internet access and digital phone service to the mass market. Time Warner Cable’s Roadrunner high-speed cable internet access service currently serves 4.8 million subscribers, representing 25% of the company’s service-ready homes. The company’s Digital Phone VoIP service has been increasingly popular, growing by 880,000 subscribers in 2005 to a total of 1.1 million subscribers, representing 7% of eligible homes.

In attracting enterprise customers, the company highlights its expertise in establishing Metro Ethernet networks within the states in which it has a presence. Time Warner’s broadband network offerings feature point-to-point connectivity, point-to-multipoint connectivity, teleworker aggregation, or Internet access to business customers. Time Warner has aggressively targeted enterprise customers, especially through a variety of Ethernet business services, such as private line, private LAN and broadband Internet connections. Time Warner’s products take advantage of its extensive metropolitan fiber networks, which are independent of existing telecom providers. Some of its products, such new storage solutions, cater to the specific disaster recovery needs of the financial sector. Cable companies like Time Warner are increasingly seen by others in the industry as viable competitors, especially for business

159 Id.


161 Id.


163 International Telecommunications, Intelligence Telecommunications, ESPICOM Business Intelligence Ltd. (Feb. 8, 2005.) (“Time Warner Cable of New York and New Jersey offers Optical Ethernet and Storage Services using Nortel Solutions.”).

164 Id.
data.\textsuperscript{165} Time Warner Cable’s broadband networking solution for business provides service to approximately 500 enterprise customers and the company claims over 211,000 business customers in total as of the fourth quarter 2005.\textsuperscript{166}

Similarly, Cox Communications is a strong competitor for both enterprise customers and the mass market, with an overall customer base of 6.6 million including 6.3 million basic cable subscribers.\textsuperscript{167} Cox claims to have been the first company to offer a bundle of telephone (both VoIP and circuit-switched), high-speed internet and digital cable television over a single broadband network, and currently over 1 million Cox customers have subscribed to their “triple play” package.\textsuperscript{168} Cox added online accessibility at no extra charge to its VoIP service in its Middle Georgia, Florida Gulf Coast and Central Florida markets allowing customers to listen to voice mails online, view their call log of incoming and outgoing calls, save voice messages on their PC, and forward voice mails as an e-mail attachment.\textsuperscript{169} In addition to Florida and Georgia,
Cox’s telephony markets in the BellSouth region also include New Orleans, Baton Rouge and Lafayette, Louisiana.¹⁷⁰

Cox competes to supply voice and data services to the enterprise segment through its Cox Business Solutions organizations, and like other competitors, touts its nationwide IP network.¹⁷¹

It provides local and long distance voice, toll-free services, and data services (including Internet access) to over 100,000 businesses.¹⁷² Cox has added 40,000 business customers since 2003 and now has 140,000; business revenues jumped 26 percent last year to $395 million.¹⁷³ While it has

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Footnote continued from previous page

¹⁷⁰ Id.


¹⁷² Frost & Sullivan, Cable Telephony Services Markets at 1-29 (2004) For example, Cox recently won contracts with Technical Software Services, Lane Construction, and America Family Online. See Cox Case Study on Medium Business: Technical Software Services, Pensacola, Fl, available at http://www.coxbusiness.com/casestudies/ mdbusiness/techsoft.html (“There is no provider with communications more reliable and stable than Cox,” said [Internet and Application Software Provider, Techsoft’s Dan Shanholtz]. “Their fiber-based communications give us the reliability and stability we need to maintain critical operations for ourselves and our clients.”); Cox Case Study on Large Business: Lane Construction/Virginia Department of Transportation, Chantilly, Virginia, available at http://www.coxbusiness.com/casestudies/lgbusiness/vadot.html (“Cox Business Services [presented to Lane Construction and VDOT] the Wireless Plant Extension, which delivered Cox Business Internet service over wireless transport. This ‘last mile’ wireless solution was enthusiastically received by both Lane and VDOT. . . ‘Not only do we enjoy the ease of access to advanced technology Cox gives us, but also the convenience of getting one bill and dealing with one company for customer care and technical questions.’ Glenn D. Gorman, Job Engineer Lane Construction); Cox Case Study on Small Business: America Family Online, Niceville, Fl, available at http://www.coxbusiness.com/casestudies/smbusiness/americanfamily.html (“American Family Online (AFO) is one of America’s original national filtered Internet service providers…”Prior to partnering with Cox,” said [founder, Stephen] Ensley, ‘we had several other providers, and we were not satisfied at all in terms of service or response. Like a lot of smaller businesses, we’re trying to build and grow by making good business decisions, by not spending too much, and by choosing the right partners. We saw Cox Business Services as such a partner.”).

traditionally focused on small and mid-sized business customers, it has increasingly focused on larger customers. Like others, Cox also offers VoIP service to enterprises.

Comcast has 21.5 million cable customers in 35 states, and has been particularly aggressive in rolling out VoIP service to its subscriber base. In 2005, Comcast launched Comcast Digital Voice, its IP-enabled phone service that provides unlimited local and domestic long distance calling as well as Voice Mail, Caller ID and Call Waiting features to 25 markets serving 16 million homes. Comcast expects that by the end of 2006, its Digital Voice service will add 1.0 million new subscribers and the service will be available in approximately 27 million homes. Comcast currently has 1.3 million phone customers (including both circuit-switched and Digital Voice subscribers) and plans to roll out discount “triple-play” bundles of video, data and voice products nationwide in 2006. The aggressive VoIP rollout “gives Comcast a big competitive edge on such Baby Bell rivals as AT&T and Verizon, now furiously building new fiber-rich networks over which to deliver cable-like video and next-generation broadband solutions.”

180 Id.
Comcast’s business offerings focus on its network capability. It offers Internet access, managed network services, VPN to connect smaller offices, branch locations, and off-site employees. Comcast’s network delivers service in 41 states, including presence in 22 of the top 25 MSAs, and has over 90,000 miles of fiber-optic cable nationwide.

