent RBOCs. From the RBOC perspective, the value of share retention (by matching competitors' pricing) is far less than the cost of the pricing action itself. Said differently, the economics of share loss are far better than the economics of share retention. (Telecom investors will recall a similar dynamic at AT&T Consumer Long Distance, which emerged from divestiture in 1984 with high prices and almost 95% market share. For them, it was nearly 15 years before the economics of trying to retain share became a viable alternative. Today, AT&T's share is roughly 25% of that market.)

Cox and Comcast, however, as the only two cable operators with significant circuit-switched phone businesses, can be expected to face falling ARPU for their existing telephony subscribers (see Exhibit 32). The nature of the crazy-quilt overlaps between individual cable operators and individual RBOCs suggest that regional pricing differences will be relatively hard to sustain. For example, prices set by Cablevision in Northern New Jersey will force responses from Verizon — even if relatively muted ones for the

reasons just noted — in the rest of the state that will in turn force Comcast to respond in the Southern Jersey suburbs.

Exhibit 32 Cable Telephony Subscriber ARPU Projections

	2000	2001	2002	2003	2004E	2005E	2006E	2007E	2008E	CAGR 2003-08E
Comcast	$54.49	$50.80	$54.33	$48.90	$44.89	$41.65	$38.85	$36.14	$33.57	(7.2)%
Cox	na	51.08	49.62	46.40	43.37	40.77	38.32	36.02	33.86	(6.1)
Cablevision	na	na	na	na	34.69	34.34	34.00	33.66	33.32	(1.0)

Notes: Cablevision ARPU excludes Lightpath subs. CAGR is for 2004 to 2008.

Source: Corporate reports and Bernstein estimates.

As a result, prices at Cox and Comcast can be expected to fall from the high $40s to the mid-$30 range by 2008, suggesting an average annual decline rate of 6-7%. (Note that our cable telephony ARPU projections exceed our RBOC ARPU forecasts by virtue of the near-100% take rate of long distance service among cable telephony subscribers. By contrast, the RBOCs provide long distance service to only about half of their local consumer subscribers today.)

Conclusion

A broad introduction of all-you-can-eat pricing plans will likely do more harm to the RBOCs than good for the cable MSOs.

For cable operators, these simpler business models accelerate the near-term prospects for cable telephony while reducing risks associated with a larger scale capital deployment. At the same time, however, they potentially reduce the long-term profitability of the telephony market, eroding longer-term returns in that segment. Among the cable operators under our coverage, Cablevision is best positioned to benefit from this nontraditional business approach. Comcast and Cox are likely to move more slowly because of their legacy investments in traditional business models.

The impact on the RBOCs will depend on their exposure to the most aggressive MSOs, with Verizon appearing to have the most immediate exposure to Cablevision and Time Warner, BellSouth next, and SBC and Qwest somewhat further out of harm's way given their exposure to the slower-deploying Comcast and Cox.

Cable's Marginal Economics of VoIP

Overview

The cable MSOs' enthusiasm for VoIP stems from its attractive marginal economics. We estimate that a full-scale deployment of VoIP would cost less than $300 per subscriber, and would yield internal rates of return as high as 30% for a 250,000 home cluster, and as high as 50% for large-scale clusters of 500,000 homes. Our estimates are predicated on a high-variable-cost interconnection model, which would likely be swapped for a lower-cost leased-line strategy when traffic volumes warrant, resulting in still higher internal rates of return.

Importantly, the relatively modest upfront capital requirements make it possible for the MSOs to earn attractive returns even in smaller market clusters, making the addressable market considerably larger than was possible with the old circuit-switched telephony model. We estimate that even small clusters (100,000 subscribers) can earn attractive rates of return at penetration rates in the 20-25% range. By contrast, the circuit-switched telephony architecture required penetration rates as high as 40% — too high an assumption to justify market entry.

Flat-rate calling plans (which, as described in a previous chapter of this report, do not necessarily presume VoIP technology) reduce variable costs relative to traditional calling plans, making attractive returns possible even at relatively low ARPUs of $39.99 for unlimited "all-you-can-eat" usage. The RBOCs' large installed base of telephony subscribers make it extremely costly for the RBOCs to match cable's discounts.

VoIP's attractive marginal economics should spur a continued acceleration of cable telephony trials and deployments during 2004 and 2005.

Marginal Economics Will Dictate Rollout Pace

Cable's acceleration in rolling out VoIP stems from its attractive marginal economics. We estimate that a full-scale deployment of VoIP will cost less than $300 per subscriber, and will yield high internal rates of return.

The purpose of this chapter is to examine in detail the marginal return-on-investment question, exploring the capital expenditures and operating expenses incurred in the telephony business, and the returns that can be expected in various sized markets. For comparison purposes, these costs and returns are compared to those of circuit-switched, or constant bit-rate (CBR), telephony.

VoIP Promises Much Lower Capital Expense, at Both System and Subscriber "Levels"

Time Warner Cable has suggested that capital expenditures associated with offering VoIP are in the range of $300 per subscriber. Cablevision, which has thus far offered only a second line solution (notably, without even battery backup powering), has claimed capital expenditures of around $150 per subscriber.

These compare to estimates of $610 per customer for circuit-switched telephony (from Cox Communications' *White Paper:* "Preparing for the Promise of Voice over Internet Protocol," February 2003).

Unfortunately, getting to an accurate picture of capital costs is more complex than applying a single number per subscriber. Capital expendi-

tures associated with telephony occur at four distinct "levels." First, there are capital expenditures that are required at the enterprise level, including billing system upgrades and system design/engineering. Second, there are capital expenditures incurred at the regional level (the cable headend), including the softswitch itself, and upgrades to the CMTS (Cable Modem Termination System) where cable modem data streams are aggregated in the headend. Third, depending on the system design, there may be costs incurred at the local level (the node), including network powering and route redundancy (if offered). Fourth, there are capital costs incurred at the individual subscriber level, including customer premises equipment and the installation truck roll.

Key Cost/Capital Assumptions

At the enterprise level, we have modeled a simple billing system upgrade that assumes flat rate (or "all-you-can-eat") pricing for unlimited usage — a much less costly billing implementation than a fully-featured traditional billing system based on rich call detail. Other enterprise level capital expenditures include system engineering time.

At the regional, or headend, level, we have modeled an integrated VoIP "softswitch" (rather than a more complex distributed call management server-based system). Softswitches — such as those manufactured by Siemens, CedarPoint, Nortel or Cisco — are essentially integrated router/software combinations that emulate the functionality of the Class 5 circuit switch that is required for CBR telephony. (For a description of the more complex distributed call management system, see the chapter titled: "Introduction: The Three Flavors of VoIP" in this report.) Current integrated softswitches incorporate the full functionality required for primary line service, including e911 and CALEA compliance. Other regional capital costs include headend power supply (not to be confused with always-on powering, which is dealt with later), real estate, engineering and switch installation, etc.

Because more than one cluster can share the same softswitch — for example, Time Warner's VoIP deployments in Syracuse, New York, and Portland, Maine, are both using the same Cisco softswitch, and a single softswitch in Kansas City will serve their Memphis and Milwaukee systems in addition to Western Tennessee — we estimate the headend equipment costs per region (excluding CMTS line cards, which we treat on a per-subscriber basis, below) will be in the range of $1.1 million per cluster (see Exhibit 33).

Exhibit 33 Selected Assumptions: Shared Infrastructure Costs

	Circuit-Switched	VoIP
Enterprise Level		
Billing System Upgrade ($ million)	$15.0 million	$10.0 million
Design Engineering/Bench Testing ($ million)	3.2	2.0
Regional/Headend Level (Per Headend)		
Integrated Softswitch (With Element Management System)		$1.0 million
Class 5 Switch (Including Engineering)	$2.4 million	
Record-Keeping Server, Voicemail Server, etc.	700,000	400,000
Local Engineering, Facilities Buildout, etc.	350,000	200,000
Headend Power Supply	150,000	20,000
Element Spares	260,000	100,000

Source: Bernstein estimates and analysis.

Individual Subscriber Costs of $240

The lion's share of the capital requirements for VoIP occur at the individual subscriber level, and are substantially lower than for circuit-switched telephony. For the purposes of this model, we have assumed that powering is by battery backup at the customer's home (rather than in the network itself), in a device called an MTA, or Media Terminal Adapter. Network-based powering would be considerably more costly. For the CMTS, or Cable Modem Termination System, we have modeled only the incremental expense associated with telephony over and above that required for high-speed Internet access. The DOCSIS 1.1 standard is required in order to prioritize voice packets ahead of the rest of the data stream in order to provide a high voice quality service.

The MTA itself, which enables a cable modem to carry a voice telephony signal, is included at incremental cost only, as it will most frequently be integrated with a cable modem, the base cost of which we assign to high-speed Internet service. In our circuit-switched model, a network interface unit (NIU) is installed at the home. Both services are assumed to require an installation visit, although over the longer term the prospects for self-installation of VoIP service are very good. Key per-subscriber assumptions are shown in Exhibit 34.

Exhibit 34 — Selected Assumptions: Capital Expenditures (Individual Subscriber)

	Circuit-Switched	VoIP
Individual Subscriber Level		
MTA (Incremental Portion Only)		$50.00
CMTS Line Cards		40.00
Battery Backup		50.00
Network Interface Unit (NIU)	$350.00	
Installation Truck Roll	100.00	100.00
Total Individual Subscriber Level CAPEX	$450.00	$240.00

Source: Bernstein estimates and analysis.

Lower Overall Capital Costs

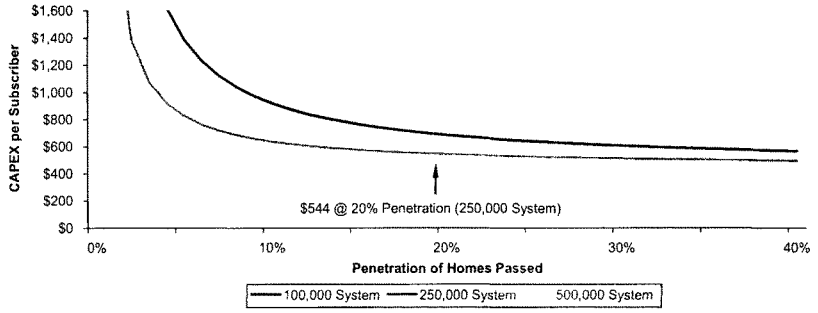
These multiple levels of capital costs and recurring expenses create a complex set of cost curves that are highly scale sensitive. Because the system-level and regional-level capital expenditures are much lower than for circuit-switched telephony, the curves are also much "flatter" than for traditional circuit-switched — making the relative cost of entering smaller market clusters significantly lower. This flatness reflects the fact that the capital requirements of VoIP are largely success-based — that is, they are mostly incurred on a per-telephony-subscriber basis. The main shared infrastructure investments have already been made as part of the broader digital upgrade of the last seven years.

We estimate that in a large, well-clustered system, VoIP service should reach an investment asymptote in the range of less than $300 per subscriber (based on a 20% or more market-share assumption), and for all but the smallest systems only 10% market share is required before costs have flattened materially Exhibit 36). Note that our model — by including costs such as system engineering and billing system upgrades — more fully allocates costs than do the per-subscriber estimates from Time Warner Cable or Cablevision, although unlike Time Warner's estimate we allocate only the incremental cost of the MTA to the telephony business, rather than allocating the full cost of the cable modem/MTA combination. (Fully $125 of Time Warner's estimate of $300 comes from the cable modem/MTA.)

These costs are dramatically lower than those for a circuit-switched platform, which by our estimate do not fall below $500 in even the largest clusters (see Exhibit 35).

Significantly lower VoIP capital investment could be achieved by moving to a self-installation model, or by requiring that customers buy their own batteries (as Cablevision has done in its initial launch).

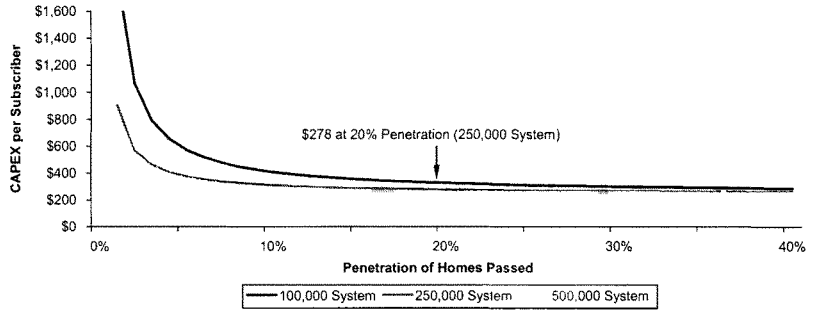
Exhibit 35 Capital Expense per Subscriber: Circuit Switched



Note: Assumes circuit-switched telephony in eight clusters/systems.

Source: Bernstein estimates and analysis.

Exhibit 36 Capital Expense per Subscriber: VoIP



Note: Assumes VoIP in 16 clusters/systems.

Source: Bernstein estimates and analysis.

Variable Costs and Margins Also Favor VoIP

Cable operators can also achieve lower variable costs by employing a VoIP platform. Contrary to popular (mis)conception, this cost advantage has little to do with the technology itself, and everything to do with the prevailing business model of flat-rate "all-you-can-eat" pricing.

Customer service costs account for almost $7 per month per subscriber in a circuit-switched environment, based on an expectation of relatively frequent contacts — especially during the early phase of the customer lifecycle. Much of that cost is eliminated in an "all-you-can-eat" pricing envi-

ronment, where customers are given far fewer reasons to call. (We estimate that as much a one-third of all calls to customer service deal with call-detail related inquiries or disputes.) While nothing about flat-rate pricing requires VoIP, there is nevertheless an unmistakable trend among operators to link the "all-you-can-eat" business model to the VoIP technology. Thus, we assume customer service expenses consume less than $5 per month in the VoIP model (see Exhibit 37).

Exhibit 37 **Customer Service Expense per Subscriber: VoIP (Flat-Rate Pricing)**

		Assumption	
Customer Service Calls/Line/Month		1.3 Calls per Month	
Customer Service Call Duration		8 Minutes	
Billing Inquiry Calls/Line/Month		0.5 Call per Month	
Billing Inquiry Call Duration		6 Minutes per Call	
	Base Salary	Loaded Salary (Incl. Benefits/Overheads)	Per Day
Customer Service Rep.	$30,000	$42,000	$175
		Per Call	Per Month
Customer Service Expense		$2.92	$3.79
Billing Inquiry Expense		2.19	1.09
			$4.89

Note: Salary assumes 240 working days per year; eight-hour shift; minutes per call shown net of availability (utilization).

Source: Bernstein estimates and analysis.

High Transport Costs, at Least Initially

In addition to customer service, transport and network access are significant variable costs for competitive telephony operators, the cable MSOs included. Our model of the variable costs of cable telephony assumes all calls incur variable interconnection/termination charges. Specifically, we assume terminating access for calls terminated on other operators' facilities costs the MSOs $0.005 per minute while long distance transport runs $0.009 per minute. These interconnection costs — and particularly the access portion — are seen as a cost of rapid market entry, with high volume rates likely lower but time-consuming to negotiate. As noted in the chapter "Introduction: The Three Flavors of VoIP," national interconnection deals — which incur variable costs for both long distance transport and local termination on a per-minute basis — are a route to rapid market entry (hence, Time Warner Cable's recent deals with Sprint and MCI).

Conservatively, our estimates assume relatively high usage per subscriber — in some cases multiples of the telecom industry averages — in the belief that heavy users will self-select for cable's low-cost, flat-rate pricing plans (see Exhibit 38).

Exhibit 38 **Variable Transport Costs (Phase I: Interconnection Strategy)**

	Percentage of Revenue	Cost per Minute	Minutes per Month	Minutes per Day	Hours per Day	Cost per Month
Federal USF Charge	8.7%	na	na	na	na	$3.48
Local		$0.005	1,600	53.3	0.89	$8.00
Long Distance		0.014	1,100	36.7	0.61	15.40
Total			2,700	90.0	1.50	$26.88

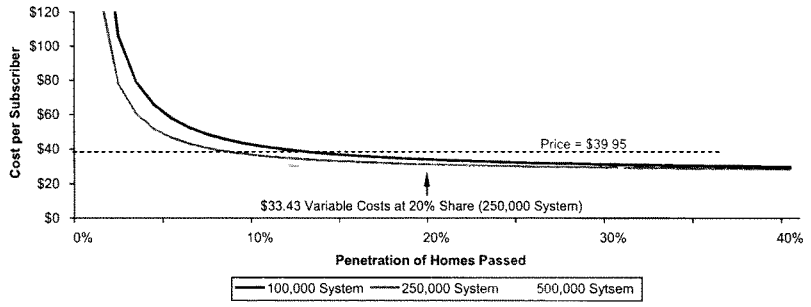
Note: FUSF assumes $39.95 ASP.

Source: Bernstein estimates.

This negative selection bias yields relatively low initial contribution margins (see Exhibit 39).

Other variable costs include customer acquisition marketing, headend power consumption, maintenance labor, etc.

Exhibit 39 VoIP Variable Costs



Source: Bernstein estimates and analysis.

We believe these low margins — after years of telling its investors to focus on EBITDA margins as a key metric of success — are the reason Comcast has proven reticent about a rapid market-entry strategy based on interconnection, and has instead opted for a slower market entry leveraging its own managed network.

Higher Long-Term Margins: The Managed Network Model

In reality, these variable costs will eventually be replaced with leased-line VPN-like managed network models as soon as traffic warrants. Indeed, Cox has already made the transition from a resale model to its own network, and terminates all on-net calls (i.e., where one Cox customer is calling another) over its own facilities, without paying for interconnection. We estimate that this is already saving Cox more than 20% relative to an interconnection strategy.

This transition from variable to fixed costs would translate into much lower average cost per subscriber, and commensurately much higher EBITDA margins. (The disadvantage, of course, is that it takes longer to launch, potentially leaving market share on the table by waiting). We estimate that the direct variable cost associated with a managed network strategy could be as much as 50% lower than the direct variable cost associated with a pure resale/interconnection model (although semi-variable costs associated with leasing fiber and managing the network would narrow the gap somewhat, with the precise amount depending on capacity utilization/network loading) (see Exhibit 40).

Exhibit 40 **Direct Variable Transport Costs (Phase II: Managed Network Strategy)**

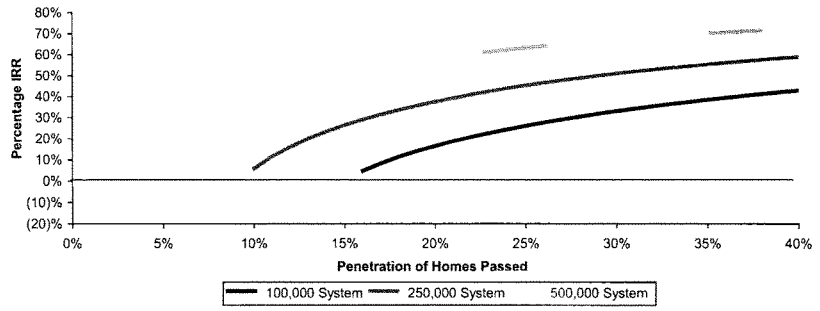
	Percentage of Revenue	Cost per Minute	Minutes per Month	Minutes per Day	Hours per Day	Cost per Month
Federal USF Charge	8.7%	na	na	na	na	$3.48
Local		$0.004	1,600	53.3	0.89	$6.40
Long Distance		0.005	1,100	36.7	0.61	5.50
Reciprocal (Terminating) Access Fees		$(0.002)	2,160	72.0	1.20	$(4.86)
Total						$10.52

Note: Assumes 20% of local termination is "on net" (i.e., $0.005 x 80%).

Source: Bernstein estimates.

High Marginal Returns for VoIP Even using conservative estimates of market share attainable and variable cost in the interconnection/resale model, the return on investment from VoIP telephony is compelling (see Exhibit 41).

Exhibit 41 **IRR: VoIP Telephony**



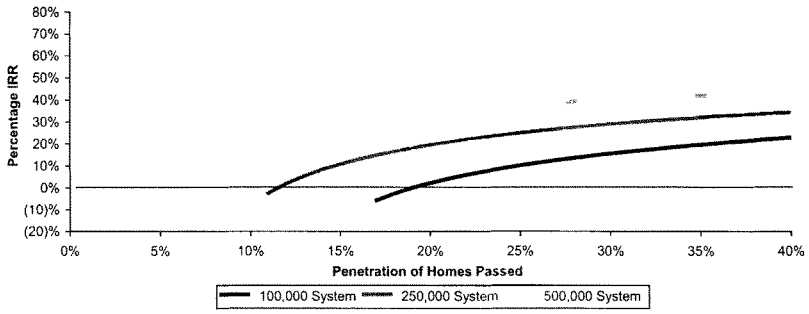
Note: Assumes 38.5% marginal tax rate, four-year average asset life for depreciation tax shield

Source: Bernstein estimates and analysis.

Two patterns are evident relative to circuit-switched telephony (see Exhibit 42). First, the economic returns in systems of all sizes are significantly higher in the VoIP model, even though we assume higher price realization in the circuit-switched model (as a matter of pricing convention rather than intrinsic value), and even though we assume a high variable cost interconnection model as our baseline. Second, the returns on the smallest systems — those of only 100,000 subscribers — become reasonable, and the potential market therefore expands dramatically in a VoIP world. Only the largest systems make sense for a Class 5 circuit switch. We estimate that between one-third and one-half of all cable subscribers nationally are in clusters of 100,000 subscribers or less, and would therefore not be economical to reach for cable operators using a circuit-switched architecture.

Smaller market returns could be boosted further by turning to third-party service aggregators such as Net2Phone, an outcome we see as likely not just among smaller operators, but potentially also among larger operators in their smallest systems.

Exhibit 42 IRR: Circuit-Switched Telephony



Note: Assumes 38.5% marginal tax rate, nine-year average asset life for depreciation tax shield.

Source: Bernstein estimates and analysis.

VoIP Will Move Higher on the Priority List

Although cable operators are currently rife with new business opportunities to pursue — the high-speed Internet access business, for example, remains in its "sweet spot" for growth, and video-on-demand, personal video recorders, and high-definition TV are all in their infancy — the high returns available in telephony will command increasing attention from cable operators, resulting in accelerating deployment plans. Even Comcast — which is perceived by many investors to be taking a more cautious approach to VoIP — appears only to be waiting until its higher-margin managed-network strategy is ready for aggressive rollout.

Although the residential telephony market is undeniably weakening, it remains attractive in both size and ripeness for attractively priced bundled offers. First, the residential wireline telephony business is almost twice the size of the multichannel video business, at roughly $65 billion to cable and satellite's $35 billion. Second, the RBOCs suffer from the high-class problem of a large installed base, making it wildly expensive for them to try to match competitive discounts. Although we believe it is inevitable that the RBOCs will offer their own flat-rate pricing plans at competitive rates, the success of those plans will put its own pressure on ARPU by repricing the heavy user base, even without taking a nominal price cut. As a result, preserving price elsewhere (including in their DSL businesses) will become increasingly critical for the RBOCs.

We expect 2004 to be punctuated by an ongoing series of announcements stepping up the pace of VoIP deployments.

Joint VoIP Market Forecast

Overview

The combination of strong consumer demand, attractive economics, and accommodative regulation all suggest VoIP is poised for rapid growth. Based on announced cable MSO VoIP deployment plans, it appears that all the major MSOs will offer cable telephony to nearly 100% of homes passed over the next two to three years. We estimate that cable MSOs will win 15% of the consumer primary access lines in the United States by 2008, implying 16.8 million cable telephony subscribers at the end of 2008, off a 2003 base of 2.3 million.

Our forecast of nearly 17% telephony penetration of available homes in 2008 is considerably above what we believe to be consensus expectations of 10-15%, and, thus, we believe the market may be underestimating both the availability of cable telephony over the next two to three years and the consumer demand for an alternative to the Regional Bells.

