CBEYOND COMMUNICATIONS, INC.
Amendment No. 1 to Form S-1 (File No. 333-124971), filed June 30, 2005

INDUSTRY DATA SUPPORT
<u>SUPPLEMENTAL RESPONSE</u>

Statement regarding Industry Data	Location in amended filing	Data source
"According to Dun & Bradstreet, there are approximately 1.4 million businesses with 5 to 249 employees in the 25 largest markets in the United States."	Pages, 1-2, 60-61 and 63	Dun & Bradstreet survey of business and employee data in 25 largest national markets
"According to International Data Corporation, or IDC, the U.S. wireline voice and data communications market's revenues for 2004 were estimated at $215.8 billion."	Page 55	IDC: *US Landline 2004 - 2008 Forecast* (December 2004), P.3
"The industry is typically segmented by both customer and service type. IDC estimates that businesses accounted for revenues of $118.5 billion in 2004, with the remaining $97.3 billion of revenues representing consumer spending."	Page 55	IDC: *US Landline 2004 - 2008 Forecast* (December 2004), P.4
"Of the total business–segment revenue, IDC estimates that small businesses, which it defines as those with fewer than 100 employees, accounted for $47.0 billion of revenues."	Page 55	IDC: *US Landline 2004 - 2008 Forecast* (December 2004), P.6
"In 2004, according to IDC, the small business segment accounted for an estimated $25.4 billion in local voice revenue, $12.1 billion in long distance voice revenue, $8.5 billion in value–added data services revenue and $1.0 billion in revenue from access charges and other services."	Page 55	IDC: *US Landline 2004 - 2008 Forecast* (December 2004), P.6
"According to Gartner Research, there were well over 300 competitive carriers by early 2001, but that number dwindled significantly as many of these operators went out of business or dissolved as a result of financial distress and merger and acquisition activity. The first wave of entrants to leverage the Telecom Act faced numerous challenges in implementing successful business strategies. Some of the challenges included significant build-out costs in advance of market penetration that left many with underutilized networks and high debt burdens, no clear cost advantage over the traditional local telephone companies as they deployed similar circuit-switched networks, and operational challenges in selling and provisioning local services."	Page 56	Gartner: *Competitive Local Exchange Carriers in the U.S.* (October 2003), P. 2
"According to IDC, the primary reasons why small and medium sized businesses use or are considering using managed network services include a reduction in total cost of network operations, improvement of network availability and performance, the lack of appropriate level	Page 58	IDC: *2003 US WAN Manager Survey: Managed Network Services Adoption by Company Size* (May 2004), P.12

of IT staffing and security concerns such as business continuity and firewalls."		
"Small businesses surveyed by Forrester Research use and outsource or plan to use and outsource web hosting (43%), intrusion detection (29%), business continuity / disaster recovery (27%), application hosting (27%), managed voice (26%) and firewalls (23%). Small businesses typically use a local carrier to procure their managed network services."	Page 58	Forrester: *Managed NEtwork Services Use Is Stable* (August 12, 2004), P.4
"According to IDC, in 2004 web hosting revenues in the United States were estimated at $6.1 billion."	Page 59	IDC: *US Web Hosting Services 2004 - 2008 Forecast* (April 2004), P. 15
"The United States small business web hosting market is expected to show a compounded annual growth rate of 12.5% for the period from 2003 to 2008 and to reach $4.5 billion by 2008."	Page 59	IDC: *US Web Hosting Services 2004 - 2008 Forecast* (April 2004), P.22
"IDC predicts that the percentage of small businesses with web sites will increase from about 46% in 2003 to nearly 66% in 2008, and that 80% of these small businesses will use third parties to host their web sites."	Page 59	IDC: *US Web Hosting Services 2004 - 2008 Forecast* (April 2004), P.17
"The main reasons for small businesses to outsource web hosting include cost savings, lack of in–house expertise, security and improvement of site performance and stability."	Page 59	IDC: *US Web Hosting Services 2004 - 2008 Forecast* (April 2004), P.8
"In addition, small businesses typically do not have the capital to build a robust data center environment."	Page 59	Forrester: *Managed Network Services Use Is Stable* (August 12, 2004), P.6
"Competition in this segment is based on service features, pricing and bundling of web hosting services as part of a larger communications or Internet access packages. The key success factors in this market are brand recognition, value–added solutions and strong distribution channels and partnerships."	Page 59	Yankee Group: *SMB Web Hosting Trends - Private-Label Strategy and Critical Success Factors*, P. 3
"According to IDC, IP virtual private network revenues for the U.S. reached $12.5 billion in 2004. The U.S. IP virtual private network market is expected to grow at an estimated compounded annual growth rate of 10.8% for the period from 2004 to 2009 and to reach $20.9 billion in revenue in 2009."	Page 59	IDC: *US IP VPN Services 2005 - 2009 Forecast* (March 2005), P. 13
"According to IDC, revenues in this market are expected to grow at an estimated compounded annual growth rate of 20.3% for the period from 2003 to 2008."	Page 59	IDC: *Worldwide IT Security Software, Hardware, and Services 2004 - 2008 Forecast: The Big Picture* (December 2004), P. 12
"According to IDC, storage services spending in the United States reached $11.3 billion in 2004 and is expected to reach $13.9 billion in 2009, or a compounded annual growth rate of 4.3% for the period from 2004 to 2009."	Page 59	IDC: *Worldwide Storage Services Market 2005 - 2009 Forecast* (April 2005), P. 4