Like other cable providers, Charter Communications has been “leveraging digital technology by offering bundled video, data and voice services — commonly referred to as the ‘triple play.’” Indeed, “[g]rowth in Charter's telephone customer base accelerated throughout 2005, with a 35% increase in customers during the fourth quarter.” As of the end of 2005, the company had 121,500 telephone customers and had expanded its telephone service footprint to over 25% of total homes passed to a total of 2,918,000 homes, and the Company currently plans to pass 6 million to 8 million homes by year end 2006. Charter Business, a subsidiary of Charter, provides a broad range of communications services to businesses of all sizes, including Internet access services, digital video services, and LAN and VPN networking solutions.

185 Id.
Georgia-based Knology offers a full suite of video, voice and data services to residential and business customers including digital cable TV, local and long distance digital telephone service with enhanced voice messaging features, and high-speed Internet access. The company announced a 27.7% in triple-play bundle customers in 2005 to over 65,000. Knology provides video, voice and data services in Huntsville and Montgomery, Alabama; Panama City and Pinellas County, Florida; Augusta, Columbus and West Point, Georgia; Charleston, South Carolina; and Knoxville, Tennessee. The company also provides IP-based products for businesses including Passive Optical Network with segmented voice and data bandwidth, and Managed Integrated Network Solutions for converged voice and data. Knology reported 15% growth in business connections in 2005 to 44,738 with 36% growth in business revenue.

Mediacom Communications is the nation’s eighth-largest MSO, focused in the South and Midwest, serving 2.7 million homes in 23 states, with 1.5 million basic cable subscribers. Like the larger MSOs, Mediacom has had notable success in launching a VoIP service as part of


\[188\] Id.


a “triple play” bundle. Mediacom added 20,000 VoIP subscribers in the fourth quarter of 2005 alone (to a total of 22,000) and ended 2005 marketing its triple-play bundle of video, data and voice in over half of the total homes in their markets.¹⁹³ Mediacom “anticipate[s] that the phone business will be a meaningful contributor to revenue growth in 2006 . . .”¹⁹⁴ Mediacom also provides advanced data and communications services to the business market, including LAN services, VPNs, and high-speed data access. For larger enterprise customers, Mediacom emphasizes their high-capacity fiber optic network, with nearly 9,000 route miles of fiber.¹⁹⁵

**System Integrators**

EDS is a leading independent systems management and global technology services firm.¹⁹⁶ EDS focuses mostly on large business customers, such as the communications, financial services, healthcare, energy, manufacturing, transportation and consumer and retail industries; and also foreign governments.¹⁹⁷ EDS offers IT outsourcing, business process outsourcing, custom applications, operations solutions and consulting. EDS is also a pioneer in the VoIP arena and controls the world’s largest private network converging voice, video and data.¹⁹⁸ EDS is presently involved in transforming Bank of America’s legacy voice carrier systems to VoIP

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¹⁹⁴ Id.

¹⁹⁵ SEC Form 10-K, Mediacom Communications Corp. at 7 (2004).


¹⁹⁷ Id.

technology and will transition the bank’s 180,000 phones nationwide to VoIP by 2007.\textsuperscript{199} EDS and Motorola also recently launched Mobile Workplace Services to help enterprise customers effectively integrate mobile solutions into their existing IT infrastructure.\textsuperscript{200} EDS also announced a major deal with Royal Ahold.\textsuperscript{201} AT&T frequently encounters EDS as a serious competitor on significant bids.

**IBM Global Services** is the leading IT services company in the world (based on revenue), and generated $46.2 billion in revenues in 2004, up 8% from the prior year.\textsuperscript{202} IBM describes its business as helping its clients redesign their business processes and structures to become “on demand” businesses, and has focused on enterprise customers, making acquisitions and investments in emerging business opportunities important to enterprise customers.\textsuperscript{203} In 2004 alone, IBM completed 14 acquisitions, all in the IT services or software segments, which will enable the company to further expand its enterprise capabilities.\textsuperscript{204}

Similarly, **SAIC** is a major telecom consultant, with over 30 years of consulting and systems integration experience to the telecommunications market: “SAIC helps enterprises and service providers realize the power of converging voice, data, and video across a single

\begin{itemize}
\item \textsuperscript{199} Id.
\item \textsuperscript{200} EDS Services: Motorola Alliance, available at http://www.eds.com/services/alliances/motorola/.
\item \textsuperscript{202} IBM Annual Report at 2 (2004).
\item \textsuperscript{203} Id. at 13.
\item \textsuperscript{204} Id. at 11, 57-8; see also Press Release, IBM, *IBM Completes Acquisition of Micromuse Inc.* (Feb. 15, 2006), available at http://www-03.ibm.com/press/us/en/pressrelease/19247.wss.
\end{itemize}
communications network." \footnote{205} SAIC achieved revenues of $7.2 billion in FY 2005, up 23 percent from the prior year. \footnote{206} SAIC offers a wide variety of services ranging from value assessment, IT strategy and planning. It is a leading provider of systems integration, engineering, and R&D services to the U.S. government. \footnote{207}

**Accenture** is a global provider of management consulting, technology and outsourcing services for high-performance businesses and governments. \footnote{208} The company generated $15.55 billion in net revenues for fiscal year 2005, an increase of 14 percent and “well ahead of the industry average.” \footnote{209} On February 2, 2005, Accenture and BT entered a 10-year, $575 million business process outsourcing (BPO) and transformation contract for human resource administration resources. \footnote{210} According to David Clinton, president of Accenture Services, this deal represents “a tremendous vote of confidence in the industry, in the business value of outsourcing, and in Accenture’s ability to deliver a consistent level of global support to multinational clients aiming to achieve high performance in their businesses.” \footnote{211} Accenture also offers its clients a range of solutions aimed at migrating their telephony services to VoIP and


\footnote{208} Accenture 2005 Annual Report at 1.