A Bullish Outlook for Cable Telephony

Since March 2001, we have highlighted the risk to the Regional Bells from cable service bundles including cable telephony (see "Initiating Coverage of the Domestic Telecom Services Industry: Growth Stable in '01 Falling Beyond," March 13, 2001). At that time, we showed through proprietary market research that consumers had a strong positive predisposition to purchasing their communications services in bundles, and that the most desirable bundle of services included local, long distance and video on a single bill, from a single service provider. Those results led us to believe — correctly — that AT&T Broadband and Cox's respective cable telephony rollouts would be successful in attracting customers and, as a result, the RBOCs would fail to meet lofty high-single digit to mid-double digit earnings growth expectations.

As noted elsewhere in this report, the Bernstein Consumer Telephony Preference Study found surprisingly high receptivity to the notion of cable companies as voice communication service providers. We have also described the very attractive marginal economics of VoIP for cable operators, which will foster aggressive deployment plans among the cable MSOs.

Four additional observations underlie our bullish outlook for cable telephony: (1) Most of the major cable MSOs have announced an intention to have near-ubiquitous availability of cable telephony within their footprints by year-end 2005, with the most aggressive by year-end 2004; (2) those carriers already offering cable telephony — either circuit-switched or IP-based — have shown surprisingly high penetration gains; (3) long distance carriers such as AT&T and MCI will move aggressively with their own standalone VoIP offers, "legitimizing" and stimulating the market; and (4) early applications of VoIP telephony such as Cablevision's current "second line" offering will increasingly give way to full primary line replacement offerings, with features and functionality that match or surpass that of traditional circuit-switched telephony.

Accelerated Cable Telephony Rollout Schedules

Nearly every major cable MSO has indicated over the past months that it will offer cable telephony service to every, or nearly every, household in its footprint by the end of 2005. Cablevision already has the service available across

its entire high-speed data footprint and Time Warner Cable is targeting availability for all homes in its territory by year-end 2004 (see Exhibit 43).

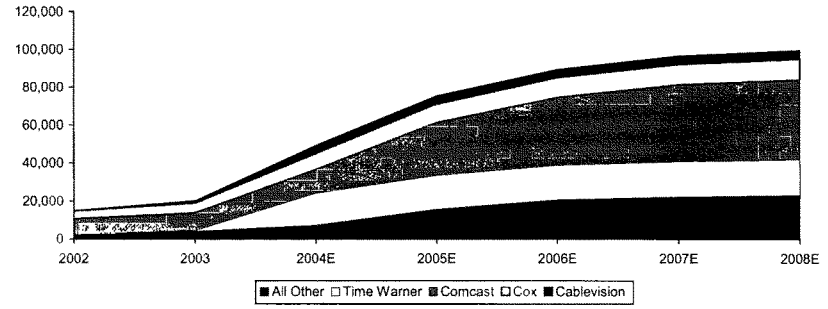
Exhibit 43 Cable MSO Current VoIP Trials and Announced Deployments

	Status	Current VoIP Markets	Announced Launches	Product Offer
Cablevision	Launched to entire footprint (HSD subs only)	New York	None	Flat Rate $34.95 Unlimited Local, Regional and LD, Five Custom Calling Features, E911. Marketed as Second Line. Primary Line Features (Inc. LNP) in 2004.
Time Warner Cable	Launching Additional Markets	Portland, ME and Raleigh, NC	Expects to Launch Across Most of Footprint in 2004 (31 Markets in 27 States).	$39.95 Flat Rate ($49.95 for Phone Only). Marketed as Primary Line Replacement. Full LNP, E911, CALEA Compliance.
Cox	Launched	Roanoke, VA	Additional Markets Planned for 2004.	Offer per Minute Pricing and Flat Rate ($49.95). Primary Line Replacement.
Comcast	Testing	Coatesville, PA	Additional Trials Announced in Hartford, CT, Springfield, MA, Indianapolis, IN. Full Commercial Rollout Not Expected Until 2005.	TBD. Considering Flat Rate. Marketed as Primary Line Replacement.
Adelphia	Testing Announced	None	Trials in 2004. Commercial Launch in 2005.	Primary Line.

Source: Press articles and corporate reports.

Our cable telephony market forecast assumes near-ubiquitous availability among the major operators, and approximately 64% availability among other operators, by year-end 2006 (see Exhibit 44). We forecast that by 2006, roughly 80% of total U.S. households will be cable telephony marketable.

Exhibit 44 Cable Telephony Homes Passed (Telephony Marketable Homes)



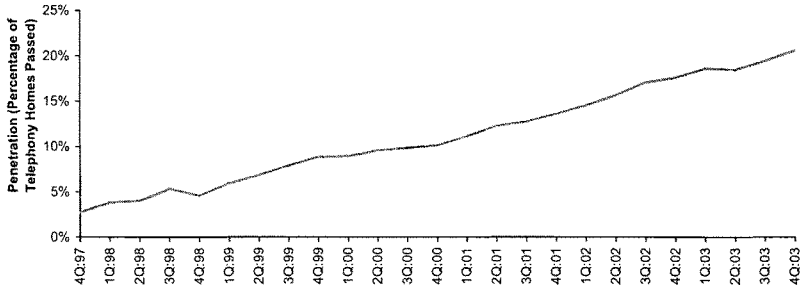
Source: Bernstein estimates.

Existing Cable Telephony Offerings Have Achieved High Penetration

Of the providers currently offering telephony service — either over a circuit-switched network or IP-based — the penetration rates have been impressive and above forecast. For example, Cox's circuit-switched telephony service achieved over 20% penetration of telephony-enabled homes passed by the end of 2003, with 16% of all Cox subscribers taking phone service (see Exhibit 45). In Omaha, Nebraska, one of Cox's oldest telephony markets (phone was launched in 1996), 65% of Cox's subscribers purchase the Cox phone services. This equates to approximately 35% share of consumer primary line connections in the Omaha market. (We note that Omaha also has among the highest

cable penetration rates of homes passed among Cox's markets.)

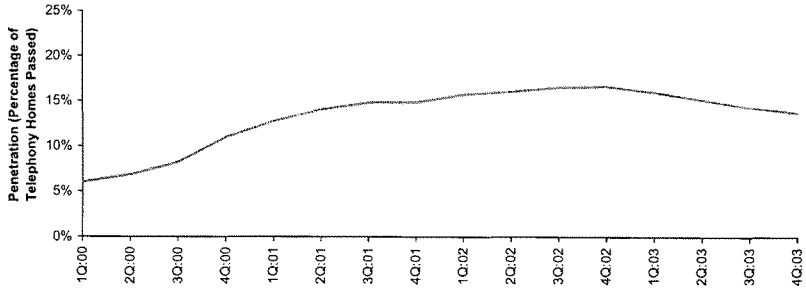
Exhibit 45 Cox Telephony Penetration



Source: Corporate reports and Bernstein analysis.

Comcast enjoys similar penetration rates in its AT&T Broadband markets, though penetration has largely stalled as Comcast has mostly discontinued marketing its legacy circuit-switched service (see Exhibit 46). And finally, most recently, Time Warner announced that it had reached roughly 10% primary line share in Portland, Maine, within only nine months of launching service.

Exhibit 46 Comcast AT&T Broadband Systems Telephony Penetration



Source: Corporate reports and Bernstein analysis.

We believe that consumer acceptance of cable telephony is likely to be stronger than generally expected, with the degree of its success dependent largely on the marketing and pricing aggressiveness of the cable MSOs and countermeasures deployed by the RBOCs.

Entry of Long Distance Players Will Legitimize and Expand Market

AT&T's recent announcements that it will begin offering stand-alone or "bring your own broadband access" VoIP service on a nationwide basis is likely to have three impacts: First, it will put increasing pressure on the FCC to adopt a regulatory framework that regulates telephony on a more sensible basis than a call's packetization structure (see "A Regulatory Framework for VoIP?" chapter later in this report); second, it will generally raise awareness of lower-priced, flat-rate calling plans (through advertising, consumer advocacy press, etc.), accelerating both market share shifts as well as price compression; and third, it will help "legitimize" the market perception of flat-rate VoIP-based calling plans, as AT&T's brand-name continues to carry tremendous weight among consumers.

AT&T's new offering is platform-agnostic; that is, it assumes that consumers will provide their own broadband access. Although AT&T's offering will compete directly with cable's, AT&T's reach will, ironically, be mostly constrained to cable modem subscribers. For DSL subscribers — the other technologically reachable segment — the value proposition is much weaker, since a DSL line (at least today) requires that a customer retain their primary line phone service from the RBOC.

The cable operators' ownership of the physical plant provides them with a significant advantage over the long distance carriers. The ability of the cable operator to preempt stand-alone VoIP through service bundling and price is significant. Moreover, cable continues to enjoy the unique advantage of what is essentially free advertising for its services by virtue of its control of the video programming into the home.

Richer Features and Functionality Than POTS Will Drive Demand

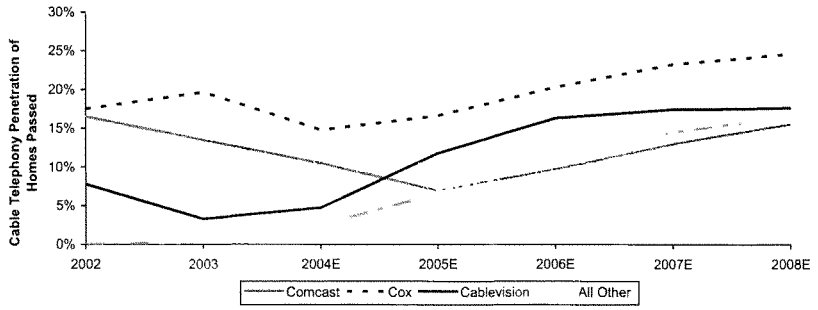
Finally, we expect the features and functionality of VoIP telephony offerings to meet or exceed circuit-switched "Plain Old Telephone Service" ("POTS") in relatively short order. Early applications like Cablevision's offering only limited reliability, no local number portability (LNP, or the ability for subscribers to keep their own phone numbers), no call detail and work for a single phone, are only the first salvo in the battle for the consumer. Time Warner's offering is already more robust, with full primary line features like battery backup, full LNP, total home wiring (i.e., the ability to power all existing phone jacks), and full call detail (available on the Web). By next year Cablevision is expected to field a similar offering.

Cox and Comcast's VoIP services are expected to be full-featured. Over the next few years, we expect the flexibility of the IP-based telephony platform to enable additional, differentiated features such as Web-based customization (special ring tones for different callers, instant line provisioning, or customized call-blocking). And, over the longer term, integration with video and data (already traveling through the same conduit) will prove much easier with VoIP telephony than with the circuit-switched architecture.

Cable Telephony Will Track Familiar Adoption Curves

We expect to see cable's consumer telephony share gains in markets entered follow adoption curves analogous to — but considerably less rapid than — those seen for RBOC state-by-state long distance entries over the past four years (in this case, approximately 0.5% per month for the first year followed by a gradual tapering to 15-20% share four years post-entry). Our cable telephony penetration forecast is shown in Exhibit 47. We estimate that the cable companies will achieve 17.0% penetration of telephony marketable homes by 2008.

Exhibit 47 Cable Telephony Penetration (Of Homes Passed)



Source: Bernstein estimates.

A Less Accommodating UNE-P Regime Bodes Well for the Residential Phone Market

In recent years, the entry of UNE-P competitors such as AT&T and Sprint into the local telephone market has brought rapid price deterioration. In line with this environment, and with the anticipated competition from the cable operators, we currently assume 5% annual telephony price declines for the cable operators, and 7% for the RBOCs, through 2008.

The recent District of Columbia Circuit Court decision overturning the current state-by-state UNE-P regime bodes well for the health of the consumer telephony market. At the very least, the decision will have the effect of forcing the UNE-P entrants to accept higher wholesale rates. This higher cost structure for the UNE competitors should, in turn, reduce price competition in the market, producing price declines less onerous than seen over the past few years. The end result should be more stable competition, both price and nonprice, leaving the playing field that much more accommodating for facilities-based competitors.

Summary Forecasts

Our consumer voice telephony market forecast calls for the Bells to lose, cumulatively, 16.8 million consumer primary lines to facilities-based and stand-alone VoIP competitors by 2008 off a base of approximately 2.3 million at year-end 2003. If all 16.8 million lines go to cable competitors (or stand-alone VoIP providers leveraging the cable infrastructure), it would represent a penetration of 11.8% of cable telephony marketable homes passed by 2006 and 17% of marketable homes passed by 2008. This would compare to 14.5% cable telephony penetration of cable telephony homes passed as of the end of 2002, albeit on a smaller but rapidly expanding base of marketable homes (see Exhibit 48).

Exhibit 48 Summary Forecasts

	2002	2003	2004E	2005E	2006E	2007E	2008E
Cable Telephony Homes Passed							
Comcast	8,712	9,415	12,390	27,793	35,746	40,620	42,054
Cox	4,101	5,031	7,395	9,313	10,175	10,607	10,862
Cablevision	157	1,214	4,434	4,467	4,501	4,535	4,569
Other	2,000	4,400	24,093	33,339	38,596	40,518	41,687
Total	14,971	20,061	48,313	79,912	89,019	96,279	99,172
HPs as % of Total Access Lines	13%	18%	43%	67%	79%	86%	88%
Cable Telephony Subscribers – Circuit-Switched + VoIP							
Comcast	1,438	1,267	1,296	1,908	3,460	5,234	6,503
Cox	718	988	1,221	1,604	2,086	2,471	2,664
Cablevision	12	40	209	524	731	787	801
All Other	-	11	600	2,175	4,257	5,838	6,865
Total	2,169	2,306	3,326	6,211	10,534	14,330	16,833
Cable Telephony Penetration of Homes Passed							
Comcast	16.5%	13.5%	10.5%	6.9%	9.7%	12.9%	15.5%
Cox	17.5	19.6	16.5	17.2	20.5	23.3	24.5
Cablevision	7.8	3.3	4.7	11.7	16.2	17.3	17.5
All Other	-	0.3	2.5	6.5	11.0	14.4	16.5
Total	14.5%	11.5%	6.8%	8.3%	11.8%	14.9%	17.0%
RBOC Cumulative Line-Loss Projections							
BellSouth	295	315	445	829	1,440	1,996	2,370
Qwest	288	317	380	566	905	1,252	1,489
SBC	749	821	1,109	1,912	3,147	4,230	4,927
Verizon	614	623	955	1,882	3,202	4,347	5,112
All Other (Used for Calculation Only)	224	230	438	1,021	1,840	2,504	2,936
Total	2,169	2,306	3,326	6,211	10,534	14,330	16,833
Cable Telephony Share of Residential Primary Access Lines							
BellSouth	2.1%	2.2%	3.2%	5.9%	10.2%	14.2%	16.8%
Qwest	3.0	3.4	4.0	6.0	9.5	13.2	15.6
SBC	2.6	2.8	3.7	6.4	10.5	14.0	16.4
Verizon	1.9	2.0	3.1	6.0	10.3	13.9	16.4
Other	0.8	0.8	1.6	3.8	6.8	9.2	10.8
Total	1.9%	2.1%	3.0%	5.6%	9.4%	12.8%	15.0%

Source: Corporate reports and Bernstein estimates.

The following two chapters of this report address the impact of the growth in VoIP services and cable telephony, specifically, on the phone and cable companies, respectively.

Conclusion

With the major cable MSOs expected to offer cable telephony on a near-ubiquitous basis by the end of 2005, the cable telephony threat to the RBOCs is very real. RBOC share losses to cable will potentially dwarf those seen during the worst days of AT&T's and WorldCom's UNE-P assault.

The RBOCs' loss will largely be the cable operators' gain. The residential telephony market is vastly larger than the video services market (approximately $65 billion versus approximately $35 billion), suggesting that even modest market-share gains for the cable operators can translate into a meaningful impact on top-line growth. Telephony is also a critical element in a bundled offering to the most valuable subscribers, and therefore has substantial benefits in reducing churn in the related businesses of high-speed Internet access and video. We recommend a portfolio overweight position on U.S. Cable and, at most, a market-weight position on U.S. Telecom.

Impact on the Bells

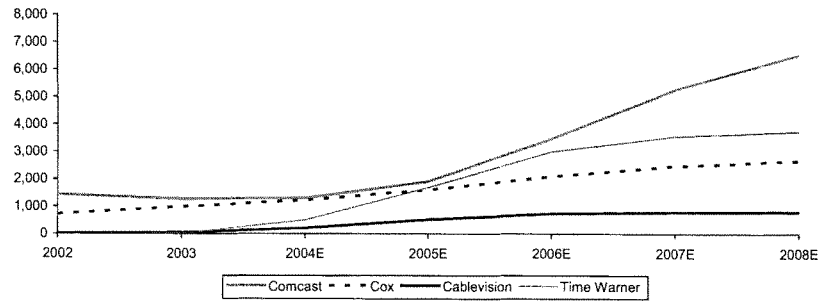
Overview

The Bells will lose 15% of primary consumer access lines or 16.8 million subscribers to cable telephony and stand-alone VoIP competitors over the next five years off a 2003 base of 2.3 million subscribers. While our current long-term top-line and earnings growth expectations for the four regional Bells reflect this outlook, we remain concerned that the losses could outstrip even our bearish, above-consensus forecast. Analysis of the announced and anticipated MSO deployment timetables suggests that Verizon is most vulnerable to near-term share losses given its overlap with the most aggressive cable telephony competitors, Cablevision and Time Warner. The risk across the Bells will even out, however, as soon as Comcast and Cox reinvigorate their own telephony efforts.

RBOC Overlaps Differ by Cable MSO

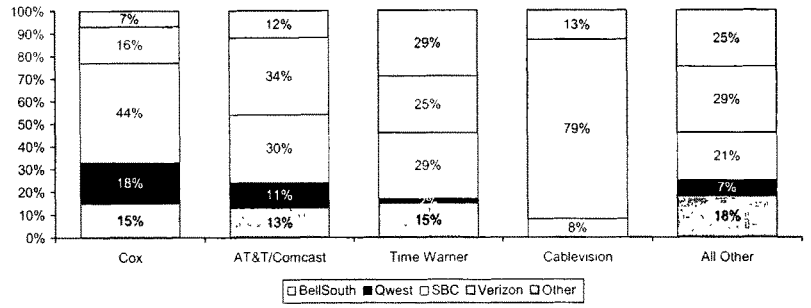
Our telephony market forecast presented in the previous chapter gives rise to the telephony subscriber forecast for the four largest MSOs presented in Exhibit 49 (for a discussion of the cable MSO chart, please see the next chapter). With differing deployment schedules for VoIP-based cable telephony and differential overlaps between the major MSOs and the RBOCs, the impact of accelerating cable telephony line share will be felt differently by the individual RBOCs. Our analysis of the specific overlap for each RBOC with each MSO is detailed in Exhibit 50, with the cumulative line losses shown in Exhibit 51.

Exhibit 49 Cable Telephony Subscriber Forecast by MSO



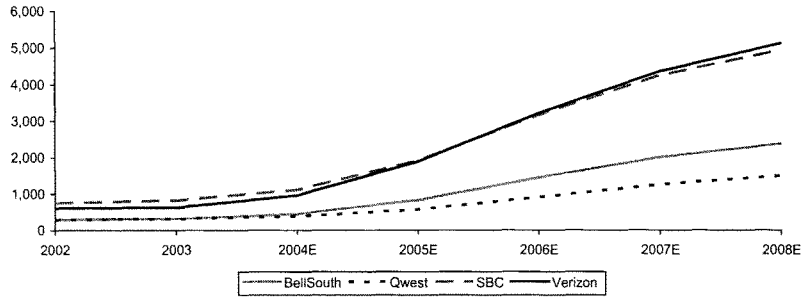
Source: Bernstein estimates and analysis.

Exhibit 50 Cable-RBOC Regional Overlap Assumptions



Source: Bernstein estimates and analysis.

Exhibit 51 Cable Telephony Subscriber Forecast by RBOC



Source: Bernstein estimates and analysis.

The Third Wave Is Coming

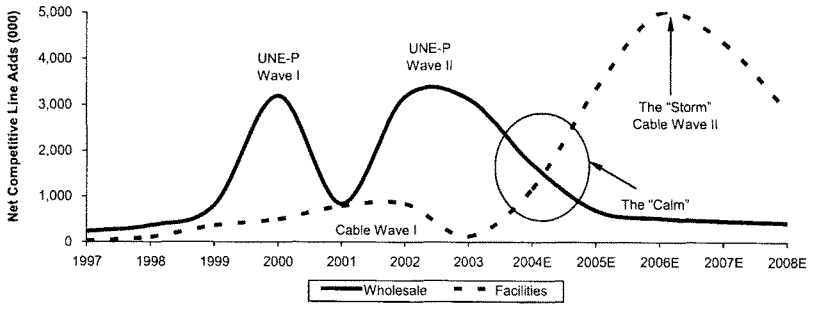
The deployment of cable telephony, and the resultant impact on the RBOCs, is expected to be the third wave breaking on the hull of the RBOCs' embattled consumer voice telephony businesses. Wave I, as can be seen in Exhibit 52, was characterized by a combination of AT&T's and MCI's initial deployment of wholesale voice service primarily into New York and Texas prior to Verizon and SBC receiving approval to offer long distance in those two states, respectively. Bolstering Wave I were Cox's and AT&T Broadband's initial deployments of circuit-switch-based cable telephony, largely in SBC markets.

Wave II was characterized by AT&T's and MCI's expansion (following a one- to two-year lull) of their local telephony offers with offensives into 12 and 35 states, respectively, with fixed-price, local and long distance bundled offers. Wave II was catalyzed by numerous state public utility commissions lowering wholesale prices, thereby improving the economics for would-be competitive entrants. Wave III will be driven entirely by the

looming share war between the RBOCs and the cable operators and is now expected to have amplitude greater than either of the previous waves of RBOC share loss. Specifically, by 2006 — the peak in the forecast share loss curve to the cable companies — the RBOCs are expected to see annual attrition of over 4% of consumer primary lines to the cable operators.

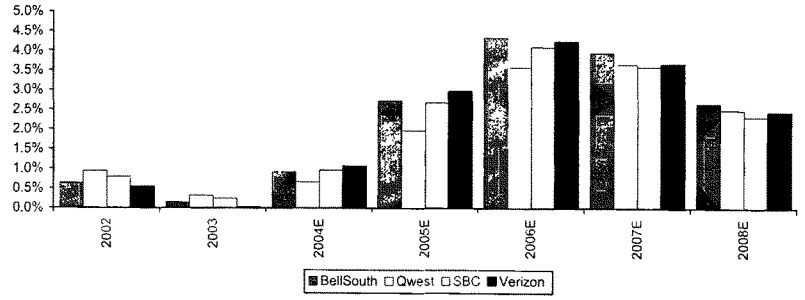
With the greatest exposure to Cablevision's and Time Warner's early telephony market deployments, Verizon is expected to show the worst near-term cable telephony share losses among the RBOCs. Longer term, however, as Cox and Comcast reinvigorate their telephony efforts (on a VoIP-basis rather than over circuit-switches), "risk" will become more evenly spread cross the Baby Bells (see Exhibit 53).

Exhibit 52 RBOC Consumer Line Losses



Source: Bernstein estimates and analysis.

Exhibit 53 RBOC Consumer Lines Lost as a Percentage of Total Primary Lines



Source: Bernstein estimates and analysis.

Summary RBOC Primary Line Losses

Exhibit 54 shows our expectations for primary lines lost to cable telephony for each of the Regional Bell companies in our coverage.

Exhibit 54 RBOC Facilities Primary Line-Loss Forecast

RBOC Cumulative Line-Loss Projections

	2002	2003	2004E	2005E	2006E	2007E	2008E	CAGR 2003-08E
BellSouth	295	315	445	829	1,440	1,996	2,370	50%
Qwest	288	317	380	566	905	1,252	1,489	36
SBC	749	821	1,109	1,912	3,147	4,230	4,927	43
Verizon	614	623	955	1,882	3,202	4,347	5,112	52
All Other	224	230	438	1,021	1,840	2,504	2,936	66
Total	2,169	2,306	3,326	6,211	10,534	14,330	16,833	49%

Source: Bernstein estimates and analysis.

Conclusion

Our general caution on the RBOCs is driven largely by the belief that the next wave of consumer voice share loss, this time to cable telephony, will dwarf those seen during the worst days of AT&T's and MCI's UNE-P assault. Given different MSO deployment timetables and overlaps by RBOCs, the risk by RBOCs suggests Verizon will experience the greatest near-term line losses as a percentage of total primary lines.