\footnote{209} Id. at 4.


\footnote{211} Id.
developing end-to-end “Triple Play” services, integrating voice, video and data on a single broadband connection.\textsuperscript{212}

\textbf{Computer Sciences Corporation} provides telecommunications solutions including front-end consulting and planning; systems design and integration; IT and business process outsourcing; applications software development; Web and application hosting; and management consulting.\textsuperscript{213} CSC has positioned itself to meet the specific challenges of the government as well as large businesses and was recognized as the top systems integrator to the U.S. federal government.\textsuperscript{214} To serve large businesses, CSC has secured global alliance partnerships with leading Enterprise Resources Planning providers – SAP and Oracle.\textsuperscript{215} The company reported

\begin{itemize}
  \item \textsuperscript{212} Accenture Communications Solutions: Migrate to IP and Develop Broadband Value-Added Services, available at http://www.accenture.com/Global/Services/By_Industry/Communications/AccentureServices.htm.
\end{itemize}
$16 billion in new business awards from continuing operations in 2005 - a new record - closely divided between commercial and government customers.\footnote{216}{CSC 2005 Annual Report at 2.} CSC has also developed a converged network solution to integrate VoIP and business applications onto a single network, which has “proved to be successful in delivering data, voice and video content to multiple locations while maintaining a high standard of service.”\footnote{217}{CSC Features: Innovative CSC Network Brings Data Together, \textit{available at} \url{http://www.csc.com/features/2005/31.shtml}.} CSC’s network offering takes advantage of the company’s remote access service network consisting of some 33,000 points of presence and 20,000 Wi-Fi hotspots in more than 180 countries.\footnote{218}{Id.}

**Equipment Manufacturers and Value-Added Resellers**

\textbf{Cisco} is a leading IP-telephony vendor. A recent Synergy Research Group report named Cisco the revenue leader in 2005 for the worldwide voice market for large, small and medium-sized enterprises, including both IP telephony as well as traditional circuit-switched systems.\footnote{219}{Press Release, Cisco, Cisco Leads Enterprise & Small-Medium Voice Market for All of 2005 (Feb. 15, 2006), \textit{available at} \url{http://newsroom.cisco.com/dlls/2006/prod_021506b.html}.} With respect to IP-telephony equipment, a 2004 Yankee Group report noted: “Cisco dominates the market because enterprises have chosen to deploy and manage VoIP networks internally. Enterprise testing VoIP are doing so within the enterprise data network department – the domain of Cisco. This has given Cisco a tremendous head start.”\footnote{220}{\textit{The Promising Outlook for Managing Enterprise VoIP, Part 2}, Yankee Group, at 5 (May 25, 2004) (“Enterprises are also intrigued by the ability to run Cisco Call Manager on a Windows or Linux environment within the enterprise network. Although this requires careful management, it also offers unique flexibility and a more apparent path to complete voice and data convergence.”).} Cisco has sold 7.5 million Cisco IP
phones globally to date, and is shipping more than twice as many IP phones as its nearest competitor.\textsuperscript{221}

Cisco recently announced a new suite of voice, video and data products and applications to enable their customers to integrate their communications system with their IT infrastructure.\textsuperscript{222} Cisco’s chief development officer hailed the system as, “the first true second-generation Internet Protocol (IP) Communications system providing not just telephone services, but rather a rich communications environment that seamlessly integrates voice, video and data collaboration in one system.”\textsuperscript{223}

Cisco has also been involved in bringing VoIP solutions to the mass market. Linksys, a division of Cisco, recently announced an effort with Skype to launch a new cordless VoIP handset to enable consumers to place Internet calls while at home or in the office.\textsuperscript{224}


\textsuperscript{222} Press Release, Cisco, Cisco Introduces New Unified Communications System to Streamline Business Processes, Drive Productivity (Mar. 6, 2006), available at http://newsroom.cisco.com/dlls/2006/product_030606.html?CMP=ILC-001. These offerings are already resulting in new business for Cisco. See e.g., Press Release, Cisco, Cisco’s CRS-1 Core Routing Platform Selected by MTS Allstream for Expansion of National Network (Feb. 9, 2006), available at http://newsroom.cisco.com/dlls/2006/product_020906b.html (“Cisco Systems® today announced that MTS Allstream has selected the Cisco CRS-1 Carrier Routing System to further enhance its national IP/MPLS backbone network and drive the company's expansion of next generation services . . . . The Cisco IP NGN architecture enables its service provider customers to deliver enterprise and consumer services over a single unified IP/MPLS network, enabling service continuity across multiple forms of network access and facilitate network, service and application convergence.”).

\textsuperscript{223} Id.

**Avaya** is also a leading IP-based telephony vendor, having recently shipped its 7 millionth IP telephony line in the fourth quarter of 2005.\(^{225}\) Avaya was recently awarded the 2006 Frost & Sullivan Enterprise Communications Applications Company of the Year Award in recognition of its achievements.\(^{226}\) Frost & Sullivan noted, “Avaya is one the leading established voice vendors that understands the dynamics of the evolving telephony market and is addressing market challenges appropriately… Avaya was also the leader in the North American IP-PBX market in terms of revenues and shipments, in 2004. The company has consistently grown its market share in the IP telephony market by leveraging its installed base of legacy systems, and migrating it to IP telephony options.”\(^{227}\) While Avaya focuses on enterprise customers, the company also pursues small business clients, introducing a “plug-and-play” IP