Impact on Cable Operators

Overview

Our forecast of 16.8 million cable telephony subscribers at the end of 2008, or nearly 17% telephony penetration of available homes, also has significant implications for cable company revenue and earnings growth. We expect cable telephony to contribute more than 2% to our projected 9-10% compound annual revenue growth rate for cable for the next five years.

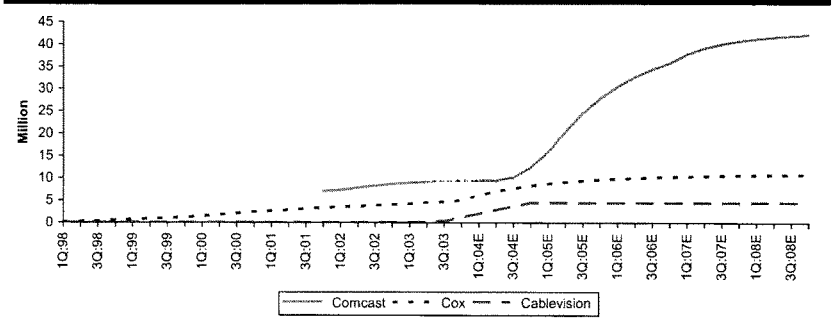
This chapter details our specific cable telephony forecasts for the three cable MSOs in our coverage, Comcast, Cox and Cablevision.

Company Forecasts

For cable operators, VoIP appears well-timed to sustain overall top-line growth just as growth from high-speed Internet access begins to wane over the next few years. The need to sustain growth has been a significant accelerant to VoIP deployment plans.

Our forecasts reflect this acceleration, as well as higher adoption rates based on the results of our proprietary Consumer Telephony Preference Study. Our forecast reflects full deployment by Cablevision in 2003 to cable modem subscribers only, followed by full rollout in 2004. We project Cox rolling out VoIP to the bulk of its markets by the end of the year 2005, and Comcast reaching about 97% availability by 2007, with most of its rollout coming in 2005 (see Exhibit 55).

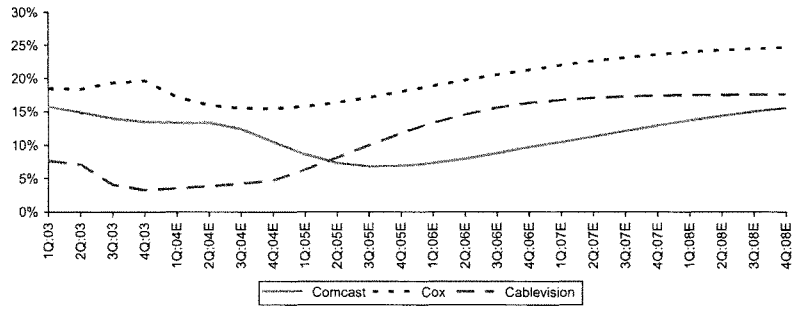
Exhibit 55 Cable Telephony Homes Marketed Forecast



Source: Bernstein estimates and analysis.

For all operators, penetration rates for cable telephony "dip" during the period of peak deployment (see Exhibit 56), reflecting the faster increase in available homes than of subscribers.

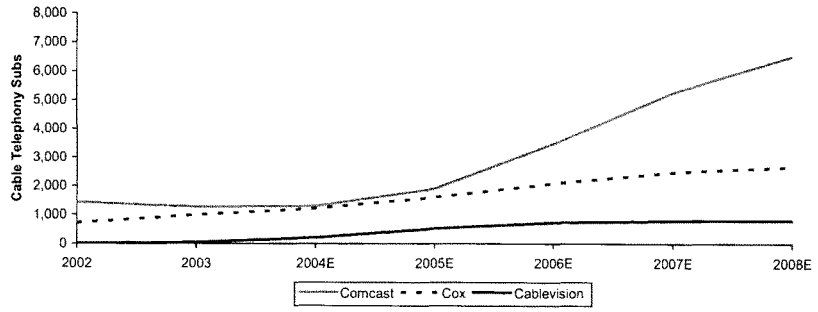
Exhibit 56 Cable Telephony Penetration Forecast



Source: Bernstein estimates and analysis.

For Cablevision — the first mover of the group — our forecast calls for 801,000 telephony subscribers in 2008, up from a standing start in late 2003 (its 4Q:03 result of 28,000 subscribers was closely in line with our projection of 33,000). For Cox, our forecast calls for 2.7 million total telephony subscribers in 2008, up from 988,000 subscribers at the end of 2003. For Comcast — which we expect to be the most cautious of the group in its rollout schedule — our revised forecast calls for 6.5 million cable telephony subscribers in 2008, up from 1.3 million in 2003 (see Exhibit 57). Our detailed forecasts for each company are shown in Exhibit 58.

Exhibit 57 Cable Telephony Subscriber Forecast by MSO



Source: Bernstein estimates and analysis.

Exhibit 58 **Comcast, Cox and Cablevision: Cable Telephony Homes Forecast (million)**

	2002	2003	2004E	2005E	2006E	2007E	2008E
Comcast							
Telephony Homes Passed	8,712	9,415	12,390	27,793	35,746	40,620	42,054
% of Total Homes Passed	22.3%	23.7%	30.7%	68.0%	86.3%	96.7%	98.8%
Telephony Subscribers	1,438	1,267	1,296	1,908	3,460	5,234	6,503
Penetration of Marketable Homes	16.5%	13.5%	10.5%	6.9%	9.7%	12.9%	15.5%
Net Additions	77	(171)	29	612	1,552	1,774	1,269
Cox							
Telephony Homes Passed	4,101	5,031	7,395	9,313	10,175	10,607	10,862
% of Total Homes Passed	40.2%	48.3%	70.1%	87.2%	94.1%	96.9%	98.0%
Telephony Subscribers	718	988	1,221	1,607	2,086	2,471	2,664
Penetration of Marketable Homes	17.5%	19.6%	16.5%	17.2%	20.5%	23.3%	24.5%
Net Additions	67	270	233	383	482	385	193
Cablevision							
Telephony Homes Passed	157	1,214	4,434	4,467	4,501	4,535	4,569
% of Total Homes Passed	3.6%	27.6%	100.0%	100.0%	100.0%	100.0%	100.0%
Telephony Subscribers	12	40	209	524	731	787	801
Penetration of Marketable Homes	7.8%	3.3%	4.7%	11.7%	16.2%	17.3%	17.5%
Net Additions	0	28	169	315	207	56	14

Source: Bernstein estimates and analysis.

For all three companies, our five-year forecast of 15-20% penetration of telephony-ready homes is considerably higher than consensus, which we estimate to be 10-15%.

Cable Telephony Will Contribute 2% of Annual Revenue Growth to 2008

Based on these forecasts, we expect cable telephony to be a significant contributor to revenue and EBITDA growth over the next five years. While incremental penetration of existing circuit-switched phone markets will wane, newly launched IP-based phone markets will contribute to a significant expansion of availability, and increased penetration will spur significant top-line growth. For Comcast, we expect telephony to contribute roughly 200 basis points to revenue growth annually through 2008, of our overall projected 9-10% CAGR.

Conclusion

The residential telephony market is much larger than the video services market (approximately $65 billion versus approximately $35 billion), suggesting that even modest market-share gains for the cable operators can translate into a meaningful impact on top-line growth.

The combination of accelerated rollout schedules and higher-than-expected share of preference for cable telephony as indicated in our consumer survey will benefit all cable operators. As we have noted in prior research ("Cable's Usage Based Segments: Not All Subscribers are Created Equal," November 24, 2003), telephony is also a critical element in a bundled offering to the most valuable subscribers, and has substantial benefits in reducing churn in the related businesses of high-speed Internet access and video.

Over the next five years, however, IP-based telephony will contribute significantly to cable revenue and EBITDA growth, just as growth from high-speed Internet access begins to wane. We expect overall organic top-line and EBITDA growth in line with historical averages, spurred by the sale of additional services like VoIP (instead of new subscriber growth, which has historically driven revenue expansion). Our forecast of strong

sustained growth is a key underpinning of our expectation of a reversion to historical multiples for the group from their currently depressed levels.

A Regulatory Framework for VoIP?

Overview

The FCC is considering possible regulatory frameworks for VoIP telephony, with the goal of delivering a final set of regulations by year-end 2004. Its decisions will impact telephone pricing, taxation, and a host of embedded subsidies, as well as requirements that VoIP-based services comply with law enforcement rules for wire tapping. We believe the likely regulatory outcome will draw distinctions between three "flavors" of VoIP, as follows:

- **Computer-to-Computer telephony** (e.g., voice-enabled instant messaging) will continue to be largely unregulated and will, therefore, continue to enjoy significant price arbitrage benefits versus circuit-switched telephony offered by the RBOCs and long distance carriers, particularly on international calling routes.
- **Internet telephony** (e.g., third-party carriers such as Vonage) that terminates calls on traditional phone lines, will likely become subject to inter-carrier compensation schemes and inclusion in the funding mechanism for Universal Service, significantly diminishing at least one aspect of the current arbitrage.
- **Cable telephony** will likely be regulated in a manner similar to Internet telephony with the primary line/secondary line distinctions that currently shield cable operators from various subsidy, inter-carrier compensation and law-enforcement-compliance obligations likely to disappear.

The FCC is likely to apply its forbearance discretion, however, in exempting VoIP providers — including cable telephony providers — from the draconian unbundling and equal network access obligations of pure Telecommunications Service providers.

Introduction

The FCC currently has a Notice of Proposed Rulemaking (NPRM) proceeding open on VoIP regulation, and is receiving submissions from the public on the topic. The NPRM notwithstanding, some states have attempted to pre-empt the FCC with their own attempts to classify VoIP services as telecom services (and, thus, subject to many of the rules governing the Bells and other telecom carriers), with other states ruling that VoIP services are information services and thus exempt from most current telecom rules. We expect the FCC to act expeditiously in formulating its own classification in order to circumvent the developing patchwork of state rules and impose one uniform national law. Consistent with this belief, the FCC has placed the VoIP proceeding on a fast track for rulemaking.

The FCC's eventual decisions will impact pricing, taxation, and a host of embedded subsidies with the likely regulatory outcome drawing distinctions between three "flavors" of VoIP.

Telecom Regulation 101: The Abridged Course

Nearly all telephone service regulations seek to accomplish one of three objectives:

(1) Ensure universal access for consumers to reasonably priced telephone service;
(2) ensure all carriers receive compensation for providing access to their networks; and
(3) foster competition and investment.

The primary means employed to ensure access to reasonably priced telephone service — regardless of the actual cost to provide that service — is to subsidize service providers serving higher-cost consumers (generally those in lower-density rural markets). The mechanism by which that subsidy is distributed is the Universal Service Fund (USF), into which telecom carriers make contributions based on established formulae.

Inter-carrier compensation — the subject of a second docket pending at the FCC — the second objective noted above of telecom regulation, occurs through several means. For a local carrier originating or terminating a call being billed by a long distance carrier, the mechanism for payment is an access charge. The amount of the access charge depends first and foremost on whether the call originated in-state or out-of-state. Intrastate access rates are governed by the state public utility commissions, while interstate access fees are set at the federal level by the FCC. As we will discuss, payment of access charges for VoIP traffic termination is an issue of significant debate.

A second form of inter-carrier compensation is that for transporting traffic from one local area to another. In the case of the public Internet, consumers pay Internet Service Providers (ISPs) for access to the Internet. Those ISPs, in turn, pay interconnection fees to Internet backbone providers to connect to their network (backbone providers tend to share traffic with each other for free, under agreements called "peering," on the assumption that one gives roughly as much as one gets). The fees charged between ISPs and Internet backbone providers are commercially negotiated and not set through public tariffs. Similarly, if a local carrier — be it RBOC, cable MSO or traditional CLEC — wishes to move voice traffic from one local market to another, they interconnect with and compensate a long distance carrier (or manage their own long distance network). The basis for that interconnection will be a wholesale relationship (versus the CLEC/RBOC/MSO's retail relationship with the customer), again, at commercially negotiated rates. The backbone interconnection terms for VoIP traffic are commercially negotiated just as they are for other data and voice traffic and, thus, are outside the scope of the current regulatory debate.

In addition to Universal Service Fund (USF) contributions and inter-carrier compensation, regulators must also ensure that national security and public safety are not compromised in the name of technological development. The means by which the regulators will likely ensure the national security aspect is to mandate compliance with the Communications Assistance to Law Enforcement Agencies Act (CALEA), which law mandates that network operators provide access to their infrastructure to law enforcement agencies for lawful wire tapping (see the following detailed description).

Finally, the public safety issue revolves around network powering. Today, the RBOCs are required to maintain extensive power backup systems to insure against service interruption in the event of a catastrophic power grid failure or natural disaster. Developing similar systems for any of the current nascent telecommunications technologies like VoIP would be prohibitively expensive and only of limited use, given the need for the new generation of customer premises equipment supporting the infrastructure for VoIP (e.g., computers, cable and DSL modems, phone adapters, etc.) to also be powered.

The Regulatory Debate Over VoIP

As noted previously, the issues facing the FCC as it considers whether and how to regulate VoIP services center around whether or not each flavor should be subject to the same subsidy payments, inter-carrier compensation requirements and CALEA compliance that traditional phone companies' voice services are.

Though we believe it is doubtful the FCC will characterize any VoIP service as a "telecommunications service," for purposes of USF contributions, taxes, and access-charge obligations, we expect the FCC to draw a distinction between VoIP services that interconnect to the Public Switched Telephone Network (PSTN) — and, more specifically, transit another carrier's switch — and those that don't, suggesting that only true computer-to-computer telephony (such as AOL 9.0 Voice Instant Messaging) will remain unregulated.

The FCC is likely to assert jurisdiction over VoIP regulation, preventing a state-by-state patchwork of regulations. Moreover, the FCC will likely abandon the primary line/secondary line distinctions currently enforced, forcing all PSTN-connected VoIP providers to comply with primary line obligations. The FCC is likely to apply its forbearance discretion, however, in exempting VoIP providers — including cable telephony providers — from the more draconian obligations of Telecommunications Service providers, such as unbundling and equal access.

VoIP Pay-In to Taxation and USF: Expect Rural States to Lead the Charge

The regulatory establishment is attempting to weigh a desire to maintain a light touch in taxing and regulating Internet-based businesses (to encourage development and investment) while insuring the long-term health of subsidy structures in place to support affordable telephone service and fair compensation for carriers originating and terminating other carriers' traffic.

The Universal Service and inter-company compensation structures governing VoIP remain in flux. The uncertainty derives both from indecision on the part of the FCC and preemptive action on the part of several states. Based on the rudimentarily regulatory discussion above, it is clear that certain forms of payment are open to debate. For example, should a voice call originated on a PC destined for another PC be subject to any USF funding requirements, given that two PCs both connected to the Internet transmitting IP data over local connections are not subject to such payment? We do not think the regulatory establishment will think so or risk being accused of "taxing the Internet."

If we assume that the public policy issue of protecting the USF and affordability are key goals, then we can also assume that the lobbying in favor of USF contributions by VoIP carriers will be led by representatives from rural states (Billy Tauzin in Louisiana, John McCain in Arizona, Ted Stephens in Alaska, etc.). We believe it is inevitable that the regulatory umbrella governing USF contributions for voice services will be extended to include some or all of the three flavors of VoIP described above, with the likely outcome being a line drawn between Computer-to-Computer VoIP services (excluded) and Internet and Cable Telephony (included).

In the end, the assignment of a North American Numbering Plan-compliant telephone number (three-digit area code plus seven-digit number) will likely be the determinant for USF contribution, with the VoIP providers likely to pass through to the customer any such "federal tax" as an add-on to the bill.

Inter-Carrier Compensation Likely to Move to Bill-and-Keep

The FCC has indicated that it is likely to overhaul the inter-carrier compensation regime sometime in 2004 and intends to move to a "Bill-and-Keep" structure. Under Bill-and-Keep, a carrier would recover its network costs directly from the end customer, not from other carriers. While such a shift would likely require several years for transition and, similar to the CALLS proposal adopted a few years ago, it will likely include a significant reduction in — if not complete elimination of — usage-sensitive payments. Such a reduction in usage-sensitive payments will accelerate the shift to flat rate retail pricing plans with all the negative ramifications such plans carry for the Bells and other incumbent players (see "The All-You-Can-Eat Business Model: A Double-Edged Sword" chapter). The carrot likely to be dangled for the Bells to offset the loss of inter-carrier access compensation will be a regulated end-user charge increase — likely in the $1-$3 range where local rates have been rebalanced and in the $5-$10 range where they have not. While the purported intention of a shift to Bill-and-Keep scheme with an end-user charge would be to keep the RBOCs "whole," the likely outcome is far more negative for the Bells. Given the anticipated increase in the competitive intensity of the industry over the next three years, it is likely that the Bells will be unable to actually pass through the full value of the offered end-user-charge increase to the customer, removing the offset to lower usage-sensitive income.

CALEA Compliance Is a Given

We believe the FCC is likely to require CALEA compliance for VoIP providers. Under the CALEA rules, telecommunications providers must offer wiretap access to law enforcement agencies. Compliance with CALEA has proven relatively simple for circuit-switched telephony operators, but is technologically more complex for VoIP — especially VoIP implementations that travel over the public Internet — because packets for any given call can take multiple possible routes. Packet "sniffing" to identify individual "targeted" packets is complex, and can create latency for other traffic on the network. The problem has been exacerbated by the fact that IP technology vendors were late in turning their attention to the problem, making CALEA compliance a game of catch-up.

Since September 11, 2001, however, the political attention paid to wiretap assistance has increased dramatically, and it is unlikely that carriers will be able to avoid compliance for long. For cable operators, for whom VoIP calls take a relatively limited number of possible routes, the complexity and cost of compliance should not be onerous, especially when the operator is providing service via an integrated softswitch rather than a piece-part assemblage of applications. Indeed, Time Warner Cable (via its Cisco softswitch architecture) is already complying with the CALEA rules in its Portland, Maine, VoIP trial, as is Cox. For Internet telephony providers, and especially for computer telephony providers, the compliance challenges are likely to be significant. We believe that, ultimately, CALEA compliance and e911 capability will be applied to all VoIP providers, with the possible exception of Computer-to-Computer VoIP, as the service represents little more than a vertical application on the network.

Public Safety: A Debate About Primary vs. Secondary Line Distinctions

We expect cable operators such as Cablevision, which is currently positioning its service as a "second line" service, to be required to comply with all "primary line" obligations. As a practical matter, however, the cost and burden of these obligations — save for network powering — is likely to be relatively small.

The distinction between primary line and secondary line is arbitrary. Cablevision knows full well that most customers who adopt the service will abandon their primary lines (generally from Verizon). By nominally positioning the service as a second line "voice" service, however, rather than as a telephone service (notice that in their marketing materials, the words "telephone service" are never used), Cablevision is attempting to walk a fine line, signaling to customers that they can save money versus their existing primary line service, but avoiding obligations associated with primary line service such as "lifeline" powering, e911, and CALEA (Communications Assistance to Law Enforcement Agencies).

Following the fall power outage in the Northeast, it became clear to the FCC that the issue of mandating backup powering for any primary line replacement service needs serious consideration. Thus, we believe the issue of VoIP service backup powering will be treated separately from the other regulatory issues and as part of a broader proceeding. The FCC may well require some form of powering, but is unlikely to go all the way to full uninterruptible network powering as a requirement because of the financial burden it would place on cable operators. A key consideration is the FCC's desire to foster facilities-based competition; adding regulatory burdens to cable telephony (including but not limited to backup line powering) would substantially lessen the cable MSOs' desire to deploy telephony service as a primary line substitution service.

The FCC Is Likely to Exempt VoIP from Unbundling and Network Access Requirements

The FCC holds that any service it deems to be a telecommunications service must comply with common carrier regulation. Common carrier status calls for just, reasonable and nondiscriminatory pricing, just and reasonable business practices, filing of tariffs, FCC approval for acquiring or constructing new lines, mandated unbundling of network elements, payment and receipt of network access fees, and payment into the Universal Service Fund. Cooperation with law enforcement and 911 rules are also part of the baggage. Despite what we have described above as a regulatory scenario for VoIP in many ways closely resembling that in existence for the Bells — at least relative to inter-carrier compensation, Universal Service and CALEA compliance — the FCC is unlikely to formally classify VoIP services as "Telecommunications Services" and, thus, will exempt VoIP from the more draconian network access and element unbundling obligations faced by the RBOCs.

Conclusion

The most likely outcome of the FCC's current rulemaking process for VoIP telephony is that Computer-to-Computer telephony will continue to be largely unregulated, while Internet telephony and cable telephony will likely be subject to inter-carrier compensation, Universal Service and CALEA compliance.

Operating under such a regime would be only a modest negative to the cable MSOs (who would become subject to additional compliance-related costs and taxes), as the cable telephony service model already assumes paying some form of access fee for terminating calls on another carrier's network and funding the Universal Service Fund. The RBOCs are likely to modestly benefit from a slightly more "level playing field," but the growing availability of all flavors of VoIP, especially cable telephony, will put increasing pressure on prevailing circuit-switched pricing. The imposition regulatory charges could potentially spell the end of Internet telephony

services like Vonage, whose competitive advantage today stems largely from regulatory arbitrage.

We therefore do not expect the regulatory treatment of VoIP to retard the growth of IP-based cable telephony.

Appendix

Appendix to The Bernstein Consumer Telephony Preference Study

Overview

This research appendix reproduces the research questionnaire, and details methodology and sample size information behind the research results discussed in "Consumer Demand: Bernstein's Consumer Telephony Preference Study" chapter earlier in this volume.

Study Design

The Bernstein Consumer Telephony Preference Study, which was jointly conducted by Sanford C. Bernstein and an independent research organization, Millward Brown Market Research, employed a "discrete choice" design — a variant of conjoint analysis — that forced more than 700 consumer respondents from around the country to "choose" between simulated offers from their specific cable operator and their specific RBOC. Subscribers to direct broadcast satellite (DBS) services were excluded from our sample, as were subscribers to UNE-P based local telephony service providers (e.g., AT&T or MCI). Recruitment of participants was by mall intercept. Respondents were instructed to assume they could keep their existing phone number (Local Number Portability, or LNP), and their existing telephones. Note that our sample was designed to achieve statistical significance for each cable brand and each RBOC, but — for reasons of cost — not necessarily for each possible combination of cable operator and RBOC.

The objective of the study was to determine customers' self-reported willingness to switch at various price points. A range of possible price discounts (from zero to 40% in 10% increments), powering options (from no battery backup to 24-hour battery power), and bundling alternatives were tested.

Sample Size

Our sample was designed to achieve not less than 100 respondents for each cable brand and each RBOC, achieving a 10% margin of error for attribute utilities for each operator. Margin of error is +/- 4% for the total sample (i.e., for all cable/all RBOC categories). For reasons of cost, we did not attempt to achieve statistical significance for each possible combination of cable operator and RBOC (statistical significance was achieved for the Cablevision/Verizon combination only).

Cell sizes are shown in Exhibits 59 through 63.

Exhibit 59 Sample Size Matrix 1: Cable MSO vs. Local Telephone Companies

	BellSouth	Qwest	SBC	Verizon	Total
Cox	31	29	44	32	136
Charter	20	6	59	10	95
Cablevision	9	7	84	51	151
AT&T Broadband	15	33	29	42	119
Comcast	31	1	30	44	106
Time Warner	44	19	23	16	102
Total	150	95	269	195	709

Note: BellSouth (includes Southern Bell). Verizon (includes Bell Atlantic, GTE and NYNEX, New York Telephone, New England Telephone, New Jersey Bell, and Bell of Pennsylvania). SBC (includes Pac-Tel, Southwestern Bell, Pacific Bell, Nevada Bell, Ameritech and SNET). Qwest (includes U.S. West).

Source: Bernstein Consumer Telephony Preference Study.

Exhibit 60 Sample Size Matrix 2: Cable MSO vs. Local Distance Carrier

	AT&T	MCI	Sprint	Local Phone	Total
Cox	47	18	26	45	136
Charter	19	12	13	51	95
Cablevision	14	34	41	62	151
AT&T Broadband	54	12	14	39	119
Comcast	36	23	13	34	106
Time Warner	42	17	10	33	102
Total	212	116	117	264	709

Source: Bernstein Consumer Telephony Preference Study.