\(^{227}\) *Id.*; *see also* SEC Form 10-Q, Avaya, (Feb. 9, 2006) (“A key component of our strategy is to leverage our substantial experience and expertise in traditional voice communications systems to capitalize on the transition of these traditional voice systems to Internet Protocol (‘IP’) and the adoption of IP telephony solutions . . . . We offer customers the flexibility to implement new IP telephony solutions or ‘IP-enable’ their existing voice communications systems, thereby preserving some of their existing communications technology investments and allowing them to implement IP telephony at their own pace.”); Press Release, Avaya, Avaya IP Telephony Solution Helps One of the Leading Providers of Floral Products and Services Deliver “Good As Gold” Customer Service (Nov. 7, 2005), available at http://www.avaya.com/gcm/master-usa/en-us/corporate/pressroom/pressreleases/2005/pr-051107.htm (“When FTD, one of the world’s leading providers of floral products and services, decided to launch a new contact center to improve customer service and accommodate growth in its operations, the company turned to an Internet protocol (IP) telephony solution from Avaya Inc., a leading global provider of business communications applications, systems and services.”); Press Release, Avaya, Avaya IP Telephony Solution Helps NBC Olympics Deliver Uninterrupted Coverage of the Torino Olympic Winter Games (Jan. 31, 2006), available at http://www.avaya.com/gcm/master-usa/en-us/corporate/pressroom/pressreleases/2006/pr-060131a.htm. (“When the Torino Olympic Winter Games get underway next month, NBC Olympics will be using an Avaya IP telephony solution to provide communication capabilities linking the International Broadcast Center and NBC’s Field Shop with sports venues in Torino, Italy, NBC Olympics headquarters in Stamford, Conn., and NBC Studios at 30 Rockefeller Center in New York, N.Y.”).

\textbf{Nortel} is a major vendor of broad-based networking solutions, and like Cisco is a direct competitor for large business customers: “Leveraging the skills it honed serving carriers, Nortel continues to provide strong service and support to large enterprises.”\footnote{Enterprises Should Keep Nortel on Their Network Infrastructure Vendor Short Lists, Yankee Group, at 1 (Sept. 29, 2004).} “Like most of its competitors, Nortel’s long-term enterprise strategy is focused on data, voice and application...
convergence.\textsuperscript{232} Nortel is “currently focused on developing products that support the continuing evolution of voice and data communications systems towards converged or combined data, voice and multimedia applications.”\textsuperscript{233} Nortel’s recently completed acquisition of Tasman Networks, a networking company that sells high-performance enterprise routers targeted at larger enterprises, will only strengthen Nortel’s position: “Nortel’s commitment to the enterprise is evidenced by this acquisition and complete convergence solution offering to the market -- one network that enables business communications, including voice, video, data and applications.”\textsuperscript{234} Nortel is also a leading provider of cable-based VoIP solutions to cable system operators including Cox, Adelphia and Charter, winning seven new cable VoIP customers in 2005 alone.\textsuperscript{235} In a recent example, Patriot Media recently deployed cable VoIP technology from Nortel to offer Patriot’s Digital Phone service to more than 115,000 homes in central New Jersey.\textsuperscript{236}

\textsuperscript{232} Id.

\textsuperscript{233} SEC Form 10-K, Nortel Networks Corp. (2004) at 12; see also Press Release, Nortel, Christensen Corp.’s New High Rise Offers Tenants Advanced IP Communications Services Based on Nortel Technology (Feb. 21, 2006), available at http://www2.nortel.com/go/news_detail.jsp?cat_id=-8055&oid=100195860&locale=en-US (“Christensen Corporation, a real estate development firm based in Idaho, is deploying a converged IP communications solutions from Nortel to become its own communications service provider to tenants in its new Banner Bank building. Christensen plans to provide affordable, advanced voice, data and multimedia communications services to its small to large professional business tenants.”).


Alcatel develops and integrates technologies, applications and services to offer advanced communications solutions to businesses and governments, focused on enabling the delivery of multimedia content (voice, video, data) over broadband. In 2004, Alcatel consolidated its leadership position in the communications technology market, including in broadband access, fiber optic networks and IP-based technologies. Alcatel recently announced having cumulatively shipped 80 million DSL lines to customers worldwide by year-end 2005, fueled by a 10 percent increase over the past year, centered around Alcatel’s suite of products which the company claims to be “the market’s first true 100% triple play broadband access platform.” Alcatel’s enterprise division is rapidly moving in the direction of IP; during 2004 over 30 percent of the telephone lines Alcatel delivered and installed were IP-based. Products and services Alcatel provides to enterprises include converged IP telephony and contact center solutions as well as a comprehensive suite of network solutions. Alcatel also develops and supplies mobile phone products, applications and services for the consumer segment as well as satellite based communications systems.

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238 Id.
241 Id.
Lucent’s “market vision is converged services” with particular strength in the areas of next-generation optical, VoIP and mobile high-speed data technologies. Effective October 1, 2005, the company combined its wireless and wireline business units to form a single unified organization “squarely focused on delivering the vision, architectures, portfolio and solutions needed to enable the rapid, cost-effective delivery of application solutions that blend voice, data, video and other multimedia content to subscribers, anytime, anywhere.” Lucent develops and supplies DSL services, enhanced business services, enhanced frame Relay and ATM Services, Ethernet over SONET (“EoS”), IP Centrex Services, managed contact center and managed wavelength services. The company’s customer base includes communications service providers, governments and enterprises worldwide. Lucent has partnered with Sprint Nextel in developing VoIP products for enterprises, using the Lucent Converged Voice for Enterprise Solution to provide subscribers all of the features of their office PBX system on their mobile phones.

Siemens Communications Group supplies enterprises, carriers and service providers a broad range of telecommunications products and services for wireless, fixed and enterprise

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Siemens Enterprise Networks, a division of Siemens Communications, is a strong competitor for converged communications solutions with over 1 million business customers globally - including over 70 percent of the Fortune 500.\(^{248}\) In January 2005, the company aligned with Microsoft in a multi-year agreement to deliver enterprise-grade, presence-enhanced calling, video and Web conferencing, and collaboration solutions to business customers in the U.S. and abroad.\(^{249}\) According to analysts, “this is a smart move that can help a very broad customer base transition smoothly to next generation Voice over IP solutions.”\(^{250}\) In March 2006, Siemens announced a collaborative effort with Intel to “optimize enterprise communications” by developing technologies to use Siemens’s VoIP telephony applications in Intel Centrino wireless laptops.\(^{251}\)

\(^{247}\) See Siemens Communications - Profile, available at http://www.siemens.com/index.jsp?sdc_p=cf11210365lmo1217925ps4t4u1436z3&sdc_bcp=0010375.s_4%2C&sdc_sid=5833205619&sdc_m4r=


\(^{250}\) Id. (quoting Dr. Brent Kelly, a senior partner at Boston-based Wainhouse Research).