Exhibit 61 Sample Size Matrix 3: Wireless Carrier vs. Cable MSO

	AT&T	Verizon	Cingular	Sprint	All Other	None	Total
Cox	16	17	19	21	27	36	136
	12%	13%	14%	15%	20%	26%	100%
Charter	9	23	15	5	9	34	95
	9%	24%	16%	5%	9%	36%	100%
Cablevision	14	30	15	23	21	48	151
	9%	20%	10%	15%	14%	32%	100%
Comcast	31	29	20	18	43	84	225
	14%	13%	9%	8%	19%	37%	100%
Time Warner Cable	9	14	15	11	17	36	102
	9%	14%	15%	11%	17%	35%	100%
Total	79	113	84	78	117	238	709

Source: Bernstein Consumer Telephony Preference Study.

Exhibit 62 Sample Size Matrix 4: Internet Access vs. Cable MSO

	Total	Total Broadband	Cable Broadband	DSL Broadband	Dial Up	No Internet Access
Cox	136	29	20	9	65	42
	100%	21%	15%	7%	48%	31%
Charter	95	18	12	6	39	38
	100%	19%	13%	6%	41%	40%
Cablevision	151	23	14	9	65	63
	100%	15%	9%	6%	43%	42%
Comcast	225	43	29	14	95	87
	100%	19%	13%	6%	42%	39%
Time Warner Cable	102	10	6	4	45	47
	100%	10%	6%	4%	44%	46%
Total	709	123	81	42	309	277

Source: Bernstein Consumer Telephony Preference Study.

Exhibit 63 **Sample Size Matrix 5: Internet Access vs. RBOC**

	Total	Total Broadband	Cable Broadband	DSL Broadband	Dial-Up	No Internet Access
BellSouth	150	19	14	5	66	65
	100%	13%	9%	3%	44%	43%
Verizon	195	44	27	17	85	66
	100%	23%	14%	9%	44%	34%
SBC	269	46	31	15	115	108
	100%	17%	12%	6%	43%	40%
Qwest	95	14	9	5	43	38
	100%	15%	9%	5%	45%	40%
Total	709	123	81	42	309	277

Source: Bernstein Consumer Telephony Preference Study.

Respondents were asked to choose between offers that varied on five different dimensions:

- Brand: Questions auto-inserted the name of the respondent's own cable operator, incumbent RBOC, and long distance provider.
- Combined or separate bills.
- Included or *à la carte* CLASS services (Custom Local Area Signaling Services, such as call waiting).
- Battery backup power (none, four-, eight- or 24-hours) for the cable operator only.
- Discounts from zero to 40% off current RBOC price. Because prices in local telephony are a moving target and vary significantly by household, we tested "discounts" (i.e., "10% lower than your current bill") rather than specific price points. Discounts for all players — including the incumbent RBOC — were tested.

Sample Bias

Subscribers to direct broadcast satellite (DBS) services were excluded from our sample, as were subscribers to UNE-P based local telephony service (e.g., from AT&T or MCI). These groups represented about 23% and 11% of households, respectively, at the time of our study. Overlap between the two groups is unknown.

We can speculate that the tendency to switch to cable for voice services would be lower among satellite subscribers than for current cable video subscribers, potentially overstating demand for cable VoIP services in our study. We can further speculate that customers of UNE-P telephony are relatively price-sensitive and are less brand-loyal than average, potentially understating demand for discounted cable VoIP services and overstating brand loyalty to RBOC telephony in our study.

Questionnaire

(Note that the questionnaire was computer aided — with discrete choice simulations dynamically generated based on prior responses — and therefore cannot be accurately reproduced here.)

The following are the excerpts relevant to the Bernstein Consumer Telephony Preference Study.

Do you currently have cable television service in your home? Please do not include satellite cable service.

Yes	O
(Terminate) No	O

Are you involved in the decision-making process when choosing a cable, long distance, or local telephone service provider for your home?

Yes	O
(Terminate) No	O

Who is your cable television service provider? (Select One Answer)

Cox Communications	O
Charter	O
Cablevision	O
AT&T Broadband	O
Comcast	O
Time Warner Cable	
(Terminate) Other (Specify)	O

Who is your current local telephone service provider? (Select One Answer)

BellSouth (includes Southern Bell)	O
Verizon (includes Bell Atlantic, GTE, and NYNEX, New York Telephone, New England Telephone, New Jersey Bell, and Bell of Pennsylvania)	O
SBC (includes PacTel, Southwestern Bell, Pacific Bell, Nevada Bell, Ameritech, and SNET)	O
Qwest (includes U.S. West)	O
(Terminate) Other (Specify)	O

Who is your current long-distance telephone service provider? (Select One Answer)

AT&T	O
MCI/Worldcom	O
Sprint	O
Your local phone company also provides your long distance (may include BellSouth, Verizon, SBC, Qwest, or other local phone company)	O
(Terminate) Other (Specify)	O

(If Other for Cable, Local Telephone, or Long Distance Service, Terminate)

How satisfied are you with the quality of service your ***cable company*** *provides? On a scale of 1 to 10, with 1 being "not at all satisfied" and 10 being "completely satisfied," please indicate your level of satisfaction.*

1	2	3	4	5	6	7	8	9	10
Not at All Satisfied									Completely Satisfied

How satisfied are you with the quality of service your ***local telephone company*** *provides? On a scale of 1 to 10, with 1 being "not at all satisfied" and 10 being "completely satisfied," please indicate your level of satisfaction.*

1	2	3	4	5	6	7	8	9	10
Not at All Satisfied									Completely Satisfied

How satisfied are you with the quality of service your ***long-distance telephone*** *company provides? On a scale of 1 to 10, with 1 being "not at all satisfied" and 10 being "completely satisfied," please indicate your level of satisfaction.*

1	2	3	4	5	6	7	8	9	10
Not at all Satisfied									Completely Satisfied

Over the next year, a number of new companies are likely to offer local phone service in your area. Your long distance telephone company and your cable television company may each begin to offer local telephone service as an alternative to your local telephone company. You may have already received marketing promotions from these companies about their local phone service alternatives.

In each of the following questions, you will be shown a series of options for providing local telephone service In each case, you should assume that you would be able to change your local telephone service provider WITHOUT CHANGING YOUR HOME TELEPHONE NUMBER if you choose to do so.

If you had to choose the provider of local telephone service for your home from among the following three options, which ONE would you choose?

DISCRETE CHOICE QUESTIONS GO HERE. EACH RESPONDENT WILL NEED TO COMPLETE ONE OF TWO SETS OF 16 CHOICE QUESTIONS.
Note: *Due To Their Dynamic Nature, Discrete Choice Questions Cannot Be Reproduced Here*

Do you currently have access to the Internet from home?

Yes O
No O

(If "Yes" to Q.10 go to Q.11, Else Skip to Q.13)
What type of Internet connection do you have? (Enter Response Below)

Dial-up (e.g., AOL, Earthlink, MSN, etc.) O
Broadband/high-speed through a cable company or DSL O

(If "Broadband/High-Speed" to Q.11 go to Q.12, else skip to Q.13)

Who is your broadband/high-speed Internet service provider?
(Select One Answer)

Cable Modem service from your local cable company	O
DSL service through your local telephone company	O
Cable Modem service from Road Runner	O
AOL Broadband	O
Earthlink Broadband	O
DSL service from another company (Specify)	O

Suppose you learned that the local telephone service offered by your cable television company was provided over an Internet connection using all your existing telephone jacks, telephone handsets, and your current telephone number. Would this information make you more likely, less likely, or have no impact on your willingness to consider using your cable television company for local telephone service? (Select One Answer)

More likely to consider using the cable company for local telephone service	**Less** likely to consider using the cable company for local telephone service	**No impact** on willingness to consider the cable company for local telephone service
O	O	O

Conclusion

See "Consumer Demand: Bernstein's Consumer Telephony Preference Study" chapter earlier in this volume.

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BERNSTEIN RESEARCH CALL

January 6, 2005

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U.S. Telecom: Superior Growth Prospects Make Enterprise Market a Key Battleground for U.S. Service Providers

Ticker	Rating	CUR	1/5/2005 Closing Price	Target Price	YTD Rel. Perf.	EPS 2003A	EPS 2004E	EPS 2005E	P/E 2003A	P/E 2004E	P/E 2005E	Yield
BLS	U	USD	27.27	23.00	0.5%	1.95	1.87	1.65	14.0	14.6	16.5	4.0%
Q	O	USD	4.38	5.00	1.0%	-0.38	-0.60	-0.22	NM	NM	NM	0.0%
SBC	U	USD	25.44	21.00	1.0%	1.55	1.52	1.41	16.4	16.7	18.0	5.1%
VZ	M	USD	40.02	43.00	1.1%	2.62	2.46	2.49	15.3	16.3	16.1	3.8%
T	M	USD	18.49	16.00	-0.7%	2.36	1.81	1.45	7.8	10.2	12.8	5.1%
SPX			1183.74			54.50	66.00	70.00	21.7	17.9	16.9	2.0%

O – Outperform, M – Market-Perform, U – Underperform

Highlights

- Large enterprises account for one-fourth of total retail telecom services revenues, but will drive over half of the industry's growth over the next five years, making this one of ***the*** most important customer segment in the industry – though one garnering only a fraction of investors' attention.
- The enterprise market's superior growth prospects make it a key strategic battleground for major telecom carriers. The large long-distance carriers have historically dominated this difficult-to-serve segment, but the RBOCs are making inroads, consistent with our observations and forecasts over the last two years.
  - Importantly, though the Bells continue to make progress climbing the enterprise services pyramid, the competitive dynamic remains today largely an oligopoly with AT&T, MCI, and Sprint controlling the high ground and the Bells using discount pricing to gain entry in more commodity services.
  - We expect the RBOCs' share to begin ramping by 2006-2007, by which time they will have sufficient experience to be considered almost on par with the traditional enterprise service providers.
  - While we believe the market could show a rebound on the heels of solid economic growth and enterprise telecom demand, this recovery has been slow to materialize; and ***the more delayed the recovery, the closer the RBOCs' eventual share wins will come, and the higher the risk that AT&T (and MCI) never sees topline recovery***.
- Our analysis suggests retail telecom revenues from large enterprise customers will grow 4.5% annually through 2009, more than twice that expected for the overall industry and significantly faster than either the consumer or small/medium business (SMB) segments at 1.1% and 2.0%, respectively.
- Somewhat moderating our overall outlook for enterprise services, however, is the steep price decline witnessed in the important long-distance data category over the past two years. Though we believe some degree of price discipline will find its way back into the market over the next two years, we nevertheless project continuing annual percentage price declines at least in the mid-teens to low-twenties range.

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- Within the enterprise segment, the majority of the growth will derive from IP and wireless data services as companies adapt their business processes to leverage these technologies.
  - Our proprietary surveys conducted over the last three years show a steady migration to IP-based networking, and an increasing interest in wireless data applications among primary telecom decision makers within *Fortune 500* companies.
  - Due to the substitutive nature of many IP services for legacy data products like frame relay and ATM, at a net revenue level, IP services will drive somewhat less than their headline share of gross revenue growth.
- In our latest analysis of the market, we have fully separated wholesale revenues from the retail market. The wholesale segment is often lumped together with the enterprise segment, because many wholesale customers (*i.e.*, other carriers) are often large corporations themselves. However, it is important to distinguish between the two, as they are characterized by very different products, market dynamics, and growth prospects.
  - Within the wholesale segment, declines in local and long-distance voice will overwhelm modest growth in long-distance data, leading to an average 2.5% annual decline overall. Though wholesale volumes continue to grow, price pressures are particularly severe in this segment, as the products are largely commoditized and widely offered by many competing carriers.
  - Without specifically considering AT&T's and Qwest's participation in the wholesale market, we believe investors could be underestimating these companies' future revenue prospects and overestimating their projected margins. AT&T and Qwest are currently two of the largest providers of wholesale long-distance voice and data services.

Investment Conclusion

We believe the RBOCs – Verizon, SBC, and BellSouth – are making steady, if slow, progress penetrating the largest enterprise accounts (for long-distance voice and data services). By 2006-2007, we expect them to begin ramping up their share of these services dramatically, reaching 36% by 2009. This share gain will allow the RBOCs to add about $6B in annual wireline revenues over the next five years; growth in enterprise wireless services will contribute another $8B in incremental revenues. In light of the RBOCs' imminent share erosion in the consumer market due to cable telephony/VoIP (the "storm" in our RBOC thesis), the enterprise market becomes especially critical to their long-term growth prospects.

The RBOCs' gain will be largely AT&T's loss. AT&T is currently the leader in the enterprise market, not only in market share but in mind-share as well. We believe AT&T will continue to hold the #1 spot in this market, but its share will inevitably be eroded as competition intensifies. Over the next five years, we see AT&T's annual revenues from enterprises decreasing by $5B. However, the company's reported top line will not fully reflect this, as some of the losses will be offset by gains in wholesale services. We believe the positive topline but negative margin impacts of AT&T's wholesale activities have not been fully incorporated into investors' expectations. We maintain our Outperform rating on Qwest (Target $5), Marketperform rating on Verizon (Target $43), and Underperform ratings on SBC (Target $21) and BellSouth (Target $23). For AT&T, we maintain our Marketperform rating and $16 target price, which we recently revised in light of our wholesale market analysis.

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Details

Framing the Third Bernstein Enterprise Telecom Decision-Maker Study

We recently concluded our third Bernstein Enterprise Telecom Decision-Maker Study, along the lines of two similar studies conducted in previous years (see March 2002 Blackbook: *"A Tough Nut to Crack: The Hegemony of AT&T and Worldcom in the* Fortune *1000 Market"*; and May 2003 Blackbook: *"A Tough Nut to Crack II: Oligopoly Returns to the Enterprise Telecom Market"*). The current study centers on 27 hours of interviews with senior IT personnel at Fortune 500 corporations, personally conducted by Bernstein analysts in conjunction with an independent market research firm. Each of the interviewees was selected for his or her direct decision-making responsibility for the company's network architecture and telecom purchases. The key findings from the study will be presented in a series of forthcoming reports.

This Research Call frames that series by detailing the size, growth, and important characteristics of the enterprise segment of U.S. telecom services. Large enterprises are a key driver of overall telecom market growth, but are generally the hardest customers to serve due to their complex and varied requirements. Information about this segment is also some of the most difficult to come by, as the few large providers that dominate this space closely guard their market data. Therefore, we believe the most effective way to acquire intelligence in this area is to speak directly with the end-users themselves.

Enterprise is One-Fourth of the Market, One-Half of the Growth

Large enterprises, roughly defined as the set of *Fortune* 1000 corporations, spent an estimated $63B on telecom services in 2004, accounting for one-fourth of the total U.S. retail market (**Exhibit 1**). This figure will grow at an average rate of 4.5% annually over the five years through 2009, more than twice the overall market growth rate of 2.1%. Said another way, large enterprises are expected to drive over one-half of the total growth in U.S. retail telecom services, with consumers and small/medium businesses making up the rest (**Exhibit 2**). As **Exhibit 3** shows, wireline data and wireless services are expected to drive the bulk of enterprise spending growth, while wireline voice revenues steadily decline.

Exhibit 1
Contribution to Total U.S. Retail Telecom Services Growth by Service Category

Contribution to Growth by Service Category,
Total Retail Industry and Large Enterprise ($ billion)

	2004E		2009E		2004E-09E CAGR		Contribution to Growth	
	Total Retail	Large Enterprises	Total Retail	Large Enterprises	Total Retail	Large Enterprises	Total Retail	Large Enterprises
Local Voice	$75.6	$21.9	$68.4	$21.0	-2.0%	-0.8%	-0.5%	-0.3%
Long-Distance Voice	31.9	10.8	14.4	4.7	-14.7	-15.3	-1.3	-1.8
Subtotal: Wireline Voice	**$107.4**	**$32.7**	**$82.7**	**$25.7**	**-5.1%**	**-4.7%**	**-1.9%**	**-2.0%**
Local Data	$19.7	$6.0	$26.8	$9.6	6.4%	9.8%	0.5%	1.0%
Long-Distance Data	18.8	14.4	23.0	18.3	4.1	4.8	0.3	1.1
Subtotal: Wireline Data	**$38.4**	**$20.4**	**$49.8**	**$27.9**	**5.3%**	**6.4%**	**0.9%**	**2.2%**
Wireless Voice	$101.2	$7.7	$133.0	$15.4	5.6%	14.9%	2.4%	2.2%
Wireless Data	4.4	2.0	13.9	9.4	26.1	36.8	0.7	2.2
Subtotal: Wireless	**$105.6**	**$9.7**	**$146.9**	**$24.8**	**6.8%**	**20.8%**	**3.1%**	**4.4%**
Total Industry	**$251.4**	**$62.8**	**$279.4**	**$78.4**	**2.1%**	**4.5%**	**2.1%**	**4.5%**

Source: Bernstein estimates and analysis

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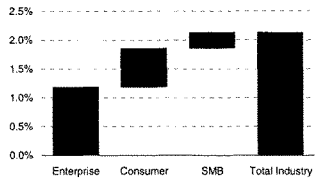
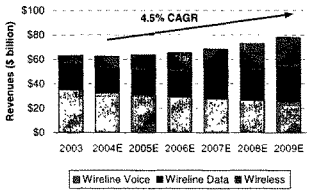
Exhibit 2
Contribution to Total Retail Industry Growth, 2004E-09E



Source: Bernstein estimates and analysis

Exhibit 3
Enterprise Telecom Spending Forecast



Source: Bernstein estimates and analysis

At $63B for 2004, enterprise telecom revenues were down 1% from the previous year; for 2005, we expect revenue growth of about 2% for this segment. Our near-term outlook for the segment has been negatively impacted over the last six months by the lack of an observable recovery in business demand for long-distance data connectivity, as well as by continued price pressure in these services (which will be discussed in detail below). Partially offsetting this has been strong demand for wireless services, particularly wireless data. We estimate enterprise wireless revenues increased by 35% in 2004, compared to 12% for the retail wireless market overall, with penetration of multifunction mobile messaging products like the Blackberry driving most of this growth. However, wireless data is currently only a minuscule portion of the enterprise market, and so far has had only limited impact on overall growth.

Wholesale Now Separate From Retail in our Analyses

In our latest analysis on the telecom market, we have fully separated wholesale revenues from retail to present a clearer picture of revenue trends. Wholesale services are often lumped into the enterprise segment by analysts (and the carriers themselves), on the grounds that many wholesale customers – usually other carriers – are also large corporations. However, it is important to clearly distinguish between wholesale and retail because the growth prospects and competitive dynamics of the two segments are very different. Therefore, for companies that are active in both segments (such as AT&T and Qwest), it is not possible to accurately evaluate their prospects without considering each of these segments separately.

At a high level, the wholesale market can be divided into local and long-distance services:

- *Local services* include access charges paid by long-distance voice carriers to the ILEC; local private lines used to connect a customer site to a long-haul data carrier's PoP (also referred to as "special access"); and ILECs' wholesale recovery fees from local access lines leased to CLECs and other carriers, via regulated (*e.g.*, UNE) or negotiated arrangements.
- *Long-distance services* include long-haul voice and data capacity sold to incumbent and competitive local carriers, wireless providers, and cable operators; as well as associated services such as collocation.

The markets for wholesale local voice and data, while large, exist only because of the ILECs' legacy monopoly over the local access infrastructure. As such, they are governed more by regulatory measures than competitive dynamics. More interesting to investors are the markets for wholesale long-distance voice and data, which are not just competitive, but highly so. Traditional long-haul carriers AT&T, MCI, and

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Sprint compete here, as do newer network operators like Level 3, Global Crossing, 360networks, Wiltel, and a host of others. The availability of wholesale long-distance capacity also increases the competitive intensity on the retail side by enabling other providers to offer services using leased bandwidth. For example, the RBOCs and cable MSOs rely on wholesale for their long-distance voice offerings.

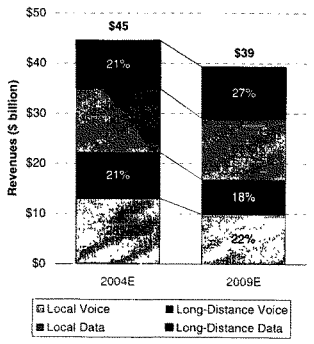
Exhibit 4 gives a summary of our forecast of the wholesale market. Through 2009, we project an overall average annual decline of 2.5%, with declines in wholesale voice overwhelming modest growth in wholesale long-distance data. We choose not to breakout wholesale wireless services, as it currently represents only a tiny fraction of the overall market, serving a few mobile virtual network operators (MVNOs). As the MVNO model catches on, we expect wholesale wireless services to become a more significant segment of the market.

Our detailed wholesale versus retail analysis has resulted in two significant changes to our enterprise market model:

- First, about 75% of what we previously categorized as retail enterprise local private line services has been reclassified as wholesale (mainly special access). These are lines provided by the ILEC to the long-distance carriers in order to reach an enterprise customer's site.
- Second, enterprise long-distance data revenues have been reduced by nearly 20% to properly account for wholesale capacity sales to other carriers.

Also as a result of our wholesale analysis, the projected growth rate of the enterprise market now reflects only that of retail revenues. Essentially, we have now more finely dissected the overall telecom market's growth by customer segment: wholesale, retail consumer, retail SMB, and retail enterprise.

Exhibit 4
U.S. Wholesale Telecom Services, 2004E-09E



Source: Bernstein estimates and analysis

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Impact of Wholesale on AT&T

Among the companies in our coverage, AT&T is most exposed to the wholesale long-distance voice and data segments, being a major provider in each. With the ongoing declines in its retail business, AT&T's services mix is shifting increasingly toward wholesale, suggesting that this segment will have an increasing impact on the company's Business Services division (which includes its wholesale activities). We believe there are two effects of the shift toward wholesale that are not well understood by investors and analysts:

- AT&T's revenue trends increasingly diverge from those suggested by studying the retail enterprise market alone. Specifically, as discussed in detail below, we foresee AT&T's losing share in the enterprise market over the next five years as the RBOCs increase their penetration into these customer accounts. However, AT&T should be able to make up for some of the lost retail revenues by selling wholesale capacity to the RBOCs (and other carriers). Since wholesale prices are significantly lower than retail, however, the net effect will still be a decline in overall revenues, but perhaps not as severe as one would expect by looking only at AT&T's role in the retail enterprise market.
- With more severe price pressure due to greater competition, margins for wholesale services are typically thinner than for retail (although the margins vary from carrier to carrier, depending on operational efficiency). This is particularly true when wholesale services *substitute* for retail, as is the case with AT&T. (On the other hand, one could argue that *incremental* wholesale sales will carry high margins, since the capacity is already there and it requires little additional operating overhead.) Therefore, while wholesale will tend to improve AT&T's revenue trend, the impact on margins may well be negative.

Similar dynamics apply to Qwest, which is also an active player in the wholesale market. However, the overall impact of wholesale will be less pronounced in Qwest's case, since the company's revenues are spread over a broader range of services than AT&T's.

We cover the wholesale market in more detail in our concurrently published Research Call, *"US Telecom: Wholesale Segment Too Large to Sweep Under Rug, But Expected to Decline At 2.9% CAGR Through '09,"* January 6, 2005.

The Key Battleground for the Large Service Providers

Given its superior growth prospects, the enterprise market has become the key battleground for the large telecom service providers. Long-distance carriers AT&T and MCI are keen to protect their positions in this market, which they see as their last stronghold after retreating from the consumer market. Meanwhile, the RBOCs, having gained full regulatory relief to offer long-distance services, see nothing but growth opportunities in providing long-distance voice and data services to large enterprises.

It is important to note that not all portions of the enterprise market are the subject of contention among these service providers. Given the RBOCs' historical monopoly over local access infrastructure, these carriers have always dominated local voice and local data services to enterprises, just as they do in the consumer and SMB markets. And while there have been some changes here in recent years, due to unbundling regulations and VoIP technology, we foresee the RBOCs' losing no more than 5 percentage points of market share in enterprise local services over the next five years. (Cable VoIP is expected to be much more prevalent in the consumer and SMB segments than in enterprise.)