Other VoIP Providers

In the past year, several companies that are traditionally thought of as internet or software companies have begun providing voice services by introducing VoIP products or have announced plans to do so, while other providers like Vonage have continued to build VoIP subscribership. Microsoft has taken a number of recent steps demonstrating a commitment to become a player in internet telephony. Microsoft is the leading software and technology firm in the world, with 2005 revenues of $39.79 billion, and offers a wide range of products and services aimed at both the mass market and enterprise customers. In August 2005, Microsoft acquired Teleo, a provider of VoIP software and services and “expects to combine the technology and expertise of Teleo with the existing VoIP investments of MSN to further develop products and services….” In November 2005, Microsoft acquired a second VoIP company, media-streams.com AG, “to accelerate the delivery of its unified communications vision, bringing together various modes of communication (e-mail; instant messaging; short message service; voice/telephony; and audio, video and Web conferencing), breaking down the silos of communication….” Microsoft plans to use media-streams.com’s technology to deliver an improved integrated VoIP product based on the Microsoft Office Live Communications enterprise server platform.

Microsoft unveiled Microsoft Office Live and Windows Live - two new internet-based software services aimed at businesses and the mass market respectively in November 2005.\(^{255}\) Currently in beta testing, Microsoft’s Windows Live Messenger, the next generation of Microsoft’s MSN Messenger instant-messaging program, enables domestic and international calls to mobile and landline telephones through MCI Web Calling as well as free PC-to-PC calls to other Messenger users.\(^ {256}\) Microsoft also announced its entry into the enterprise wireless VoIP market with Microsoft Office Communicator Mobile, a service to integrate Windows Mobile-based cellular devices and “enterprise-grade, real-time communications tools” including security-enhanced instant messaging, presence awareness, integrated VoIP telephony, and wireless access through Wi-Fi hotspots.\(^ {257}\) Microsoft is also collaborating with Avaya on improving the voice capabilities of Microsoft Office Communicator to enable calls through Avaya telephony endpoints and the ability to conduct calls from the PC or an Avaya desk phone.\(^ {258}\) With Microsoft’s vast resources and broad customer base - for example, 200 million


users of its MSN Instant Messenger software worldwide\textsuperscript{259} - the company can be expected to quickly become a very significant competitor for internet telephony.

\textbf{America Online} (AOL) has already begun offering a VoIP service. AOL, a division of Time Warner, is the nation’s leading ISP, with approximately 20 million U.S. subscribers.\textsuperscript{260} The company launched its TotalTalk VoIP service in October 2005: “The TotalTalk service transforms any high-speed Internet connection into a quality phone service that is simple to use and affordable, with savings of up to 40\% off monthly phone bills, compared to traditional landline service.”\textsuperscript{261} TotalTalk users can use their existing phone (only requiring a phone adapter) and do not need to be a subscriber to AOL.\textsuperscript{262} TotalTalk offers an unlimited local calling plan for only $18.99 per month.\textsuperscript{263}

\textbf{eBay} began offering internet telephony service with its acquisition of VoIP provider \textbf{Skype Technologies SA} (Skype), completed in October 2005.\textsuperscript{264} eBay is an online marketplace where users buy and sell a wide variety of products, reporting 2005 net revenues of $4.552 billion (a 39\% increase over 2004) and 71.8 million active users (180.6 million total registered

\begin{thebibliography}{99}
\item See TotalTalk, http://www.totaltalk.com/.
\end{thebibliography}
users). The company purchased Skype for total up-front consideration of approximately $2.5 billion (including approximately $1.3 billion in cash), demonstrating a significant commitment on the part of eBay to the telephony business with the goal of “creat[ing] an unparalleled ecommerce and communications engine.” Skype claims 54 million members in 225 countries and territories, adding approximately 150,000 users per day. As of the end of the fourth quarter 2005, eBay reported 74.7 million total registered Skype users. Skype offers free calling to other Skype users as well as an add-on service to enable users to make domestic and international calls to any landline or mobile phone. Skype claims that when their service is used to call France, Germany and United Kingdom, the caller saves “up to 56% per minute” compared with AT&T CallVantage.


Similarly, Google launched a VoIP service, Google Talk, last year in August 2005.\textsuperscript{271} Google operates the world’s largest search engine, responding to more search queries than any other service online, and reported 2005 revenues of $1.919 billion (an increase of 86\% compared with 2004).\textsuperscript{272} Google Talk enables users of Google’s Gmail email service to talk to one another for free over the PC, requiring only a microphone and speaker or a headset.\textsuperscript{273}

Atlanta-based EarthLink is a successful ISP - with over 5 million subscribers - but has taken a number of recent steps to become a significant competitor in a wide range of telecommunications services including wireless, VoIP, line-powered voice and small and medium-sized business services by reinvesting its earnings in a number of strategic initiatives.\textsuperscript{274}

In March 2005, EarthLink entered into a wireless joint venture with SK Telecom, Korea’s leading mobile communications provider, to market wireless voice and data services in the U.S. market utilizing a non-facilities-based nationwide mobile virtual network operator (MVNO) network.\textsuperscript{275} In voice services, EarthLink launched a plug-and-play VoIP solution in October 2005 offering caller ID, call waiting, call forwarding, voicemail and other features.\textsuperscript{276} This was followed in January 2006 by the rollout of EarthLink’s line-powered voice service in select

\begin{itemize}
\item \textsuperscript{275} Earthlink, 2005 Highlights, available at http://www.earthlink.net/about/history/.
\item \textsuperscript{276} Id.
\end{itemize}
markets, merging phone service with high-speed broadband data access utilizing an innovative technology developed in collaboration with Covad.\footnote{Press Release, Earthlink, Introducing Earthlink DSL and Home Phone Service (Feb. 6, 2006), available at http://www.earthlink.net/about/press/pr_home_phone/; Press Release, Earthlink, Earthlink and Covad Announce Market Trial of Innovative Bundle of Home Phone Service and High-Speed Internet (June 6, 2005), available at http://www.earthlink.net/about/press/pr_voip_trial/.