Rather, the service providers are battling mainly over long-distance voice and data services to enterprises. These services are integral to enterprises' IT infrastructure, and much more challenging to provide. Therefore, in our interviews with enterprise telecom buyers, we focus mainly on their long-distance voice and data needs (as well as wireless, to the extent that it is relevant). Likewise, in the discussion that follows, where we speak of the carriers' relative capabilities and positioning in the enterprise market, it is

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generally in the context of long-distance services. We continue, however, to include local voice and data revenues in our market sizing, in order to accurately reflect the total spending of enterprises on telecom services.

Enterprise Requirements are Demanding and Complex

Telecom buyers repeatedly emphasize the difficulty of finding one service provider that meets all, or even most, of their needs. This is especially true for the largest corporations with a need for secure connectivity to international locations. In many cases, these companies have been forced to divide their telecom purchases among multiple providers, each providing a subset of services to a subset of customer locations.

Enterprise telecom requirements, particularly for long-distance services, are much more stringent than those for consumers and SMBs. In terms of the network itself, reach, reliability, and security are tantamount – the latter two dictating that the reach should be achieved "on-net" (i.e., on the provider's own network) as much as possible. Flexibility, or the ability to provide custom solutions, is highly valued, since customer needs at the high end of the market rarely fit a standard model. Important as well are the sales approach, competitive pricing, service delivery, and overall responsiveness. With switching costs high, corporate buyers also look for financial stability and a demonstrated commitment to service.

We found in our 2003 study that technology is not a key factor in the buying decision – rather, it is widely viewed as being only a transient differentiator between carriers. Our interviewees in that study commented that they could tell little difference between the technological capabilities of the major service providers. The ability to integrate wireless services is also not considered very important, as many companies do not even designate a primary wireless provider. However, we expect that this will become an increasingly important differentiator in the future as wireless data becomes integral to corporate business processes.

Service Provider Positioning Summary from our 2003 Study

Though we spent less time in our 2004 study examining relative carrier positioning, many of the findings of our 2003 study were reaffirmed. Our 2003 interviewees generally regarded AT&T and MCI as the only two providers that had the global reach and breadth/flexibility of solutions required to service large multinational corporations. Not surprisingly, these two providers retain the bulk of enterprise market share: they served 92% of enterprises in our survey for (long-distance) voice services and 85% for data services. Sprint accounted for the rest, with some companies finding Sprint's partnership with Equant effective in providing a global reach even beyond AT&T's and MCI's capabilities. However, Sprint's network was perceived as less reliable, and its sales force less experienced, than those of its two larger peers.

At the time we conducted our 2003 study, the RBOCs were all but missing from enterprise contracts, despite their well-publicized efforts to penetrate the market. Global reach was out of the question for these carriers, and even national reach was regarded as lacking, with most (potential) customers believing they could offer only regional services. As a result, despite the RBOCs' incumbent status in local voice and data services, none of the companies we talked to named an RBOC as their primary or secondary provider of long-distance services. The RBOCs also received low marks for their sales capabilities and breadth of service offerings (with the exception of wireless, in which most companies had little interest at the time). In negotiations, many buyers found the RBOCs' attitude to be more characteristic of former monopolists than aggressive competitors.

All service providers – AT&T, MCI, Sprint, and the RBOCs – were criticized for having overly complex and rigid pricing schemes, rendering negotiations difficult. AT&T's sales attitude (described as a "general sense of entitlement") was also the subject of frequent complaints, though its professionalism and experience were favorably recognized. MCI, eager to hold share during its bankruptcy at the time, won praise for maintaining a high level of contact with key customers. **Exhibit 5** graphically shows the relative positioning of the various service providers, from the perspective of our 2003 study participants.

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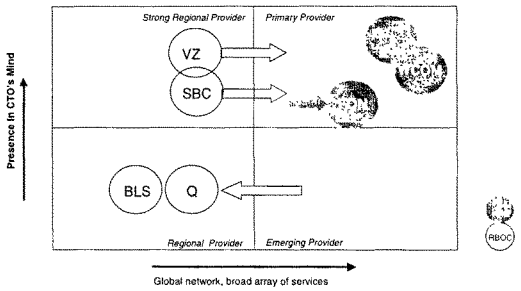
Exhibit 5
Perceived Service Provider Positioning, 2003



Source: Bernstein 2003 Enterprise Telecom Decision-Maker Study

For more detail on our findings from last year, see the May 2003 Blackbook, *"A Tough Nut to Crack II: Oligopoly Returns to the Enterprise Telecom Market.*

RBOCs Continue to Push

The RBOCs continue to push their way into the enterprise market for long-distance voice and data services. Not having the network reach, services breadth, and sales experience of their more established competitors, but with stronger financial footings, they have used discounted pricing to gain a seat at the negotiating table. So far, the RBOCs have achieved only limited penetration into this market, usually with smaller regionally-focused companies. The large enterprise market, however, remains very much an oligopoly with AT&T, MCI, and, to a lesser extent, Sprint controlling the high ground.

However, over the course of our three enterprise studies (including the current one), we have seen clear evidence of the RBOCs' steady, if slow, progress. Specifically, SBC and Verizon are perceived by several of our interviewees as now coming "very close" to being able to meet their corporate telecom needs. In fact, at least one of the companies we spoke to this year has granted its primary telecom contract to an RBOC. Also, while the RBOCs' sales bench is nowhere near as deep as that of AT&T or MCI, in cases where they sent their "A-team" to negotiate, the customers report that they were favorably impressed. We would look for the RBOCs to continue their progress in the enterprise market, although the large multinational corporations are expected to remain generally out of reach for some time yet (barring acquisition of AT&T, MCI, or Sprint by an RBOC).

Dimensioning the Enterprise Market

As shown in **Exhibit 6**, the enterprise telecom segment in 2004 represented 25% of the total U.S. market for retail telecom services; by 2009, this segment will be nearly 30% of the total market, thanks to its superior growth rate. Nearly all of the additional share will be gained at the expense of the consumer segment, which will decrease from 61% of the market in 2004 to 58% in 2009; while the SMB segment is expected to hold its share unchanged at 14%. The consumer segment had been the fastest-growing over the

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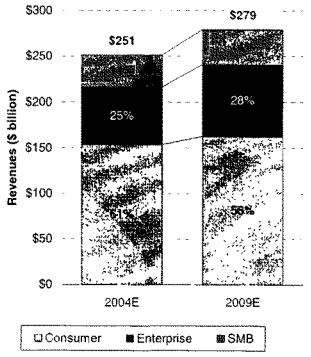
last four years, driven by rapid wireless and broadband growth. However, our outlook for this segment is less rosy, given the maturation of wireless and broadband, and the imminent threat from cable telephony and other VoIP providers. (Our market numbers here do not include cable telephony and non-telco VoIP revenues.) On the other hand, we expect enterprise growth to tick upward with a cyclical recovery in IT spending driven by improving overall business conditions, including employment growth.

Exhibit 6
Evolution of U.S. Retail Telecom Services, 2004E-09E



Source: Bernstein estimates and analysis

That said, while business conditions have improved, we have not yet seen a robust recovery in the enterprise telecom market. As a result, we estimate the enterprise market in 2004 experienced a net 1% decline due to lax demand as well as price pressures in long-distance voice and data. We continue to look for a meaningful, if delayed, recovery in telecom services demand, although the impact on revenues may be muted by persistent price pressure. Furthermore, with the RBOCs continuing to forge their way into the enterprise market, any pushback in the timing of the recovery means more revenues will be available for the RBOCs to win when that recovery does occur (because the RBOCs will steadily increase their capabilities over time). Therefore, we believe that the more delayed the recovery, the higher the risk that market leaders AT&T and MCI lose share to the RBOCs, and perhaps never fully recover their toplines. **Exhibit 7** provides the details of our enterprise market forecast.

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Exhibit 7
Bernstein U.S. Enterprise Telecom Services Revenue Forecast

U.S. Enterprise Telecom Services Revenues ($ billion)

	2000	2001	2002	2003	2004E	2005E	2006E	2007E	2008E	2009E	CAGR 2000 - 2003	CAGR 2004E - 2009E
Local Voice	$24.3	$24.0	$23.4	$22.5	$21.9	$21.6	$21.4	$21.3	$21.2	$21.0	-2.4%	-0.8%
Long-Distance Voice	22.6	16.9	14.6	12.8	10.8	9.2	7.8	6.5	5.5	4.7	-17.4	-15.3
Subtotal: Wireline Voice	**$46.9**	**$41.0**	**$38.0**	**$35.3**	**$32.7**	**$30.8**	**$29.2**	**$27.9**	**$26.7**	**$25.7**	**-9.0%**	**-4.7%**
Local Data	$8.8	$7.2	$5.9	$5.3	$6.0	$6.7	$7.1	$7.4	$8.4	$9.6	-15.8%	9.8%
Long-Distance Data	15.0	17.8	17.2	15.7	14.4	13.9	14.0	14.9	16.4	18.3	1.6	4.8
Subtotal: Wireline Data	**$23.8**	**$25.0**	**$23.1**	**$21.0**	**$20.4**	**$20.6**	**$21.1**	**$22.3**	**$24.8**	**$27.9**	**-4.1%**	**6.4%**
Wireless Voice	$3.2	$4.2	$5.0	$6.2	$7.7	$9.3	$10.9	$12.4	$13.9	$15.4	24.5%	14.9%
Wireless Data	0.1	0.2	0.5	0.9	2.0	3.3	4.7	6.3	8.0	9.4	101.1	36.8
Subtotal: Wireless	**$3.3**	**$4.4**	**$5.5**	**$7.2**	**$9.7**	**$12.6**	**$15.6**	**$18.8**	**$21.9**	**$24.8**	**28.8%**	**20.8%**
Total Enterprise Market	**$74.0**	**$70.4**	**$66.5**	**$63.4**	**$62.8**	**$63.9**	**$65.9**	**$68.9**	**$73.4**	**$78.4**	**-5.0%**	**4.5%**
Memo: Yr/Yr Change		-5.0%	-5.5%	-4.6%	-1.0%	1.8%	3.0%	4.6%	6.5%	6.7%		

Source: Bernstein estimates and analysis

We expect wireline data and wireless services to drive growth in the enterprise market, while wireline voice is projected to decline steadily. On the data side, long-distance IP services are expected to grow strongly, with volumes increasing 40-60% per year which, even with relatively high rates of unit price decline, should support 10-20% annual growth in revenues from these services. However, IP service growth will drive less-than-proportionate growth in overall data revenues due to substitution of IP for legacy data services. For example, currently more than half of IP-VPN installations replace existing frame relay, ATM, and private line services. With VPN priced lower than legacy services (on a unit basis), these actually result in a reduction in overall revenues. This is offset, however, by "greenfield" VPN installations, as well as organic growth in legacy services. **Exhibit 8** shows the aggregate growth of long-distance data service revenues projected for the next five years.

In wireless services, enterprises accounted for only a small portion of the total market in 2004: about 9% overall. Most companies today do not even report having a primary wireless service provider; and when they do, often only a small subset of the companies' employees are connected with the service. In the sub-segment of wireless data, however, enterprises currently drive a much more significant 45% of total revenues, from services such as email and wireless Internet access. Most of the remaining 55% is accounted for by consumer-driven applications, mainly SMS and MMS. (A small portion of revenues is derived from SMBs.) Our view is that revenues from consumer wireless data applications will grow at only about 10% annually in the U.S., where users have shown much less affinity for such applications than those in Asia and Western Europe. This is a relatively slow growth rate for a fledgling segment of the typically dynamic wireless market.

On the other hand, we expect much more rapid growth for enterprise wireless data services, manifested in a projected average annual growth rate of 37% over the next five years. This will be driven by an increasing degree of integration of wireless data applications into basic business processes related to supply chain management, sales, customer service, and the like. Many of the corporate telecom buyers we have talked to confirm this vision - although admittedly, their visions of the exact applications they would use tend to be much vaguer. We believe enterprise wireless data usage will grow significantly faster than consumer usage and, as such, will be the critical determinant of whether 3G services in the U.S. achieve the level of success currently professed by the wireless providers. **Exhibit 9** clearly shows the significance of enterprise usage in driving the overall wireless data market.

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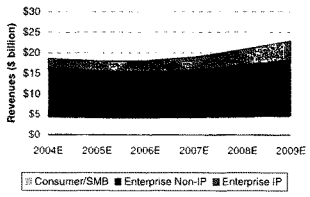
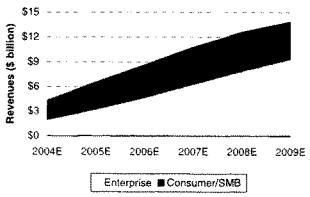
Exhibit 8
Total U.S. Long-Distance Data Growth



Source: Bernstein estimates and analysis

Exhibit 9
Total U.S. Wireless Data Growth

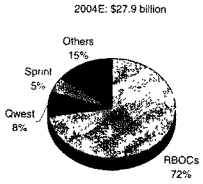


Source: Bernstein estimates and analysis

Carrier Market Shares in Enterprise

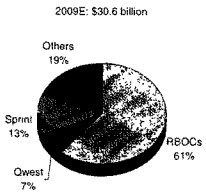
For local voice and local data services, the RBOCs – Verizon, SBC, and BellSouth – dominate in the enterprise market, just as they do in the consumer and SMB markets. We project that this will remain largely the case over the next five years, since the RBOCs' position in these segments is strongly tied to their ownership of the local access infrastructure. However, we do foresee a small degree of share erosion to alternative providers (via unbundling or otherwise) and to enterprise VoIP provided by IXCs. Between 2004 and 2009, we project the RBOCs' collective share in local services to decline from 72% to 61%, as shown in **Exhibit 10** and **Exhibit 11**.

Exhibit 10
Market Shares in Local Voice and Data, 2004E



Source: Bernstein estimates and analysis

Exhibit 11
Market Shares in Local Voice and Data, 2009E



Source: Bernstein estimates and analysis

The market for enterprise long-distance services will evolve more dramatically over the next five years. In 2004, AT&T, MCI, and Sprint dominated these services, collectively accounting for over 90% share (**Exhibit 12**). The RBOCs' efforts to penetrate the market have so far yielded only a small share, though they are making incremental progress. We expect the RBOCs to only gradually win share in this segment until 2006-2007, by which time they will have brought their offers in complex networking solutions up

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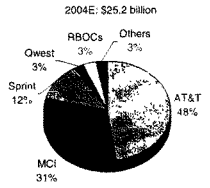
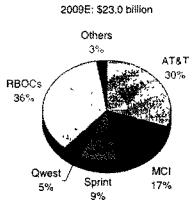
closer to par with AT&T and MCI. At that time, we expect to see a rapid ramp in the RBOCs' share of enterprise long-distance voice and data services, to approximately 36% by 2009 (**Exhibit 13**). Most of this share will be gained at the expense of AT&T and MCI. Sprint and Qwest will play the same role as they do now: as lower-cost alternatives to their larger long-distance peers.

Exhibit 12
Market Shares in Long-Distance Voice and Data, 2004E



Source: Bernstein estimates and analysis

Exhibit 13
Market Shares in Long-Distance Voice and Data, 2009E



Source: Bernstein estimates and analysis

Price Pressures Persist

Over the past year, we have been informally monitoring pricing trends in the enterprise market, looking for signs that price pressure is starting to subside. Unfortunately, we have found few such signs. Long-distance voice pricing continues to decline steadily – leading to our projection that revenues in 2009 will be only 40% of 2004's level (**Exhibit 14**). Many enterprise users expect service providers to soon offer unlimited long-distance voice as part of a service bundle anchored by data services, thereby reducing voice pricing to effectively "free". We believe service providers and industry followers have largely accepted this fate, and have appropriately discounted the role of traditional long-distance voice in future growth plans.

More concerning are the persistent price pressures in long-distance data, a growth area in terms of demand. Unit price declines for both IP and non-IP (e.g., frame relay, ATM, private line, etc.) data reaccelerated slightly to over 20% in 2003, following several years of steady easing. In 2004, we believe prices again declined at close to a 20% rate. Combined with slowing volume growth, the price drops have resulted in decreases in long-distance data revenues in 2003 and 2004 – the first declines since we began tracking these trends (**Exhibit 15**).

Though we believe data pricing will continue to fall, we expect the rate of decline to gradually slow over time, continuing the trend started in 2000 (before it was interrupted in 2003). We also expect demand growth to tick upward as general economic growth continues. As a result of these two factors, we believe revenues from long-distance data services will decline slightly in 2005, flatten in 2006, then grow modestly in 2007 and beyond.

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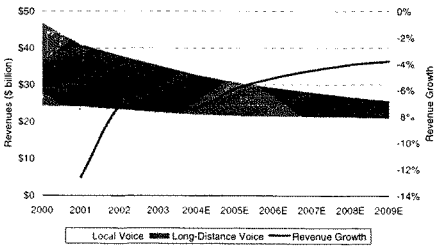
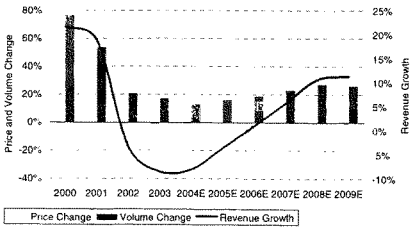
Exhibit 14
Enterprise Wireline Voice Forecast



Source: Bernstein estimates and analysis

Exhibit 15
Enterprise Long-Distance Data Forecast



Source: Bernstein estimates and analysis

Why is the Price Trend So Steep in a Market with Relatively Few Players?

Given the relatively high market share concentration of this market – our 2003 study found AT&T and MCI provided voice services to over 90% of the enterprises we surveyed, and data services to 85%, with Sprint accounting for the remainder – the intense price pressure observed is surprising. Usually, in industries that exhibit such concentration, the major players are able to exercise a greater degree of price discipline. Unfortunately, in the telecom industry, price discipline is hindered by two factors: (1) a general lack of differentiation in service offerings and (2) the high fixed cost/low marginal cost nature of network economics. The first of these takes pricing power away from the service providers, leading prices to trend down toward marginal cost; while the second drives a very low pricing floor due to carriers' efforts to build network scale. The result is the downward spiral in pricing that we continue to witness.

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Wholesale segment aggravates the situation

Finally, it is important to note the role of wholesale providers, including AT&T, MCI, Sprint and near-pure-play wholesalers like Level 3 and Global Crossing. This segment of the industry exemplifies both of the factors discussed above: the product, pure bandwidth, is nearly completely undifferentiated; and the costs are almost all fixed in the network infrastructure. In addition, the competitive intensity is high, with far more supply than demand. Therefore, wholesale prices suffer from the greatest degree of price pressure, and are declining most rapidly – for some high-capacity bandwidth products, unit prices have declined as much as 30-40% per year for the past half-decade.

Pure-play wholesalers impact pricing in the enterprise market by leasing low-cost bandwidth to non-traditional long-distance providers, including small niche players as well as the RBOCs. These providers are then able to compete with AT&T and MCI (who own their networks) with comparable costs. The general availability of cheap bandwidth is one of the reasons the RBOCs have been able to enter the enterprise market without significant capital investments or acquisition of an existing long-distance network operator. Using leased wholesale capacity, they are able to piece together their long-haul networks, adding links as necessary to service specific customer demands.

Valuation Methodology

For all the companies in our coverage, we leverage three distinct valuation methodologies: Relative Price-to-Forward Earnings (P/FE), EV/EBITDA and Discounted Cash Flow Analysis (DCF). We see Price-to-Forward Earnings as most valuable for assessing the relative expensiveness or cheapness of a company against its own history. P/FE has historically been a poor predictor, however, of the timing of valuation swings though is a reasonable predictor of forward relative performance in the sector.

In contrast to P/FE, EV/EBITDA is a poor tool for analyzing the valuation level of a company against history but a very good tool for assessing valuation levels across similarly-structured companies in the same industry. EV/EBITDA's shortfall as a tool for making investment decisions in telecom, however, is its failure to capture capital spending, a critical driver of free cash flow generation in the sector.

Lastly, we find DCF analysis most useful for setting target prices. On the positive side, DCFs -- when completed objectively and employing textbook approaches to calculating weighted average costs of capital – capture both differences in business mix and operational performance as well as differing levels of capital discipline, both shortfalls of EV/EBITDA. In addition, DCFs aren't skewed by historical spending above trend which, while potentially indicative of a lack of capital discipline, should not necessarily receive the strong weighting accorded it within the P/FE metric. The shortfall of the DCF is its reliance on numerous modeling assumptions and any subjectivity incorporated into the WACC calculation and long-term growth assumptions for the company.

Risks

Our forecast of the enterprise market is based on an analysis of the demand drivers, combined with our outlook on pricing trends. Both of these are difficult to predict, and are subject to change in the event of unforeseen industry circumstances. For example, a prolonged economic downturn could reduce corporations' demand for IT in general, in turn reducing demand for telecom services. As well, industry consolidation could impact the direction of pricing trends – as has happened in the past. More specifically, we believe our forecast is especially sensitive to two uncertain factors: (1) the rate of price declines for long-distance IP and non-IP data services, and (2) the rate of adoption of wireless data applications for enterprises.

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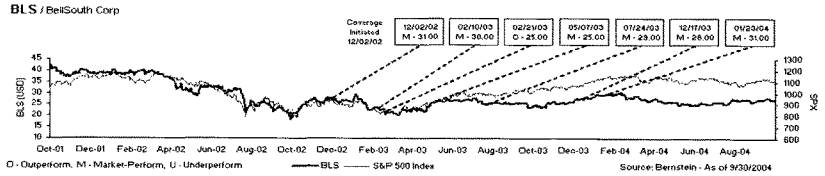
- Bernstein rates stocks based on forecasts of relative performance for the next 6-12 months versus the S&P 500 for U.S. listed stocks and versus the MSCI Pan Europe Index for stocks listed on the European exchanges — unless otherwise specified. We have three categories of ratings:

  Outperform: Stock will outpace the market index by more than 15 pp in the year ahead.

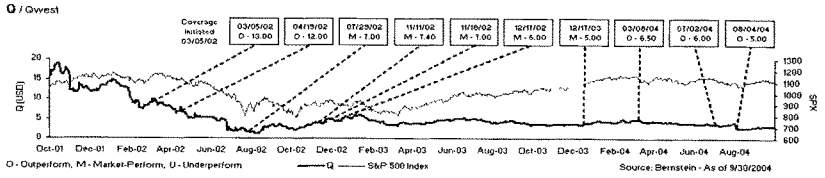
  Market-Perform: Stock will perform in line with the market index to within +/-15 pp in the year ahead.

  Underperform: Stock will trail the performance of the market index by more than 15 pp in the year ahead.
- As of 12/31/04, our ratings were distributed as follows: Outperform/Buy - 48.7%; Market-Perform/Hold - 45.7%; Underperform/Sell - 5.6%.
- The following companies are or during the past twelve (12) months were clients of Bernstein, which provided non-investment banking-securities related services and received compensation for such services BLS / BellSouth Corp, SBC / SBC Communications, VZ / Verizon, T / AT&T.
- An affiliate of Bernstein received compensation for non-investment banking-securities related services from BLS / BellSouth Corp, SBC / SBC Communications, VZ / Verizon, T / AT&T.