EarthLink took a significant step into the business segment with its December 2005 acquisition of New Edge Networks, a national provider of VPNs and secure multi-site managed data networks. EarthLink plans to “package their voice, data, protection, and security tools to meet the rapidly growing demand for high-speed access and VPN services by both small office and home office (SOHO) users as well as small and medium enterprise (SME) customers…. [representing a] tremendous growth platform for EarthLink to compete in the rapidly expanding SME networking market.”\footnote{Press Release, Earthlink, Earthlink to Acquire New Edge Networks (Dec. 13, 2005), available at http://www.earthlink.net/about/press/pr_newedge/; see also Earthlink to Telecom World: Watch Us Now, Telephony Online, Feb. 23, 2006, available at http://telephonyonline.com/broadband/marketing/earthlink_dayton_provider_022306/; see also Carol Wilson, Competitive VPN Players Benefit From Consolidation, Telephony Online, Feb. 24, 2006, available at http://telephonyonline.com/broadband/news/VPN_EarthLink_Netifice_022406/ (“reporting that EarthLink officials said . . . that they plan to pump significant resources into New Edge, particularly in sales and marketing, to grow sales to SMBs on its national network”).

Vonage is a leading broadband telephony provider, with an extensive service area covering more than 150 global markets and 44 U.S. states, including every state in the BellSouth region.\footnote{See Vonage, Redefining Communications: Vonage Network, available at http://www.vonage.com/corporate/index.php (“Network Map” showing active markets); see also About Vonage: Fast Facts, available at http://www.vonage.com/corporate/aboutus_fastfacts.php (listing service areas).}

As of March 1, 2006, the company claims over 1.5 million active lines, over 2 billion completed calls, and over 42 million calls completed per week.\footnote{About Vonage: Fast Facts, available at http://www.vonage.com/corporate/aboutus_fastfacts.php.

Vonage offers residential...
VoIP as well as VoIP service for small businesses. For residential customers, Vonage offers an unlimited local and long distance calling plan to anywhere in the U.S. (including Puerto Rico) and Canada for $24.99 per month, including a wide range of services associated with traditional landline phones such as Call Waiting, Call Forwarding, Caller ID, 3-Way Calling, Voicemail and 911 Service. The company currently offers a cordless 5.8 GHz broadband VoIP phone, and is working with Panasonic to develop a new 5.8 GHz cordless phone that permits direct telephone hookup to a customer’s broadband connection, eliminating the need for a stand-alone adaptor.282

Fixed Wireless Broadband Service Providers

Founded in October 2003, Clearwire operates a wireless broadband network based on the WiMax technology (“pre-WiMax”), providing “off-the-shelf” broadband solutions to consumers without the need to purchase or install additional equipment.283 Clearwire launched its pre-WiMax service in its first commercial market, Jacksonville, Florida in August 2004, and has been aggressively deploying its network across the U.S., Mexico and Europe - with service in over 200 cities worldwide.284 It currently boasts service in 27 U.S. markets, including - in the BellSouth region - the Jacksonville and Daytona Beach markets in Florida and Winston-Salem, Greensboro and Burlington in North Carolina.285 Clearwire has also been successful in attracting

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284 Id.
venture capital funding to further develop and expand its pre-WiMax network, having raised at least $720 million in funding, including investment by Intel.  

Foreign-Based Carriers

Equant is part of the France Telecom Group, and asserts that it is the world leader in communications solutions for multinational business. Equant is also positioned in Gartner’s “Magic Quadrant” for network providers in 2005. It claims to operate the world’s largest global network in terms of geographic coverage, extending to 164 counties and territories, 967 cities and towns, and 1,468 POPs worldwide. Although Equant’s network density is greatest in Europe, greater penetration of the North American marketplace is one of the company’s top priorities and “is a focal point for its growth and expansion.” Equant offers a host of managed services, VPN, Internet connectivity, security, and consulting products. Equant claims to offer the market-leading IP VPN solution, recently delivering an IP VPN solution to connect the 264

Footnote continued from previous page

286 See VentureWire Professional, Clearwire Quietly Keeps Up Impressive Pace With $360M More In Funding (Mar. 14, 2006).


288 See Press Release, Equant, Equant Positioned in Leaders Quadrant (Jan. 4, 2006), available at http://www.equant.com/content/xml/pr_gartner_04_01_06.xml (President and CEO of Equant Barbara Dalibard stated that “[w]e believe Equant leads the market with what we call double-edge convergence: IP convergence plus IT/Telecom convergence. We bring real value to customers and help them improve the way they do business by supporting double edge-convergence with innovation.”).


retail stores of the U.S.-based Stride Rite Corporation.\textsuperscript{291} Because of its global reach, Equant is an attractive option for an enterprise business with international needs.\textsuperscript{292}

**British Telecom** (“BT”) is one of Europe’s leading providers of telecommunications services. Its principal services include local, national, and international telecommunications, higher-value broadband and Internet products and services, and IT solutions.\textsuperscript{293} BT’s global IP-enabled network spans 72 countries with over 1,000 POPs worldwide.\textsuperscript{294} BT significantly expanded its network footprint in the United States and strengthened its ability to provide IT and networking services to U.S.-based enterprises with its acquisition of Infonet (now BT Infonet), completed in February 2005. Infonet is one of the world’s leading providers of international