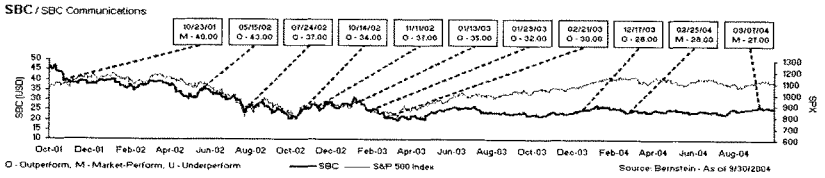
BLS / BellSouth Corp

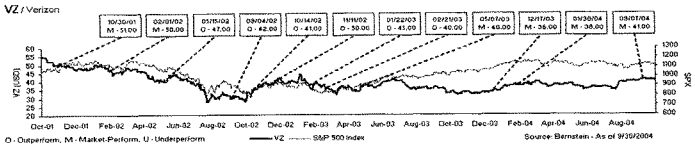


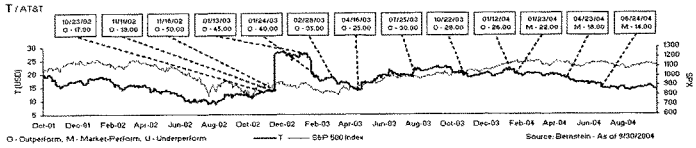
Q / Qwest



SBC / SBC Communications







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BERNSTEIN RESEARCH CALL

February 14, 2005

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Verizon & Qwest: Who Will be MCI's Valentine? Verizon Clearly MCI's Preferred Date; Combo Modestly Positive

Ticker	Rating	CUR	2/11/2005 Closing Price	Target Price	YTD Rel. Perf.	EPS 2004A*	EPS 2005E	EPS 2006E	P/E 2004A	P/E 2005E	P/E 2006E	Yield
Q*	O	USD	4.15	5.00	-6.0%	-0.60	-0.22	0.10	NM	NM	41.5	NA
VZ	M	USD	36.31	41.00	-9.8%	2.51	2.43	2.32	14.5	14.9	15.7	4.2%
SPX			1205.30			66.00	70.00	74.50	18.3	17.2	16.2	2.0%

O – Outperform, M – Market-Perform, U – Underperform

* 2004A figures for Qwest include Bernstein estimates for 4Q04, as the company has not yet reported full-year results.

Highlights

This morning, Verizon and MCI announced the details of a merger agreement forged over the weekend. This call partially reflects the details of that agreement and partially presents a more generic analysis of the challenges and opportunities inherent in either a Verizon or Qwest merger with MCI. The companies will hold a joint conference call this morning at 9am Eastern to discuss the details of their agreement. The dial-in numbers for the call are 888-802-8577 (domestic), 973-935-2981 (international).

- In reportedly frenzied negotiations over the weekend, Verizon won MCI's hand for $4.8B in equity and nearly $500M in cash for a total of approximately $16.25 per MCI share based on both companies Friday closing stock prices.
  - Verizon will exchange 0.4062 of its shares ($14.75 based on Friday's close) for each MCI share and pay $1.50 in cash.
  - In addition, following the lead of AT&T in which the target pays its own shareholders the deal premium, MCI will pay a special cash dividend of $4.50 prior to closing. MCI shareholders also appear to bear much of the risk associated with outstanding litigation associated with the fraud.
- Verizon estimates the merger will be dilutive to earnings in the first two years following close, turning accretive by Year 3, consistent with our own analysis presented herein. We do, however, believe, the turnaround of MCI's operations will be more costly than the company is currently suggesting.
- In contrast to our positive assessment of the SBC-AT&T merger, we are less optimistic about the benefits of an MCI merger with either Verizon or Qwest. Our current analysis, based on our own estimates of synergies and costs, suggests that in return for significantly increased risk, shareholders would gain only modest value creation from either combination.
  - In aggregate, we are neutral to a Verizon-MCI merger, seeing the potential reward as commensurate with the increased risk. We estimate the combined company's per share valuation would be 10% or so higher than Verizon's standalone ($45 vs. $41), but near-term earnings would be diluted by up to 25%.
  - In the case of a Qwest-MCI merger, we believe the risk/reward profile of the combined company would be less attractive than that of Qwest on its own near-term. We estimate a combined Qwest-MCI would be less than 10% more valuable on a per-share basis than Qwest on its own ($5.40 vs. $5.00), while projected positive earnings in 2006 and 2007 would be turned into losses.

See Disclosure Appendix of this report for important disclosures and analyst certifications.

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- Our analysis incorporates our own estimates of the synergies and integration costs associated with each potential merger and has not yet been updated for either the expectations or announced deal terms between Verizon and MCI. Relative to the SBC-AT&T merger, we believe a merger with MCI would yield smaller synergies and require lower overall integration costs, the latter a function of MCI's lack of a legacy monopoly operating structure.
  - We believe a Qwest-MCI merger could realize annual expense synergies reaching $1.5-2.0B by 2010, and capex synergies of up to $400M per year. Both expense and capex synergies would result from combining the companies' long-haul operations. We believe revenue synergies would be minimal.
  - For a Verizon-MCI merger, we estimate expense synergies could reach $2.0-2.5B by 2010, while revenue synergies could add another $770M. Much of the expense synergies would be due to transport savings at both Verizon and Verizon Wireless, and avoided costs earmarked for developing Verizon's enterprise business. We foresee no meaningful capex synergies.
  - For either merger, we estimate integration costs to total $3B over 4 years in our base case that assumes the acquirer does not attempt to significantly improve MCI's current operations.
- Compared to AT&T, which has spent billions in recent years on network upgrades and process re-engineering, MCI's network infrastructure and operations are much less efficient. The resulting low margins are the primary source of risk for MCI's acquirer.
  - In 2004, we estimate MCI's EBITDA margin was 11%, less than half of AT&T's 23%; and operating margin was just 1%, compares to 11% for AT&T. We estimate MCI's net *loss* in 2004 was $(70)M, compared to AT&T's net *profit* of $1.5B (both normalized to exclude one-time items).
- An acquirer could decide to undertake a network transformation project designed to increase MCI's EBITDA margins to AT&T's levels. Estimated to require about $3B over 2-3 years (Verizon appears to be estimating this to be $2B), we believe such an effort could create additional value but would also involve significantly increased risk, as the integration of MCI's own various networks is likely to be even more challenging than the integration of MCI into the acquirer.
  - Of the two potential acquirers, only Verizon has the resources to commit to such an effort, and it would represent that RBOC's third area of major capital spending (the first two being Fiber and EV-DO). In this case, the value of the combined company's stock could rise to $47, or about 14% higher than our valuation of Verizon alone.
  - If Qwest were to undertake such an effort, it could increase the value of post-merger shares to nearly $6, or 19% higher than our valuation of Qwest on its own. However, it is not clear if Qwest could absorb the negative impact on near-term free cash flow or would be willing to forego the debt-reduction opportunity presented by MCI's substantial cash balance.
- MCI's value lies primarily in its roster of large enterprise clients, which accounted for $4.8B in revenues in 2004, or 23% of MCI's total revenues. With sales of wireline and wireless services to enterprises projected to drive over half of the industry's growth over the next five years, Verizon and, to a lesser extent, Qwest are aggressively targeting the enterprise segment. Acquisition of MCI would provide a significant boost to their efforts, just as AT&T does for SBC.
  - MCI's second most valuable asset is its long-haul network (actually, a collection of multiple networks). For Verizon, this could allow savings on transport costs, and also help facilitate the RBOC's FiOS broadband and IP-video services. For Qwest, consolidating MCI's traffic could help Qwest finally achieve economic scale in its own long-haul operation. We estimate Qwest's long-haul business continues to lose about $400-500M annually.

Investment Conclusion

Compared to our positive assessment of SBC's acquisition of AT&T, we believe an acquisition of MCI by either Qwest or Verizon is much less compelling. Though MCI's price tag is significantly lower than AT&T's, its buyer would also receive a smaller and less profitable asset. MCI is second to AT&T in nearly every market where the two compete, and the gap between them has continued to increase since MCI's fraud and bankruptcy. Unlike AT&T, which grew its long-haul network largely organically, MCI is collection of multiple parallel networks collected through a string of acquisitions. To make matters worse, MCI has invested far less into its networks and processes in recent years than AT&T, and as a result, is a much less efficient operation with significantly lower margins.

MCI's acquirer faces a dilemma that AT&T's does not: whether to make the long-overdue investment aimed at improving MCI's operations and margins. If it doesn't, the combined company would be worth only modestly more for shareholders on a discounted cash flow valuation, but its topline growth and near-term earnings would be materially impaired. If it does make the estimated $3B investment, long-term value creation would be improved, but at the expense of depressed free cash flow in the near term. Qwest likely could not afford this, and Verizon already has two other significant capital projects in Fiber and EV-DO. Furthermore, such a network transformation effort is extremely challenging and risky, and the longer it takes to "fix" MCI, the smaller the ultimate benefit, since MCI's market position is steadily eroding.

In any scenario, whether Qwest or Verizon acquires MCI, and whether they decide to transform MCI in addition to integrating it, we see only modest value creation that just offsets the increased risk borne by shareholders. The incremental value created from a merger would only begin to accrue 2-3 years after the merger closes, while MCI's poor margins would dilute earnings for at least 2 years, even if integration costs are excluded from normalized results. Given this and the negative topline impact, we are not convinced that the market would place a higher valuation on the stock of a combined Qwest-MCI or Verizon-MCI.

We believe the near- and mid-term risk/reward profile of a combined Qwest-MCI would be less attractive than that of Qwest on its own, and would rather see the company focus on its internal cost cutting opportunities and deliver several quarters of improved financial results before pursuing M&A deals. We maintain our Outperform rating on Qwest with target price of $5. We would be largely neutral to a Verizon-MCI deal, seeing long-term value both financially and strategically, but near-term risks due to earnings dilution and integration challenges. We rate Verizon Marketperform with a target price of $41.

Details

According to recent press reports, Qwest has offered to pay more than $7B to acquire MCI, and Verizon has also put at least an informal offer on the table. MCI has not yet responded to either suitor, but is believed to be eager to do a deal, especially now that rival AT&T has agreed to be acquired by SBC. MCI is expected to choose its merger partner this week.

A Look at MCI

Readers should note that we do not officially follow MCI; and, specifically, do not offer an investment rating on the company's shares. As such, our financial projections for and assessment of MCI are not based on the same level of detailed research and analysis typically afforded to our covered companies.

Formerly known as Worldcom, MCI is the company best known for its massive accounting fraud and record-setting bankruptcy. MCI is the second-largest long-distance carrier behind AT&T, serving consumers, small/medium businesses (SMB), enterprises, and wholesale customers. It is a major carrier of IP traffic, with its UUNet network recognized as one of the largest Internet backbones. Revenues in 2004 were estimated to be $20.7B.

MCI (or, more accurately, Worldcom) grew primarily through a string of more than 70 acquisitions including that of MCI, with, by all accounts, only superficial attention paid to integrating them. Even after

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bankruptcy restructuring, the company today still operates multiple parallel networks and a myriad of OSS systems. Because of its financial difficulties, MCI has also invested far less in its networks and processes than rival AT&T (**Exhibit 1**). As a result, its profit margins are slim: in 2004, we estimate MCI's EBITDA margin was 11%, compared to AT&T's 23%; and operating margin was 1%, compared to AT&T's 10%. We estimate the company lost $(0.21) per share in 2004, whereas AT&T earned $1.97 per share (both normalized to exclude one-time items).

Exhibit 1
AT&T vs. MCI Capex, 2002-2004

	2002	2003	2004
AT&T Total Capex ($M)	**3,858**	**3,431**	**1,767**
Memo: portion committed to process re-engineering	*610*	*763*	*687*
Memo: portion committed to network upgrades (e.g., GNI, MPLS)	*2,604*	*1,871*	*537*
MCI Total Capex ($M)	**1,660**	**945**	**1,000**

Source: Company Reports, Bernstein Estimates

MCI's most valuable asset is its roster of large enterprise clients, second only to AT&T's. In 2004, enterprise sales accounted for $4.8B in revenues, or 23% of MCI's total. The enterprise segment is projected to drive over half of the industry's growth over the next five years (see Research Call, *"U.S. Telecom: Superior Growth Prospects Make Enterprise Market a Key Battleground for U.S. Service Providers,"* January 6, 2005). Because of this, the RBOCs are aggressively targeting enterprise customers; we believe they will gain 36% of the market by 2009, up from only 3% in 2004 (including long-distance services only). Acquisition of MCI would provide a significant boost in Qwest's or Verizon's efforts, just as AT&T does for SBC.

Like AT&T, MCI has recently begun to pull back from the consumer and small/medium business (SMB) markets due to unfavorable regulatory and competitive conditions. These markets, which generated $9.1B in revenues in 2004 for MCI, or 44% of total revenues, are thus projected to decline rapidly over the next two years, mirroring the trend projected for AT&T. Some of the SMB business could potentially be salvaged with a merger than brings increased bundling capability. The remainder of MCI's revenues, about $6.8B or 33% of total, derives from international markets and wholesale customers.

MCI's Prospects Are Not Great

Though frequently compared to AT&T, MCI is decidedly a less valuable acquisition candidate than AT&T. AT $20.7B in 2004, MCI's overall revenues are about two-thirds those of AT&T; more importantly, its revenues in the enterprise, SMB and wholesale markets totaled $11.9B, just over half of AT&T Business' $22.6B. We projected in the above-referenced enterprise report that AT&T would maintain its lead over MCI in the enterprise market for long-distance services, with 30% share in 2009 compared to 17% for MCI (assuming both remained independent). In another report (see Research Call, *"U.S. Telecom: Wholesale Market Too Large to Sweep Under Rug, but Expected to Decline at 2.5% CAGR Through '09,"* January 6, 2005), we projected that AT&T would maintain its lead in the wholesale long-distance market as well, with 28% share of wholesale voice versus 12% for MCI, and 22% of wholesale data versus just 7% for MCI (also assuming both remained independent). **Exhibit 2** through **Exhibit 5** show our market share projections for the enterprise and wholesale markets

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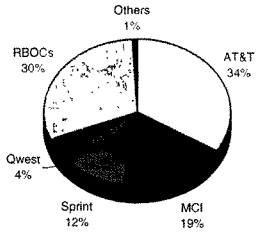
Exhibit 2
Projected Market Shares in Enterprise LD Voice, 2009E

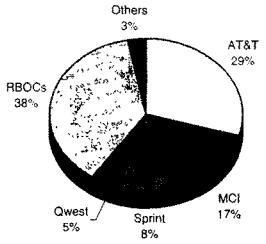
2009E: $4.7 billion



Source: Bernstein Estimates and Analysis

Exhibit 3
Projected Market Shares in Enterprise LD Data, 2009E

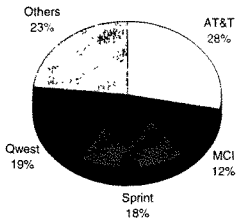
2009E: $18.3 billion



Source: Bernstein Estimates and Analysis

Exhibit 4
Projected Market Shares in Wholesale LD Voice, 2009E

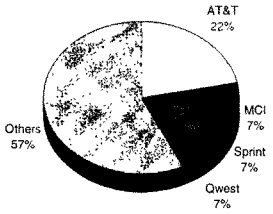
2009E Total = $6.9 billion



Source: Bernstein Estimates and Analysis

Exhibit 5
Projected Market Shares in Wholesale LD Data, 2009E

2009E Total = $10.3 billion



Source: Bernstein Estimates and Analysis

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Our projections for MCI call for a brief improvement in margins in 2005, as the company benefits from the cost reductions associated with its consumer and SMB pullback. Beyond 2005, margins are expected to resume their steady decline, with EBITDA margin falling to 9%, and operating margin at -7%, by 2009. We expect the company to report a small net profit in 2005, followed by significant losses in the years thereafter. **Exhibit 6** gives our summary projected income statement for MCI. *Note again that this is only a rough projection, as we do not currently cover the company.*

Exhibit 6
MCI Summary Income Statement, 2004-2010E

	2004	2005	2006	2007	2008	2009	2010	05-10 CAGR
Total Revenues	**20,660**	**16,973**	**13,215**	**11,729**	**10,935**	**10,354**	**9,893**	**-10.2%**
Memo: y/y change	*-15.2%*	*-17.8%*	*-22.1%*	*-11.2%*	*-6.8%*	*-5.3%*	*-4.5%*	
By Segment:								
Enterprise Markets	**4,792**	**4,409**	**4,091**	**3,826**	**3,603**	**3,414**	**3,253**	**-5.9%**
Memo: y/y change	*-9.4%*	*-8.0%*	*-7.2%*	*-6.5%*	*-5.8%*	*-5.2%*	*-4.7%*	
U.S. Sales & Service	**9,114**	**5,799**	**4,048**	**3,358**	**3,093**	**2,940**	**2,854**	**-15.9%**
Memo: y/y change	*-18.1%*	*-25.4%*	*-40.5%*	*-17.0%*	*-7.9%*	*-4.9%*	*-2.9%*	
International & Wholesale	**6,754**	**5,765**	**5,076**	**4,546**	**4,240**	**4,000**	**3,786**	**-8.1%**
Memo: y/y change	*-14.9%*	*-14.6%*	*-12.0%*	*-10.4%*	*-6.7%*	*-5.7%*	*-5.4%*	
Total Cash Expenses	**18,375**	**14,562**	**11,760**	**10,578**	**9,927**	**9,425**	**9,006**	**-9.2%**
Memo: y/y change	*-14.0%*	*-20.8%*	*-19.2%*	*-10.1%*	*-6.1%*	*-5.1%*	*-4.5%*	
Access Costs	10,560	8,147	6,145	5,278	4,921	4,659	4,452	-11.4%
Memo: % of revenue	*51.1%*	*48.0%*	*46.5%*	*45.0%*	*45.0%*	*45.0%*	*45.0%*	
Costs of Services and Products	2,525	2,426	2,576	2,660	2,546	2,437	2,328	-0.8%
Memo: % of revenue	*12.2%*	*14.3%*	*19.5%*	*22.7%*	*23.3%*	*23.5%*	*23.5%*	
Selling, General, & Administrative	5,290	3,989	3,039	2,639	2,460	2,330	2,226	-11.0%
Memo: % of revenue	*25.6%*	*23.5%*	*23.0%*	*22.5%*	*22.5%*	*22.5%*	*22.5%*	
EBITDA	**2,285**	**2,411**	**1,455**	**1,152**	**1,008**	**928**	**887**	**-18.1%**
Memo: margin	*11.1%*	*14.2%*	*11.0%*	*9.8%*	*9.2%*	*9.0%*	*9.0%*	
Depreciation & Amortization	**2,083**	**2,002**	**1,964**	**1,865**	**1,772**	**1,684**	**1,599**	**-4.4%**
Operating Income before One-Time Items	**202**	**410**	**(509)**	**(714)**	**(764)**	**(755)**	**(712)**	**-211.7%**
Memo: margin	*1.0%*	*2.4%*	*-3.9%*	*-6.1%*	*-7.0%*	*-7.3%*	*-7.2%*	
Interest Income (Expense)	(403)	(403)	(403)	(403)	(403)	(403)	(403)	0.0%
Miscellaneous Income, Net	94	94	94	94	94	94	94	0.0%
Normalized Pre-tax Income	**(107)**	**101**	**(818)**	**(1,023)**	**(1,073)**	**(1,064)**	**(1,021)**	**-258.9%**
Income Tax Expense (Benefit)	(38)	35	(286)	(358)	(376)	(372)	(358)	
Memo: tax rate	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	
Normalized Net Income	**(70)**	**65**	**(532)**	**(665)**	**(698)**	**(692)**	**(664)**	**-258.9%**
Diluted Shares	319.6	319.6	319.6	319.6	319.6	319.6	319.6	
Normalized EPS	$ (0.21)	$ 0.20	$ (1.66)	$ (2.08)	$ (2.18)	$ (2.16)	$ (2.08)	-258.9%
Capex	**1,000**	**950**	**903**	**857**	**815**	**774**	**735**	**-5.0%**

Source: Bernstein Estimates and Analysis

Motivation for Acquiring MCI

For both potential acquirers, MCI's enterprise client base is the obvious asset being sought. Although customers are demanding and margins are thin in this market, it is expected to grow faster than either the consumer or SMB markets. The RBOCs are aggressively targeting this segment, and are well positioned to gain share over the next 4-5 years: they can offer integrated solutions of local, long-distance and wireless services. The RBOCs' main shortcoming is that they lack an in-house long-haul network (with the exception of Qwest) and a national sales and support infrastructure.

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Thus, MCI's second valuable asset is its relatively broad network and its experienced sales and support organizations. While Qwest also owns a national network, it has neither the network breadth of MCI nor as deep a sales bench to service large enterprise customers. Furthermore, by consolidating MCI's traffic, Qwest could finally gain economic scale in its own long-haul network, which we estimate still drains $400-500M in annual cash flow. Verizon has said it intends to build its network and develop its capabilities in the enterprise space organically. While this strategy is credible for Verizon, we believe it is an expensive one. By our estimates, Verizon will incur cash expenses over $4B in its enterprise initiative through 2008, by which time it will have just started to gain momentum in the market. Savings in these expenses is an obvious synergy opportunity for Verizon, in addition to savings in transport costs for Verizon's other businesses, including Verizon Wireless.

Finally, for Qwest, MCI's $5.6B cash balance is an additional motivator. Although we are confident of Qwest's ability to continue as a going concern on its own, the company does carry a high debt load that leads to high interest expenses. MCI's cash and comparatively low-interest debt would allow Qwest to lower its interest payments by calling, over the next three years, $3.3B in debt that carries interest rates of 13-14%.

Turnaround Potential

An additional potential motivation for MCI's acquirer (including a private equity buyer) is the opportunity to significantly turn around the company and increase its margins to a level more comparable to rival AT&T's. We believe there is some validity to this strategy and that, to a large extent, MCI's troubles can be fixed by essentially throwing money at them. As stated earlier, we believe MCI has neglected to properly integrate its past acquisitions and has invested only the bare minimum necessary to keep its network running over the past few years. On the other hand, AT&T has invested billions in network upgrades and process re-engineering, resulting in a significant margin advantage over MCI.

We conservatively estimate an overhaul of MCI would cost require about $3B in capital to be spent over three years, at which point MCI's EBITDA margin would be on par with AT&T's (at least that is what we are willing to assume). In reality, this scenario is unlikely to play out as simply as we have outlined. In turning around MCI, some of the company's operations – for example, some of the smaller networks it has acquired – would likely be deemed not worthy of further significant investment. Shutting these down could help achieve the margin goal but might decrease revenues, while allowing these to continue as-is would preserve revenues but hurt margins. In our simplified analysis, we intentionally neglect these effects and assume margins could be improved with no impact to the overall revenue trend.

Although this network transformation would be costly, we believe it would pay off in the long term. If MCI were able to achieve AT&T-level margins by 2009 (assuming the transformation begins in 2006), we estimate it could increase the value of the company by $3.7B; net of the $3B investment required, this undertaking would have an NPV of $700-800M. Perhaps more importantly, it would allow MCI to be more competitive in the market in the long term. There is risk involved, however: the return on investment is uncertain and the longer it takes to "fix" MCI's margins, the smaller the ultimate reward, since MCI's revenues are steadily declining.

Given our belief that MCI could be transformed into a more profitable company, the obvious question is why MCI's management has not already done this. We believe MCI has consciously decided to avoid the investment, in order to preserve cash flow. Moreover, were the company to be in the midst of a major multi-year transformation, it would be less likely to get acquired.

MCI Acquisition has Strategic Merit

For both Qwest and Verizon, we believe an acquisition of MCI has long-term strategic merit, although a negative impact to near-term results is unavoidable due to MCI's poor margins. In addition, the near-term

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challenge of integrating and possibly turning around MCI is a significant risk that handicaps the acquisition's overall value.

By bidding for MCI, Qwest has unintentionally highlighted its own strategic shortcoming: that in the long term, without a merger partner, Qwest's position in the market becomes increasingly marginalized. It is the smallest of the RBOCs and the weakest financially, and it lags in the key areas of broadband and wireless. As the other RBOCs increasingly emphasize service bundles and expand in the SMB and enterprise markets, Qwest will be left to play perpetual catch-up. Furthermore, with AT&T and MCI owned by other RBOCs, the addressable market for Qwest's wholesale long-distance services shrinks. By merging with MCI, Qwest gains an immediate anchor in the enterprise market, on which it could then build additional capabilities.

For Verizon, acquisition of MCI may represent the best strategy for rapidly gaining share in the enterprise market. While its organic growth strategy is credible so far, AT&T's acquisition by SBC, and MCI's acquisition by another RBOC, would create two powerful competitors to contend with. By acquiring MCI, Verizon not only secures its place in the enterprise market, but also avoids significant costs that would otherwise be incurred in developing its own enterprise initiative.

Analyzing a Qwest-MCI Merger

Exhibit 11 (at the end of this report) gives our summary projected income statement for Qwest through 2010. On a standalone basis, we believe Qwest would continue to show progress in cost cutting, leading to steady EPS improvement. In the longer term, however, its lack of scale would eventually succumb to price pressures, and EPS would likely start eroding again.

In a merger between Qwest and MCI, synergies would derive from two sources: cost savings from consolidating a significant portion of MCI's traffic onto the newer and more efficient Qwest network; and capex savings from not having to invest in parallel long-haul networks.

Although press reports have suggested cost synergies could reach $4B annually, we predict $1.5-2.0B in synergies by 2010 is more likely. We do not believe it will be possible to migrate all of MCI's long-haul traffic onto the Qwest network – or at least that doing so will be prohibitively expensive. MCI's traffic is currently distributed across a multitude of different networks, in some cases, running parallel to each other. If it were straightforward to consolidate this traffic onto a single common network, MCI would have done so itself long ago. However, the fact is that consolidating the traffic from multiple networks onto a single one is complex and expensive, and likely not worth doing in the case of some of the smaller networks. Our *base-case* synergy estimates reflect a balanced view, where only the largest networks are consolidated, in order to avoid prohibitively high integration costs.

Our capex synergy estimates reflect the amount of spending that could be avoided by not having to maintain separate long-haul networks (again, we assume some of MCI's networks would not be consolidated). For reference, our current projections for Qwest call for $500-700M in annual investments in the long-haul network. We believe MCI, on a standalone basis, would spend between $700-900M annually on capex. Our synergy estimate of $400M is thus about 30% of the combined standalone long-haul capex budgets.

We believe revenue synergies would be minimal in a Qwest-MCI combination, as (1) the companies do not compellingly complement each other's service offerings, and (2) Qwest would not be a driving force in the declines expected for MCI over the next five years. Eliminations would be minimal as well, resulting only from MCI access charges currently paid to Qwest (which we estimate account for 10% of MCI's total access charges).

We estimate merger integration costs would total about $3B over four years, with most of it incurred in the initial two years following closure. Again, these estimates reflect our base-case view, wherein the more

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straightforward integration opportunities are pursued in order to preserve a balance between long-term benefits and near-term dilution. After accounting for these integration costs, the net present value of our estimated synergies is $11.7B (top half of **Exhibit 7**). By comparison, we estimated the SBC-AT&T merger would generate $19.5B in net present value of synergies, after integration costs.

Valuation of Combined Qwest-MCI

Given these synergies and integration costs, we value the combined Qwest-MCI at roughly $5.40 per share, based on a discounted cash flow valuation. This is just 8% higher than our $5 per share valuation of Qwest alone. In deriving this valuation, we assumed a discount rate of 9% and a long-term decline in free cash flow of (2)% per year, and used pro-forma figures assuming the companies were combined at the beginning of 2005 (but synergies and integration costs are realized starting 2006). The free cash flows of the combined company are discounted to the present (*i.e.*, beginning of 2005). ***To arrive at value per share, we assumed Qwest pays for MCI entirely in stock, and offers no premium over the current MCI share price.*** The valuation calculation is shown in the bottom half of **Exhibit 7**. Note that the numbers have changed slightly since our publication last week (see Research Call, *"Qwest 4Q04 Preview: Expect Improved Earnings from Cost Cuts, but MCI Question Overhangs; Maintain Outperform,"* February 11, 2005), due to slightly revised assumptions and using the latest closing prices for Qwest and MCI.

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Exhibit 7
Calculation of Synergy NPV, Valuation of Combined Qwest-MCI, Base Case

	2005	2006	2007	2008	2009	2010	
NPV of Synergies							
Qwest Revenue Synergies (EBITDA Impact)	-	0	0	0	0	0	
MCI Revenue Synergies (EBITDA Impact)	-	-	-	-	-	-	
Net Expense Synergies (after integration costs)	-	(831)	197	1,285	1,451	1,623	
Taxes on Above	-	291	(69)	(450)	(508)	(568)	
Capex Synergies	-	100	250	350	400	400	
Change in Depreciation Tax Shield	-	(4)	(12)	(25)	(38)	(53)	**Terminal**
= Free Cash Flow Impact	-	**(444)**	**366**	**1,161**	**1,305**	**1,403**	**15,586**
Net Present Value	**$ 11,709**						
Tax Rate	35%						
Discount Rate	9.0%						
Terminal Growth Rate	0.0%						

	2005	2006	2007	2008	2009	2010	
DCF of Combined Company							
Normalized EBITDA (after integration costs)	6,462	5,273	5,864	6,601	6,406	6,282	
Qwest Pension & Options Expense	(23)	31	69	108	151	197	
MCI Pension & Options Expense	10	10	10	10	10	10	
Taxes	(2,257)	(1,860)	(2,080)	(2,352)	(2,299)	(2,271)	
Depreciation Tax Shield	1,757	1,753	1,677	1,578	1,508	1,435	
Capex	(2,977)	(2,762)	(2,528)	(2,350)	(2,225)	(2,158)	**Terminal**
= Normalized Free Cash Flow	**2,973**	**2,445**	**3,012**	**3,595**	**3,552**	**3,495**	**31,142**
Core Enterprise Value	**32,619**						
Net Debt	15,748						
Hidden Assets	1,586						
Equity Value	**18,457**						
Pro Forma Shares Outstanding	3,425						
Value per Share	**$ 5.39**						
Memo: Qwest standalone value	$ 4.99						
Tax Rate	35%						
Discount Rate	9.0%						
Terminal Growth Rate	-2.0%						

Shares Outstanding Calculation	
Assumed premium for MCIP	0.0%
Q closing price, 2/11/05	$4.15
MCIP closing price, 2/11/05	$20.75
Q shares per MCIP share	5.000
MCIP shares outstanding	319
Q shares issued	1,596
Q shares outstanding	1,829
Pro Forma Shares	**3,425**
MCIP Equity Value	$ 6,621
MCIP Net Debt	$ 350
MCIP Total Deal Value	**$ 6,971**

Source: Bernstein Estimates and Analysis

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Exhibit 12 (at end) provides our preliminary pro-forma income statement for the combined Qwest-MCI under our base-case assumptions. We expect the combined company to show continually declining revenues, but EBITDA margin improvement from 20% in 2006 to better than 27% by 2008. GAAP EPS would be diluted for three years following closure of the merger, turning Qwest's expected positive earnings in 2006 and 2007 into losses. On a normalized bassis, if merger integration costs were excluded from the earnings calculation, EPS would begin to show mild accretion in the third year.

Alternative Scenario: Turning Around MCI

Finally, in an alternative scenario in which Qwest undertakes to turnaround MCI and improve its margins (as discussed above), our discounted cash flow valuation suggests the combined company could be worth nearly $6 per share, or 20% higher than our valuation of Qwest alone. GAAP EPS would be diluted for only two years rather than three, and normalized EPS could show accretion in the first year, assuming the turnaround effort focused on the largest near-term opportunities first. However, free cash flow in the initial years after the merger would be diminished significantly, and it is not clear if Qwest could absorb this impact, given its high debt obligations. Furthermore, as mentioned above, the turnaround of MCI would be challenging and risky, and there is no assurance investors would credit the company for its efforts before concrete evidence of positive progress is delivered. **Exhibit 13** (at end) provides our pro-forma income statement for the combined Qwest-MCI under this scenario, and **Exhibit 8** below shows the valuation calculation.

Exhibit 8
Valuation of Qwest-MCI under MCI Turnaround Scenario

	2005	2006	2007	2008	2009	2010	
DCF of Combined Company							
Normalized EBITDA (after integration costs)	6,462	6,022	6,813	7,539	7,144	6,929	
Qwest Pension & Options Expense	(23)	31	69	108	151	197	
MCI Pension & Options Expense	10	10	10	10	10	10	
Taxes	(2,257)	(2,122)	(2,412)	(2,680)	(2,557)	(2,498)	
Depreciation Tax Shield	1,757	1,805	1,712	1,595	1,508	1,435	
Capex	(2,977)	(4,262)	(3,528)	(2,850)	(2,225)	(2,158)	**Terminal**
= Normalized Free Cash Flow	**2,973**	**1,484**	**2,663**	**3,722**	**4,031**	**3,916**	**34,888**
Core Enterprise Value	**34,427**						
Net Debt	15,748						
Hidden Assets	1,586						
Equity Value	**20,266**						
Pro Forma Shares Outstanding	3,425						
Value per Share	**$ 5.92**						
Memo: Qwest standalone value	$ 4.99						
Tax Rate	35%						
Discount Rate	9.0%						
Terminal Growth Rate	-2.0%						

Source: Bernstein Estimates and Analysis

Analyzing a Verizon-MCI Merger

Exhibit 14 (at the end of this report) gives our summary projected income statement for Verizon through 2010. On a standalone basis, we expect Verizon to show low- to mid-single-digit revenue growth driven by wireless and, in the outer years, by fiber-enabled wireline services. We project a modest degree of earnings decline through 2008, before the benefits of the fiber strategy reverse the trend and drive increasing earnings.

In a merger between Verizon and MCI, synergies would derive primarily from three sources: transport cost savings due to Verizon using MCI to carry its long-haul traffic; avoided costs developing Verizon's own

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enterprise initiative; and improvements in the revenue trends for MCI's enterprise and SMB businesses, due to diminished competitive intensity and the ability to bundle local, broadband, and wireless services from Verizon. We also expect a modest degree of savings in MCI's costs of services and SG&A expenses, due to rationalization with Verizon's own organizations.

We estimate cost synergies would reach $2.3B by 2010, with 70% of this due to savings at Verizon (transport and enterprise). As with our Qwest analysis, we take a balanced and relatively conservative view in our base case, where we assume Verizon does not attempt to integrate all of MCI's various networks and systems, but focuses only on the major ones. Revenue synergies are estimated to reach $770M by 2010, with all of it derived from MCI's business markets. These are offset by eliminations of $2.1B in 2006, declining to $1.6B in 2010, mainly due to MCI's access charges currently paid to Verizon (we estimate Verizon accounts for 30% of MCI's access). The net result is that revenues of the combined company would be $1-2B less than the combined revenues of the companies on standalone bases. However, since eliminations are also removed from reported costs, there is no net impact on earnings.

We expect a Verizon-MCI merger would generate minimal capex synergies, as the two companies have largely non-overlapping networks and MCI's capex budget is already lean. Contrary to our assessment of the SBC-AT&T merger, we do not believe there are opportunities to remove duplicate product and service development efforts, as we believe there are currently few such efforts underway at MCI (e.g., consumer voice over IP). For our analysis, we assume zero capex synergies for Verizon-MCI. From a free cash flow perspective, the lack of capex synergies largely offsets the higher cost synergies; but the impact on EPS is less severe.

As in the case for Qwest-MCI, we estimate merger integration costs for Verizon-MCI would total about $3B over four years, with most of it incurred in the initial two years following closure. Again, these estimates reflect our base-case view, wherein the more straightforward integration opportunities are pursued in order to preserve a balance between long-term benefits and near-term dilution. After accounting for these integration costs, the net present value of our estimated Verizon-MCI synergies is $12.1B (top half of **Exhibit 9**). This is slightly higher than the synergies value estimated for Qwest-MCI, but still lags the $19.5B we estimated for SBC-AT&T.

Valuation of Combined Qwest-MCI

Given these synergies and integration costs, we value the combined Verizon-MCI at roughly $45 per share, or about 10% higher than our $41 per share valuation for Verizon alone. This derivation assumes a discount rate of 9% and long-term growth in free cash flow of 3% per year, thanks largely to Verizon Wireless. It also uses pro-forma figures assuming the companies were combined at the beginning of 2005, though synergies and integration costs are realized starting 2006. The free cash flows of the combined company are discounted to the present (*i.e.*, beginning of 2005). To arrive at value per share, we assumed Verizon pays for MCI entirely in stock, and offers no premium over the current MCI share price. The valuation calculation is shown in the bottom half of **Exhibit 9**.

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Exhibit 9
Calculation of Synergy NPV, Valuation of Combined Verizon-MCI, Base Case

	2005	2006	2007	2008	2009	2010	
NPV of Synergies							
Verizon Revenue Synergies (EBITDA Impact)	-	(0)	-	0	-	-	
MCI Revenue Synergies (EBITDA Impact)	-	26	42	53	61	69	
Net Expense Synergies (after integration costs)	-	(1,024)	76	1,256	1,842	2,317	
Taxes on Above	-	349	(41)	(458)	(666)	(835)	
Capex Synergies	-	-	-	-	-	-	
Change in Depreciation Tax Shield	-	0	-	-	-	-	**Terminal**
= Free Cash Flow Impact	-	**(648)**	**77**	**851**	**1,237**	**1,551**	**17,230**
Net Present Value	**$ 12,119**						
Tax Rate	35%						
Discount Rate	9.0%						
Terminal Growth Rate	0.0%						

	2005	2006	2007	2008	2009	2010	
DCF of Combined Company							
Normalized EBITDA (after integration costs)	25,478	23,327	23,907	25,140	25,979	26,845	
Verizon Pension & Options Expense	390	674	958	1,155	1,358	1,570	
MCI Pension & Options Expense	10	10	10	10	10	10	
Taxes	(9,057)	(8,404)	(8,706)	(9,207)	(9,572)	(9,949)	
Depreciation Tax Shield	4,920	4,983	5,074	5,168	5,216	5,322	
Capex	(12,862)	(13,266)	(12,710)	(12,403)	(12,078)	(11,873)	**Terminal**
= Normalized Free Cash Flow	**8,878**	**7,324**	**8,532**	**9,862**	**10,913**	**11,926**	**204,733**
Core Enterprise Value	**164,164**						
Net Debt	39,630						
Hidden Assets	11,326						
Equity Value	**135,860**						
Pro Forma Shares Outstanding	3,005						
Value per Share	**$ 45.21**						
Memo: Verizon standalone value	$ 41.07						
Tax Rate	35%						
Discount Rate	9.0%						
Terminal Growth Rate	3.0%						

Shares Outstanding Calculation	
Assumed premium for MCIP	0.0%
VZ closing price, 2/11/05	$36.31
MCIP closing price, 2/11/05	$20.75
VZ shares per MCIP share	0.571
MCIP shares outstanding	319
VZ shares issued	182
VZ shares outstanding	2,823
Pro Forma Shares	**3,005**
MCIP Equity Value	$ 6,621
MCIP Net Debt	$ 350
MCIP Total Deal Value	**$ 6,971**

Source: Bernstein Estimates and Analysis

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Exhibit 15 (at end) provides our preliminary pro-forma income statement for the combined Verizon-MCI under our base-case assumptions. We expect the combined company to show revenue growth in the low-single-digits (except for 2006), and slowly improving EBITDA margins. Like the Qwest-MCI case, we project GAAP EPS to be diluted in the first three years following closure of the merger, but less severely (ranging from (25)% to (2)% dilution). On a normalized basis, with merger integration costs excluded, EPS would similarly turn accretive in the third year.

Alternative Scenario: Turning Around MCI

In our alternative scenario in which Verizon attempts to turnaround MCI and improve its margins, our discounted cash flow valuation suggests the combined company could be worth an incremental $1.50 per share, or nearly $47. Near-term free cash flow would be negatively impacted, but Verizon would likely be able to absorb the impact without materially hurting its financial position. However, the risks of doing this are the same: given the challenges of turning around MCI, the returns have more risk and investors may not initially credit the company for its efforts. In our opinion, the potential incremental $1.50 per share valuation would do little to alleviate investor concerns over the $3B cost of the turnaround project, especially as Verizon has two other significant capital projects under way (Fiber and EV-DO). **Exhibit 16** (at end) provides our pro-forma income statement for the combined Verizon-MCI under this scenario, and **Exhibit 10** below shows the valuation calculation.

Exhibit 10
Valuation of Verizon-MCI under MCI Turnaround Scenario

	2005	2006	2007	2008	2009	2010	
DCF of Combined Company							
Normalized EBITDA (after integration costs)	25,478	24,076	24,849	26,113	26,810	27,586	
Verizon Pension & Options Expense	390	674	958	1,155	1,358	1,570	
MCI Pension & Options Expense	10	10	10	10	10	10	
Taxes	(9,057)	(8,666)	(9,036)	(9,547)	(9,862)	(10,208)	
Depreciation Tax Shield	4,920	5,036	5,109	5,185	5,216	5,322	
Capex	(12,862)	(14,766)	(13,710)	(12,903)	(12,078)	(11,873)	**Terminal**
= Normalized Free Cash Flow	**8,878**	**6,363**	**8,179**	**10,013**	**11,453**	**12,407**	**212,993**
Core Enterprise Value	**168,752**						
Net Debt	39,630						
Hidden Assets	11,326						
Equity Value	**140,448**						
Pro Forma Shares Outstanding	3,005						
Value per Share	**$ 46.73**						
Memo: Verizon standalone value	$ 41.07						
Tax Rate	35%						
Discount Rate	9.0%						
Terminal Growth Rate	3.0%						

Source: Bernstein Estimates and Analysis

Conclusions

Our conclusion from the above analyses is that an acquisition of MCI, while having long-term strategic merit for either Verizon or Qwest, is a far less value-creating move than SBC's acquisition of AT&T. This is entirely due to MCI's weaker position relative to AT&T, both in terms of market share and in terms of financial performance. Acquiring and integrating MCI entails significant risk for only a modest reward. This is true whether Qwest or Verizon does the deal, and whether they undertake to significantly turn around MCI's performance.

In our opinion, Qwest would do better to continue focusing on its own internal cost cutting opportunities, and deliver a full year of improved financial performance before pursuing major M&A deals. We believe

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this would likely have a more beneficial effect on the company's stock price than an acquisition of MCI now – especially given what we believe is the intrinsic value of Qwest's stock. An MCI acquisition could boost the stock near-term, but the dilutive effects on earnings and free cash flow would likely renew investors' concerns as the realities of the merger settle in.

We would be neutral to a Verizon-MCI merger, seeing it as providing a reward that is commensurate with the risk involved. In this case, we believe Verizon would most likely pursue a turnaround of MCI, in hopes of extracting higher long-term value for their investment. This would increase the costs of integration (though much of it would be capitalized), increasing the risk that investors devalue the stock in the near-term, before benefits are realized. In the longer term, Verizon's improved position in the enterprise market and lower costs could justify a higher valuation.

Valuation Methodology

Our $5 target price for Qwest and $41 target price for Verizon are based on discounted cash flow valuations, back-tested against our proprietary Bernstein Implied Growth Model.

Risks

One of either Qwest or Verizon is likely to acquire MCI in the near future. Such an acquisition will likely cause us to materially alter our projections of that company's revenues, margins and earnings, as well as our assessment of the company's risk profile. Neither Qwest nor Verizon has made any official statements regarding their merger plans, including the acquisition price, projected synergies, projected integration costs, and strategic plans. Therefore, our analysis at this time is based on our own estimates of these factors, which could differ materially from the companies' understandings. Finally, we do not currently cover MCI. Therefore, the projections and statements made within this report regarding MCI are not based on the same level of detailed research and analyses typically afforded to our covered companies. ***Investors should not place undue reliance on our projections of MCI's financial results as the basis of investment decisions on MCI.***

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Exhibit 11
Qwest Summary Income Statement and Key Metrics, 2003-2010E

Qwest Normalized Summary Income Statement

	2003	2004E	2005E	2006E	2007E	2008E	2009E	2010E	05-10 CAGR
Revenues									
Wireline	13,650	13,294	13,210	13,308	13,162	12,846	12,437	12,073	-1.8%
Memo: y/y change	-6.7%	-2.6%	-0.6%	0.7%	-1.1%	-2.4%	-3.2%	-2.9%	
Wireless	594	516	584	709	846	966	1,066	1,147	14.5%
Memo: y/y change	-14.4%	-13.2%	13.2%	21.4%	19.4%	14.1%	10.4%	7.6%	
Other	44	39	36	36	36	36	36	36	0.0%
Memo: y/y change	-22.8%	-11.4%	-7.7%	0.0%	0.0%	0.0%	0.0%	0.0%	
Total Qwest Revenues	**14,288**	**13,849**	**13,830**	**14,053**	**14,045**	**13,848**	**13,539**	**13,256**	**-0.8%**
Memo: y/y change	-7.1%	-3.1%	-0.1%	1.6%	-0.1%	-1.4%	-2.2%	-2.1%	
Total EBITDA	**3,749**	**3,537**	**4,051**	**4,649**	**4,515**	**4,309**	**4,027**	**3,772**	**-1.4%**
Memo: margin	26.2%	25.5%	29.3%	33.1%	32.2%	31.1%	29.7%	28.5%	
Total D&A	**3,167**	**3,102**	**3,020**	**3,055**	**2,961**	**2,805**	**2,734**	**2,652**	**-2.6%**
Memo: y/y change	-17.7%	-2.0%	-2.7%	1.2%	-3.1%	-5.3%	-2.5%	-3.0%	
Total Operating Income	**582**	**434**	**1,031**	**1,594**	**1,555**	**1,504**	**1,292**	**1,120**	**1.7%**
Memo: margin	4.1%	3.1%	7.5%	11.3%	11.1%	10.9%	9.5%	8.5%	
Non-Operating & Taxes	(1,263)	(1,517)	(1,432)	(1,406)	(1,229)	(1,121)	(991)	(874)	-9.4%
Net Income (normalized)	**(681)**	**(1,082)**	**(401)**	**188**	**325**	**383**	**301**	**246**	**-190.7%**
Memo: margin	-4.8%	-7.8%	-2.9%	1.3%	2.3%	2.8%	2.2%	1.9%	
EPS (normalized)	**$ (0.38)**	**$ (0.60)**	**$ (0.22)**	**$ 0.10**	**$ 0.16**	**$ 0.19**	**$ 0.14**	**$ 0.11**	**-187.8%**
Memo: y/y change	-49.1%	56.2%	-63.9%	-145.0%	68.3%	14.0%	-23.7%	-20.8%	
Capex									
Wireline	1,729	1,586	1,650	1,593	1,565	1,539	1,512	1,489	-2.0%
Wireless	11	5	15	19	22	25	29	33	17.0%
Other	348	370	361	348	334	322	311	301	-3.6%
Total Capex	**2,088**	**1,941**	**2,027**	**1,959**	**1,920**	**1,886**	**1,851**	**1,822**	**-2.1%**
Memo: y/y change	-25.1%	-7.1%	4.4%	-3.3%	-2.0%	-1.8%	-1.8%	-1.5%	
Memo: % of revenues	14.6%	14.0%	14.7%	13.9%	13.7%	13.6%	13.7%	13.7%	
Reported Access Lines									
Residential (000)	10,018	9,208	9,138	9,105	8,934	8,888	8,776	8,723	-0.9%
Business (000)	6,191	6,240	6,266	6,261	6,269	6,230	6,259	6,293	0.1%
Total Access Lines (000)	**16,209**	**15,448**	**15,404**	**15,367**	**15,203**	**15,118**	**15,035**	**15,015**	**-0.5%**
Memo: y/y change	-3.9%	-4.7%	-0.3%	-0.2%	-1.1%	-0.6%	-0.6%	-0.1%	
of which UNE-P	948	1156	969	618	358	211	218	225	-25.4%
of which Resale/UNE-L	636	636	636	633	631	625	613	600	-1.2%
DSL Subscribers (000)	**637**	**1,066**	**1,504**	**1,919**	**2,293**	**2,611**	**2,874**	**3,090**	**15.5%**
Memo: y/y change	19.1%	67.3%	41.0%	27.6%	19.5%	13.9%	10.0%	7.5%	
Net Adds (000)	102	429	438	416	374	318	262	216	-13.1%
Wireless Subscribers (000)	**871**	**790**	**961**	**1,165**	**1,360**	**1,510**	**1,630**	**1,723**	**12.4%**
Memo: y/y change	-15.8%	-9.3%	21.7%	21.2%	16.8%	11.0%	7.9%	5.7%	
Wireless Net Adds (000)	(163)	(37)	171	204	195	150	120	93	-11.6%

Source: Bernstein Estimates and Analysis

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Exhibit 12
Pro-Forma Summary Income Statement for Qwest-MCI Combination, Base Case, 2006-2010E