\textsuperscript{291} Equant, About Equant, available at http://www.equant.com/content/xml/who_we_are.xml; Press Release, Equant, Stride Rite to deliver superior in-store customer service with Equant and GoRemote Small Office Solution (Aug. 29, 2005), available at http://www.equant.com/content/xml/pr_stride_rite_goremote_29_08_05.xml. In addition, Equant has recently announced a number of new contracts. See Press Release, France Telecom, Equant Signs Global IP VPN Deal With Dutch Specialty Chemicals Giant DSM (Dec. 15, 2005), available at http://www.francetelecom.com/en/financials/journalists/press_releases/CP_old/cp051215-2.html. (“Equant has signed a multi-million dollar deal with DSM, the Dutch specialty chemicals producer of life science products and performance materials, to provide and manage a global IP VPN covering 180 sites. Equant will provide a MPLS-based network to link DSM’s offices and production facilities globally, while a DSL network will also connect satellite offices, giving users easy access to the corporate network and business-critical applications, such as Sap. In total, the IP VPN will connect 45 countries and 23,000 staff.”); see also Press Release, Equant, Leading Global Law Firm Extends Contract with Equant to Ensure Seamless Service (Jan. 10, 2006), available at http://www.equant.com/content/xml/pr_bakermckenzie_10_01_06.xml (“‘As a truly global firm, we are committed to a seamless, secure, and reliable global infrastructure that ensures our attorneys worldwide are always connected to their clients and guarantees their needs are well-served,’ said Sue Hall, chief technology officer, Baker & McKenzie.”).


managed voice and data network services and has a global backbone network reaching 170
countries with POPs in over 3,000 cities including a wide-ranging network of POPs in the United
States, and was recently named Frost & Sullivan’s Business Services Communications Company
of the year.\footnote{See Press Release, BT Group plc, BT Infonet Named Frost & Sullivan’s Business Services
Communications Company of the Year (Jan. 26, 2006), available at
award was presented for operational excellence and outstanding market performance in the
global communications industry in 2005.”).}

BT is also making significant investments in transitioning its legacy network
architecture to MPLS which will improve BT’s ability to deploy multimedia content - voice,
video, and data - through its network and “dramatically increase the scale and capacity of BT’s
global voice capability.”\footnote{See Press Release, BT Group plc, BT Deploys Global IP-Based Voice Platform (Feb. 20,
2006), available at http://www.btplc.com/News/Articles/Showarticle.cfm?ArticleID=6f698d77-
ff67-4d56-8624-e73b83958e15.}

BT’s strategy is to target multi-site global organizations in the
Americas, particularly U.S.-based multinational corporations with global requirements and
extensive operations throughout Europe. This strategy is resulting in success.\footnote{See Press Release, BT Group plc, BT to Deliver and Manage Global IP Network for Infor (Feb. 7, 2006), available at http://www.btplc.com/News/Articles/Showarticle.cfm?ArticleID=fadcc395-18b6-4168-a185-95370d9441f4 (“BT today announced that it has signed an agreement to provide global IP-based network services to Infor, Atlanta-headquartered global provider of enterprise business solutions to select manufacturing and distribution industries. Under the terms of the contract, BT will provide MPLS network services to 60 Infor sites in the U.S., Europe, and Asia/Pacific.”); Press Release, BT Group plc, BT To Provide Microsoft With Global Call Routing Solution (Jan. 26, 2006), available at http://www.btplc.com/News/Articles/Showarticle.cfm?ArticleID=2329a854-59c1-4d2a-8e7d-0bc831d351d5 (“BT today announced that it has signed a contract over 2 years to manage Microsoft’s global OneCall call center routing initiative. Under the agreement, BT will design, build, deploy and manage a solution to unify and manage Microsoft’s contact centers throughout the world into a single network-based contact center environment.”); see also Press Release, BT Infonet, BT and BT Infonet Deliver Managed IP MPLS and Conferencing Services for Epicor Software Corporation (Jan. 19, 2006), available at http://www.bt.infonet.com/about/newsroom/press_release.asp?month=0119&year=2006 (“BT Infonet’s multi-class, MPLS based IP VPN Secure service will be used to manage both voice and data traffic for Epicor sites in the U.S., Mexico, Asia-Pacific and Europe.”).}
Deutsche Telekom (DT), a Fortune Global 100 company, is one of Europe’s largest telecommunications companies and asserts that it is “a truly global player with a presence in about 50 countries on six continents, in all major markets,” including Europe, the Middle East, Asia, and North and South America. Although DT’s network density is greatest in Europe, it has achieved significant penetration of the North American marketplace with its T-Systems and T-Mobile subsidiaries. T-Systems offers many managed information and communications technology services tailored to the specific needs of Global and Enterprise customers within and without North America, including infrastructure, industry-specific solutions or entire business processes. T-Systems “provides single-source information technology and telecommunications convergence solutions for Global 2000 corporations, . . . [offering] a portfolio of integrated solutions including network and carrier services, managed services, hosting, desktop and asset management services, systems integration as well as business process and continuity consulting, enabling companies to increase profits, improve performance and increase productivity.”

On January 1 2005, DT carried out a strategic realignment of its operations in which all of its business customer services were consolidated under its T-Systems subsidiary “to better serve the continued demand for integrated solutions.”

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300 SEC Form 20-F, Deutsche Telekom AG (Mar. 15, 2005).
the needs for its global business accounts while T-Systems Business Services serves small, medium-sized and large business customers.

Also in 2005, Level 3 became T-System’s primary broadband transport provider in North America in order to “enable [T-Systems] to continue serving our U.S.-based enterprise customers with industry-leading levels of efficiency, operational excellence and customer care.”