	2006	2007	2008	2009	2010
Qwest Revenues	14,053	14,045	13,848	13,539	13,256
MCI Revenues	13,215	11,729	10,935	10,354	9,893
Eliminations	(614)	(528)	(492)	(466)	(445)
Pro Forma Revenues	**26,654**	**25,246**	**24,291**	**23,426**	**22,704**
Memo: *y/y change*	*-11.1%*	*-5.3%*	*-3.8%*	*-3.6%*	*-3.1%*
Memo: Net Revenue Synergies	-	-	-	-	-
Qwest Cash Expenses	8,964	8,647	8,227	8,215	8,200
MCI Cash Expenses	11,017	9,785	9,062	8,604	8,221
Merger Integration Costs	1,400	950	400	200	-
Pro Forma Cash Expenses	**21,381**	**19,382**	**17,689**	**17,020**	**16,421**
Memo: *y/y change*	*-9.1%*	*-9.3%*	*-8.7%*	*-3.8%*	*-3.5%*
Memo: Net Expense Savings	831	(197)	(1,285)	(1,451)	(1,623)
Pro Forma EBITDA	**5,273**	**5,864**	**6,601**	**6,406**	**6,282**
Memo: *margin*	*19.8%*	*23.2%*	*27.2%*	*27.3%*	*27.7%*
Qwest D&A	3,055	2,961	2,805	2,734	2,652
MCI D&A	1,964	1,865	1,772	1,684	1,599
Pro Forma Depreciation & Amortization	**5,008**	**4,791**	**4,507**	**4,308**	**4,101**
Memo: *y/y change*	*-0.3%*	*-4.3%*	*-5.9%*	*-4.4%*	*-4.8%*
Memo: D&A Savings	(10)	(35)	(70)	(110)	(150)
Pro Forma Operating Income	**264**	**1,073**	**2,094**	**2,099**	**2,181**
Memo: *margin*	*1.0%*	*4.2%*	*8.6%*	*9.0%*	*9.6%*
Pro Forma Interest Expense, Net	**(1,770)**	**(1,547)**	**(1,423)**	**(1,446)**	**(1,337)**
Pro Forma Other Income, Net	**127**	**134**	**139**	**146**	**154**
Pro Forma Pre-tax Income	**(1,379)**	**(341)**	**811**	**798**	**998**
Income Taxes	483	119	(284)	(279)	(349)
Memo: *effective tax rate*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*
Pro Forma Net Income	**(896)**	**(221)**	**527**	**519**	**649**
Pro Forma Diluted Shares	3,425	3,425	3,425	3,425	3,425
Pro Forma Normalized EPS	**$ (0.26)**	**$ (0.06)**	**$ 0.15**	**$ 0.15**	**$ 0.19**
Memo: Qwest Standalone EPS	$ 0.10	$ 0.16	$ 0.19	$ 0.14	$ 0.11
Memo: *accretion/dilution*	*-369%*	*-139%*	*-18%*	*6%*	*68%*
Qwest Capex	1,959	1,920	1,886	1,851	1,822
MCI Capex	903	857	815	774	735
Pro Forma Capex	**2,762**	**2,528**	**2,350**	**2,225**	**2,158**
Memo: *y/y change*	*-7.2%*	*-8.5%*	*-7.0%*	*-5.3%*	*-3.0%*
Memo: Capex Synergies	(100)	(250)	(350)	(400)	(400)

Source: Bernstein Estimates and Analysis

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Exhibit 13
Pro-Forma Summary Income Statement for Qwest-MCI Combination, MCI Turnaround Scenario, 2006-2010E

	2006	2007	2008	2009	2010
Qwest Revenues	14,053	14,045	13,848	13,539	13,256
MCI Revenues	13,215	11,729	10,935	10,354	9,893
Eliminations	(561)	(441)	(364)	(305)	(292)
Pro Forma Revenues	**26,707**	**25,333**	**24,419**	**23,587**	**22,857**
Memo: *y/y change*	*-10.9%*	*-5.1%*	*-3.6%*	*-3.4%*	*-3.1%*
Memo: Net Revenue Synergies	-	-	-	-	-
Qwest Cash Expenses	8,964	8,647	8,227	8,215	8,200
MCI Cash Expenses	10,321	8,923	8,253	8,028	7,728
Merger Integration Costs	1,400	950	400	200	-
Pro Forma Cash Expenses	**20,685**	**18,520**	**16,880**	**16,444**	**15,928**
Memo: *y/y change*	*-12.1%*	*-10.5%*	*-8.9%*	*-2.6%*	*-3.1%*
Memo: Net Expense Savings	844	(193)	(1,303)	(1,496)	(1,670)
Pro Forma EBITDA	**6,022**	**6,813**	**7,539**	**7,144**	**6,929**
Memo: *margin*	*22.5%*	*26.9%*	*30.9%*	*30.3%*	*30.3%*
Qwest D&A	3,055	2,961	2,805	2,734	2,652
MCI D&A	1,964	1,865	1,772	1,684	1,599
Pro Forma Depreciation & Amortization	**5,158**	**4,891**	**4,557**	**4,308**	**4,101**
Memo: *y/y change*	*2.7%*	*-5.2%*	*-6.8%*	*-5.5%*	*-4.8%*
Memo: D&A Savings	140	65	(20)	(110)	(150)
Pro Forma Operating Income	**863**	**1,921**	**2,981**	**2,836**	**2,828**
Memo: *margin*	*3.2%*	*7.6%*	*12.2%*	*12.0%*	*12.4%*
Pro Forma Interest Expense, Net	**(1,770)**	**(1,547)**	**(1,423)**	**(1,446)**	**(1,337)**
Pro Forma Other Income, Net	**127**	**134**	**139**	**146**	**154**
Pro Forma Pre-tax Income	**(780)**	**508**	**1,698**	**1,536**	**1,645**
Income Taxes	273	(178)	(594)	(537)	(576)
Memo: *effective tax rate*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*
Pro Forma Net Income	**(507)**	**330**	**1,104**	**998**	**1,069**
Pro Forma Diluted Shares	3,425	3,425	3,425	3,425	3,425
Pro Forma Normalized EPS	**$ (0.15)**	**$ 0.10**	**$ 0.32**	**$ 0.29**	**$ 0.31**
Memo: Qwest Standalone EPS	$ 0.10	$ 0.16	$ 0.19	$ 0.14	$ 0.11
Memo: *accretion/dilution*	*-252%*	*-41%*	*72%*	*104%*	*176%*
Qwest Capex	1,959	1,920	1,886	1,851	1,822
MCI Capex	903	857	815	774	735
Pro Forma Capex	**4,262**	**3,528**	**2,850**	**2,225**	**2,158**
Memo: *y/y change*	*43.2%*	*-17.2%*	*-19.2%*	*-21.9%*	*-3.0%*
Memo: Capex Synergies	1,400	750	150	(400)	(400)

Source: Bernstein Estimates and Analysis

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Exhibit 14
Verizon Summary Income Statement, 2004-2010E

	2003	2004	2005E	2006E	2007E	2008E	2009E	2010E	06-10 CAGR
Revenues									
Wireline	39,602	38,551	37,736	38,625	35,968	36,149	36,653	37,258	-0.3%
Memo: y/y change	*-3.0%*	*-2.7%*	*-2.1%*	*-2.9%*	*-1.8%*	*0.5%*	*1.4%*	*1.7%*	
Wireless	22,469	27,662	32,206	35,542	38,188	40,448	42,497	44,327	6.6%
Memo: y/y change	*15.5%*	*23.0%*	*16.4%*	*10.4%*	*7.4%*	*5.9%*	*5.1%*	*4.3%*	
International	1,949	2,014	2,087	2,088	2,066	2,039	2,026	2,004	-0.8%
Memo: y/y change	*-12.2%*	*3.3%*	*3.6%*	*0.0%*	*-1.0%*	*-1.3%*	*-0.6%*	*-1.1%*	
Information Services	3,830	3,615	3,544	3,514	3,498	3,488	3,485	3,494	-0.3%
Memo: y/y change	*-5.2%*	*-5.6%*	*-2.0%*	*-0.8%*	*-0.5%*	*-0.3%*	*-0.1%*	*0.3%*	
Other	(402)	(559)	(529)	(544)	(556)	(575)	(561)	(573)	1.6%
Memo: y/y change	*192.4%*	*39.1%*	*-5.4%*	*2.8%*	*2.5%*	*3.0%*	*-2.5%*	*2.3%*	
Total Verizon Revenues	**67,468**	**71,283**	**75,043**	**77,225**	**79,162**	**81,546**	**84,100**	**86,510**	**2.9%**
Memo: y/y change	*1.6%*	*5.7%*	*5.3%*	*2.9%*	*2.5%*	*3.0%*	*3.1%*	*2.9%*	
EBITDA									
Wireline	16,377	14,751	13,226	11,870	10,838	10,434	10,118	10,025	-5.4%
Memo: margin	*41.4%*	*38.3%*	*35.0%*	*32.4%*	*30.1%*	*28.9%*	*27.6%*	*26.9%*	
Wireless	7,972	10,324	12,401	14,205	15,313	16,214	17,018	17,736	7.4%
Memo: margin	*35.4%*	*37.3%*	*38.5%*	*40.0%*	*40.1%*	*40.1%*	*40.0%*	*40.0%*	
International	684	917	879	851	884	954	907	953	1.6%
Memo: margin	*35.1%*	*45.5%*	*42.1%*	*40.8%*	*42.8%*	*41.9%*	*44.8%*	*47.5%*	
Information Services	1,871	1,738	1,640	1,591	1,549	1,509	1,473	1,442	-2.5%
Memo: margin	*48.9%*	*48.1%*	*46.3%*	*45.3%*	*44.3%*	*43.3%*	*42.3%*	*41.3%*	
Other	288	121	426	448	470	493	570	594	6.9%
Memo: margin	*-71.6%*	*-21.6%*	*-80.6%*	*-82.3%*	*84.2%*	*85.7%*	*-101.7%*	*103.6%*	
Total EBITDA	**27,192**	**27,851**	**28,573**	**28,965**	**29,053**	**29,595**	**30,087**	**30,750**	**1.5%**
Memo: margin	*40.3%*	*39.1%*	*38.1%*	*37.5%*	*36.7%*	*36.3%*	*35.8%*	*35.5%*	
Depreciation & Amortization									
Wireline	9,217	8,939	8,767	8,954	9,261	9,489	9,606	9,900	2.5%
Wireless	3,888	4,486	4,986	5,046	5,131	5,365	5,530	5,726	2.8%
International	346	324	349	346	348	346	362	346	-0.1%
Information Services	79	87	92	96	98	102	102	102	2.1%
Other	77	74	74	73	73	73	73	73	-0.3%
Total D&A	**13,607**	**13,910**	**14,269**	**14,514**	**14,908**	**15,374**	**15,674**	**16,150**	**2.5%**
Memo: y/y change	*2.4%*	*2.2%*	*2.6%*	*1.7%*	*2.7%*	*3.1%*	*1.9%*	*3.0%*	
Operating Income									
Wireline	7,160	5,812	4,459	2,916	1,577	946	512	125	-51.1%
Memo: margin	*18.1%*	*15.1%*	*11.8%*	*8.0%*	*4.4%*	*2.6%*	*1.4%*	*0.3%*	
Wireless	4,084	5,838	7,415	9,158	10,182	10,849	11,488	12,008	10.1%
Memo: margin	*18.2%*	*21.1%*	*23.0%*	*25.8%*	*26.7%*	*26.8%*	*27.0%*	*27.1%*	
International	338	593	530	505	538	508	546	606	2.7%
Memo: margin	*17.3%*	*29.4%*	*25.4%*	*24.2%*	*26.0%*	*24.9%*	*26.9%*	*30.3%*	
Information Services	1,792	1,651	1,548	1,496	1,450	1,407	1,371	1,340	-2.8%
Memo: margin	*46.8%*	*45.7%*	*43.7%*	*42.6%*	*41.5%*	*40.3%*	*39.3%*	*38.3%*	
Other	352	47	352	375	397	420	497	521	8.2%
Memo: margin	*-87.6%*	*-8.4%*	*-66.5%*	*-68.9%*	*-71.1%*	*-73.0%*	*88.7%*	*-90.9%*	
Total Operating Income	**13,726**	**13,941**	**14,304**	**14,451**	**14,145**	**14,130**	**14,414**	**14,800**	**0.4%**
Memo: margin	*20.3%*	*19.6%*	*19.1%*	*18.7%*	*17.9%*	*17.3%*	*17.1%*	*16.9%*	
Non Operating & Taxes	(6,493)	(6,960)	(7,469)	(7,994)	(7,960)	(7,979)	(8,082)	(8,110)	1.7%
Net Income (normalized)	**7,233**	**6,981**	**6,834**	**6,456**	**6,184**	**6,152**	**6,331**	**6,490**	**-1.0%**
Memo: margin	*10.7%*	*9.8%*	*9.1%*	*8.3%*	*7.8%*	*7.5%*	*7.5%*	*7.5%*	
EPS (normalized)	**$ 2.82**	**$ 2.51**	**$ 2.43**	**$ 2.32**	**$ 2.18**	**$ 2.16**	**$ 2.23**	**$ 2.28**	**-1.2%**
Memo: y/y change	*-14.1%*	*-4.1%*	*-3.3%*	*-4.4%*	*-6.0%*	*-0.8%*	*2.9%*	*2.5%*	
Capex									
Wireline	6,820	7,118	8,123	8,863	8,507	8,281	8,029	7,891	-0.6%
Wireless	4,590	5,633	5,900	5,450	5,250	5,250	5,250	5,250	-2.3%
International	359	382	382	344	301	263	230	202	-12.0%
Information Services	84	90	88	87	87	87	87	87	-0.3%
Other	32	39	39	39	39	39	39	39	0.0%
Total Capex	**11,885**	**13,262**	**14,532**	**14,783**	**14,183**	**13,920**	**13,635**	**13,468**	**-1.5%**
Memo: y/y change	*-0.1%*	*11.6%*	*9.6%*	*1.7%*	*-4.1%*	*-1.9%*	*-2.0%*	*-1.2%*	
Reported Access Lines									
Residential (000)	36,089	34,160	32,516	30,606	28,745	27,882	27,257	26,844	-3.8%
Memo: y/y change	*-3.7%*	*-5.3%*	*-4.8%*	*-5.9%*	*-6.1%*	*-3.0%*	*-2.2%*	*-1.5%*	
Business excl. ISDN (000)	18,990	18,392	18,877	19,242	19,573	19,792	20,230	20,672	1.8%
Memo: y/y change	*-3.0%*	*-3.1%*	*2.6%*	*1.9%*	*1.7%*	*1.1%*	*2.2%*	*2.2%*	
Public (000)	462	427	396	367	340	315	292	270	-7.4%
Memo: y/y change	*-11.5%*	*-7.6%*	*-7.2%*	*-7.4%*	*-7.4%*	*-7.4%*	*-7.4%*	*-7.4%*	
Total Access Lines (000)	**55,541**	**52,979**	**51,789**	**50,215**	**48,658**	**47,990**	**47,778**	**47,786**	**-1.6%**
Memo: y/y change	*-4.2%*	*-4.6%*	*-2.2%*	*-3.0%*	*-3.1%*	*-1.4%*	*-0.4%*	*0.0%*	
of which UNE-P (000)	5,019	5,364	4,521	3,161	1,766	843	823	797	-29.3%
Memo: y/y change	*57.5%*	*18.8%*	*-24.2%*	*-30.1%*	*-46.0%*	*-50.6%*	*-2.3%*	*-3.1%*	
of which Resale (000)	729	514	352	247	173	121	85	59	-30.0%
Memo: y/y change	*-30.5%*	*-29.4%*	*-31.5%*	*-30.0%*	*-30.0%*	*-30.0%*	*-30.0%*	*-30.0%*	
High-Speed Data									
DSL Subscribers (000)	2,319	3,559	4,719	5,294	5,770	5,879	5,791	5,554	3.3%
Fiber HSD Subscribers (000)	0	66	268	1,365	2,371	3,611	4,889	6,195	87.4%
Total HSD Subscribers (000)	**2,319**	**3,625**	**4,987**	**6,659**	**8,141**	**9,490**	**10,680**	**11,749**	**16.7%**
Memo: y/y change	*38.8%*	*56.3%*	*37.6%*	*33.5%*	*22.3%*	*16.6%*	*12.3%*	*10.2%*	
Net Adds (000)	649	1,306	1,363	1,671	1,483	1,349	1,170	1,069	-4.4%

Source: Bernstein Estimates and Analysis

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Exhibit 15
Pro-Forma Summary Income Statement for Verizon-MCI Combination, Base Case, 2006-2010E

	2006	2007	2008	2009	2010
Verizon Revenues	77,225	79,162	81,546	84,100	86,510
MCI Revenues	13,453	12,154	11,505	11,032	10,658
Eliminations	(2,143)	(1,883)	(1,776)	(1,698)	(1,635)
Pro Forma Revenues	**88,534**	**89,432**	**91,275**	**93,434**	**95,533**
Memo: *y/y change*	*-0.8%*	*1.0%*	*2.1%*	*2.4%*	*2.2%*
Memo: Net Revenue Synergies	238	424	570	678	766
Verizon Cash Expenses	47,712	49,181	50,713	52,386	53,826
MCI Cash Expenses	9,788	8,596	7,823	7,313	6,987
Merger Integration Costs	1,400	950	400	200	-
Pro Forma Cash Expenses	**58,900**	**58,727**	**58,936**	**59,899**	**60,813**
Memo: *y/y change*	*1.0%*	*-0.3%*	*0.4%*	*1.6%*	*1.5%*
Memo: Net Expense Synergies	1,024	(76)	(1,256)	(1,842)	(2,317)
Pro Forma EBITDA	**29,634**	**30,705**	**32,339**	**33,536**	**34,720**
Memo: *margin*	*33.5%*	*34.3%*	*35.4%*	*35.9%*	*36.3%*
Verizon D&A	14,514	14,908	15,374	15,674	16,150
MCI D&A	1,964	1,865	1,772	1,684	1,599
Pro Forma Depreciation & Amortization	**16,478**	**16,774**	**17,146**	**17,357**	**17,750**
Memo: *y/y change*	*1.3%*	*1.8%*	*2.2%*	*1.2%*	*2.3%*
Memo: D&A Savings	0	-	-	-	-
Pro Forma Operating Income	**13,156**	**13,932**	**15,192**	**16,178**	**16,970**
Memo: *margin*	*14.9%*	*15.6%*	*16.6%*	*17.3%*	*17.8%*
Pro Forma Interest Expense, Net	**(2,674)**	**(2,733)**	**(2,792)**	**(2,852)**	**(2,914)**
Pro Forma Other Income, Net	**(2,457)**	**(2,639)**	**(2,614)**	**(2,573)**	**(2,465)**
Pro Forma Pre-tax Income	**8,025**	**8,560**	**9,787**	**10,754**	**11,592**
Income Taxes	(2,809)	(2,996)	(3,425)	(3,764)	(4,057)
Memo: *effective tax rate*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*
Pro Forma Net Income	**5,216**	**5,564**	**6,362**	**6,990**	**7,535**
Pro Forma Diluted Shares	3,005	3,005	3,005	3,005	3,005
Pro Forma Normalized EPS	**$ 1.74**	**$ 1.85**	**$ 2.12**	**$ 2.33**	**$ 2.51**
Memo: Verizon Standalone EPS	$ 2.32	$ 2.18	$ 2.16	$ 2.23	$ 2.28
Memo: *accretion/dilution*	*-25%*	*-15%*	*-2%*	*4%*	*10%*
Verizon Capex	14,783	14,183	13,920	13,635	13,468
MCI Capex	903	857	815	774	735
Pro Forma Capex	**15,686**	**15,041**	**14,734**	**14,409**	**14,204**
Memo: *y/y change*	*1.3%*	*-4.1%*	*-2.0%*	*-2.2%*	*-1.4%*
Memo: Capex Synergies	-	-	-	-	-

Source: Bernstein Estimates and Analysis

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Exhibit 16
Pro-Forma Summary Income Statement for Verizon-MCI Combination, MCI Turnaround Scenario, 2006-2010E

	2006	2007	2008	2009	2010
Verizon Revenues	77,225	79,162	81,546	84,100	86,510
MCI Revenues	13,453	12,154	11,505	11,032	10,658
Eliminations	(1,984)	(1,623)	(1,392)	(1,215)	(1,175)
Pro Forma Revenues	**88,694**	**89,693**	**91,659**	**93,917**	**95,993**
Memo: *y/y change*	*-0.6%*	*1.1%*	*2.2%*	*2.5%*	*2.2%*
Memo: Net Revenue Synergies	238	424	570	678	766
Verizon Cash Expenses	47,712	49,181	50,713	52,386	53,826
MCI Cash Expenses	9,198	7,915	7,235	6,965	6,707
Merger Integration Costs	1,400	950	400	200	-
Pro Forma Cash Expenses	**58,311**	**58,045**	**58,347**	**59,551**	**60,533**
Memo: *y/y change*	*0.0%*	*-0.5%*	*0.5%*	*2.1%*	*1.6%*
Memo: Net Expense Synergies	1,036	(66)	(1,311)	(1,979)	(2,457)
Pro Forma EBITDA	**30,383**	**31,648**	**33,312**	**34,366**	**35,460**
Memo: *margin*	*34.3%*	*35.3%*	*36.3%*	*36.6%*	*36.9%*
Verizon D&A	14,514	14,908	15,374	15,674	16,150
MCI D&A	1,964	1,865	1,772	1,684	1,599
Pro Forma Depreciation & Amortization	**16,628**	**16,874**	**17,196**	**17,357**	**17,750**
Memo: *y/y change*	*2.2%*	*1.5%*	*1.9%*	*0.9%*	*2.3%*
Memo: D&A Savings	150	100	50	-	-
Pro Forma Operating Income	**13,755**	**14,774**	**16,116**	**17,009**	**17,711**
Memo: *margin*	*15.5%*	*16.5%*	*17.6%*	*18.1%*	*18.4%*
Pro Forma Interest Expense, Net	**(2,674)**	**(2,733)**	**(2,792)**	**(2,852)**	**(2,914)**
Pro Forma Other Income, Net	**(2,457)**	**(2,639)**	**(2,614)**	**(2,573)**	**(2,465)**
Pro Forma Pre-tax Income	**8,624**	**9,402**	**10,710**	**11,584**	**12,332**
Income Taxes	(3,018)	(3,291)	(3,749)	(4,055)	(4,316)
Memo: *effective tax rate*	*35.0%*	*35.0%*	*35.0%*	*35.0%*	*35.0%*
Pro Forma Net Income	**5,605**	**6,111**	**6,962**	**7,530**	**8,016**
Pro Forma Diluted Shares	3,005	3,005	3,005	3,005	3,005
Pro Forma Normalized EPS	**$ 1.87**	**$ 2.03**	**$ 2.32**	**$ 2.51**	**$ 2.67**
Memo: Verizon Standalone EPS	$ 2.32	$ 2.18	$ 2.16	$ 2.23	$ 2.28
Memo: *accretion/dilution*	*-20%*	*-7%*	*7%*	*12%*	*17%*
Verizon Capex	14,783	14,183	13,920	13,635	13,468
MCI Capex	903	857	815	774	735
Pro Forma Capex	**17,186**	**16,041**	**15,234**	**14,409**	**14,204**
Memo: *y/y change*	*11.0%*	*-6.7%*	*-5.0%*	*-5.4%*	*-1.4%*
Memo: Capex Synergies	1,500	1,000	500	-	-

Source: Bernstein Estimates and Analysis

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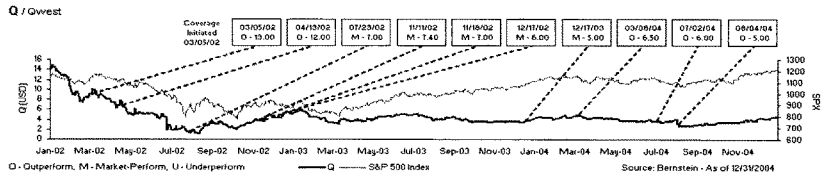

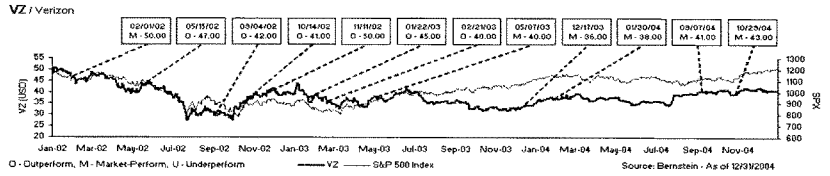

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