In the previous year, T-Systems partnered with Level 3 to provide T-System’s MPLS-based service portfolio to customers across the entire Level 3 fiber network, spanning approximately 30,400 km in North America, including multi-conduit metropolitan networks in 27 American cities and over 100 points-of-presence in 68 U.S. cities. T-Systems claims that its MPLS data service allows corporate customers to use a complete solution for a variety of applications, including corporate WANs, voice applications, disaster recovery networks, data overflow networks, video distribution networks and IP backbones, and is “ideal” for building multi-location, point-to-point networks that are scalable, secure, reliable and cost-effective.

Telefónica is one of the largest European telecommunications companies, and asserts that it is “a multi-domestic operator” and a “world leader in the telecommunication sector.”


303 Id.

Telefónica is present on three continents, and its global IP fiber-optic network has “worldwide coverage” in more than 70 countries with more than 1,500 POPs worldwide. Although Telefónica’s presence is concentrated on Spanish and Portuguese speaking countries, it provides enterprise services in the United States through its subsidiary Telefónica U.S.A., headquartered in Miami, Florida. Telefónica USA delivers business solutions for U.S. and Puerto Rico-based multinational firms requiring network connectivity services in throughout Latin America and the Caribbean.

Telefónica’s KeyCenter, located in Miami, is one of the company’s globally interconnected Data Centers, providing telecommunications connectivity between the U.S., Latin America and Europe, permitting customers to locate data at a central location while enhancing the users’ global network reach, bandwidth, and data access. Connected to Telefonica's 16,000-mile self-healing undersea fiber optic ring to Latin America, the KeyCenter provides “massive, dedicated bandwidth” to Latin American markets. Through relationships with other IP network providers such as Level 3, Sprint, Savvis, Progress Telecom and Cogent, the company extends its IP bandwidth reach for its business customers. Specific solutions offered by the company include MPLS IP VPN, ATM, Frame Relay, Roaming IP, VoIP VPN and managed telephony services as well as business continuity, disaster recovery and managed data

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307 Id.
Telefónica’s managed telephony services include deployment of PBX and
VoIP systems, including the company’s Voiceplus+ VoIP solution “designed for Enterprises
with multiple offices and/or a high volume of voice traffic.”

In 2005, Nortel selected Telefónica USA to provide its IP backbone network in Latin
America, including deployments in Argentina, Brazil, Peru, Puerto Rico, Chile and the United
States. As part of the agreement, Telefónica will migrate Nortel’s current network
infrastructure and suppliers to ATM and Private Line circuits while interconnecting Nortel’s
office communications infrastructure.

**Nippon Telegraph and Telephone (NTT)** is the largest telecommunications company
in the world. NTT operates a global Tier 1 IP backbone, which it claims provides the
industry’s largest dedicated bandwidth of 24.4 Gpbs between the U.S. and Japan. The
company recently expanded its network reach by entering an agreement with Telefónica to allow
the interconnection of their global data networks, thus extending NTT’s capabilities between the
U.S. into Latin America. NTT was the first Asian telecommunications carrier to be

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com/international_home.htm.
com/man_telephony_home.htm.
311 Press Release, Telefónica, Nortel Selects Telefonica USA to Provide IP Backbone Network to
312 NTT America, Our Company, available at http://us.ntt.net/about/company/ (noting that NTT
has “grown to become the largest telecommunications company in the world”). The Japanese
government holds an interest in NTT, but does not exercise its voting rights. Id.
313 NTT America, What is the NTT Com Global IP Network?, available at http://us.ntt.net/about/
network/.
314 Press Release, NTT America, NTT Communications and Telefonica Wholesale Agree to
Interconnect Data Networks to Provide Enhanced Global Network Capabilities for Customers
recognized as the “Best Global Carrier” at the World Communications Awards 2004, in part due to its high-capacity global network, expanding network coverage and provision of MPLS IP VPN services to multinational businesses.\textsuperscript{315}

NTT’s presence in the U.S. is through two subsidiaries in the United States: NTT America and Verio. NTT recently reorganized its U.S. operations by shifting its Global IP Network and Enterprise Hosting businesses (previously operated by Verio) to NTT America, which offers its own private network services portfolio.\textsuperscript{316} “By combining the offerings under one roof, NTT America will be in a position to provide integrated data networking, IP, and hosting solutions through a single resource to its growing global customer base…. reemphasizing NTT Communications’ leadership position as a comprehensive enterprise solutions provider.”\textsuperscript{317} Verio, on the other hand, will focus instead on providing hosting and managed network services to small and mid-sized business customers.\textsuperscript{318}

NTT America provides a wide range of telecommunications and managed network services to business customers, and has introduced innovative new products to enhance its IP capabilities. The company recently launched a high-speed point-to-point wide area Ethernet


\textsuperscript{316} See Press Release, NTT Communications, NTT Com Announces Reorganization of Global Operations (Nov. 9, 2005), available at http://www.ntt.com/release_e/news05/0011/1109_2.html (“In the increasingly competitive U.S. market . . . NTT Com will strengthen operations by shifting Verio’s global IP network services and dedicated hosting for large and midsize enterprises to NTT America.”).


\textsuperscript{318} Id.
solution which “provides the flexibility and scalability of Layer 3 (IP) technology while incorporating the dedicated traffic paths and management capabilities associated with Layer 2 technologies…[and] targets a ultra high bandwidth solution (100Mbps to 1Gbps) for U.S. domestic needs.”

NTT also introduced commercially the new Internet Protocol - IP version 6 (IPv6) - which provides many benefits over IPv4 (the current IP standard): more flexible support for mobile devices; more support for secure communications; and improves on QoS support to allow time-sensitive applications like VoIP and video to be prioritized over less critical applications.

NTT was the first company to offer IPv6 services in the U.S. and operates the world’s largest IPv6 Tier 1 backbone (running “dual-stack” to permit both IPv4 and IPv6 traffic). With the June 2005 announcement that the U.S. federal government will be transitioning its’ agencies network backbones to IPv6 by June 2008, the pace of IPv6 adoption by government customers will no doubt accelerate and NTT’s early adoption of IPv6 will give it a competitive edge.


321 See id.