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Summary

While many CLECs are viable competitors in the telecom services market, business users must keep abreast of the CLECs' current status and activities to properly take advantage of their service offerings.

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Introduction

In many cases and in many areas, competitive local exchange carriers (CLECs) offer business users a highly viable alternative to the more traditional Regional Bell operating companies (RBOCs), incumbent local exchange carriers (ILECs) or interexchange carriers (IXCs) for providing voice, data and Internet services. While many of the larger original CLECs have been acquired (or are in the process of being acquired) by IXCs and others, more new companies continue to be formed, companies continue to expand and merge together, and virtually all of the companies remain the possible target of future acquisitions. And increasingly in recent months, many of the CLECs have faced extremely heavy financial pressures, causing some to collapse, others to strive to reorganize under bankruptcy protection laws and many to scale back their network expansion plans and reduce their coverage areas. As a business user, it is extremely important to keep abreast of current CLEC activity, as the CLECs often can provide equal (or better) services and at lower rates, as compared to the traditional RBOC/LEC/ILEC provider. The status of many of the CLECs is ever-changing.

Real growth in the number of true CLEC companies in operation in the United States began after the signing of the Telecommunications Act of 1996. Since that time (and through 2000), their numbers grew significantly, and as of early 2001, there were well over 300 companies in operation or that had announced plans to build new networks over the course of the next two years. Of those 300-plus companies, approximately 200 had (or planned to have) their own facilities-based networks, with the remainder operating primarily as nonfacilities-based resellers. During 2001, 2002 and continuing through 2003, however, many CLECs went out of business, several others filed for U.S. Chapter 11 bankruptcy law protection, many scaled back their operations and coverage areas, and still others merged together or were acquired by other companies. The end result has been a significant reduction in the number of active CLEC organizations. In fact, according to the Association for Local Telecommunications Services (ALTS) in a report published in April 2003, there were only about 100 facilities-based CLECs in the U.S. at the end of 2002.

This report looks at the definition of a CLEC, who the major (and many of the minor) CLECs are, what services are being offered by these companies and what the future holds for the CLEC market.

What Is a CLEC?

Following the divestiture of AT&T and the Bell System, a number of competitive access providers (CAPs) formed as companies dedicated to providing an alternative means for business customers to connect to their long-distance carriers (IXCs) and to bypass the local telephone companies — the local telephone companies being the Bell Operating Companies and other local telephone companies, also known as LECs and ILECs. These CAPs gradually expanded their networks and their service offerings to evolve into CLECs, offering a wide variety of local, regional and national telecommunications services to business customers. Along with today's CLECs, there are now a number of alternative telecommunications service providers, including cable television companies, power/utility companies, Internet service providers, Voice over IP (VoIP) providers and other hybrid service providers, many offering telephony, Internet access and other services. In fact, several companies started referring to themselves as integrated service providers or integrated communications providers, as they felt that the term CLEC did not adequately describe the full scope of their service offerings. Additionally, a number of varieties of CLECs began appearing, including data-only CLECs (DLECs) and building-CLECs (BLECs, serving multitenant buildings).

A CLEC can be virtually any entity that has received authority from, or has been granted certification by, a state public utilities commission (or equivalent regulatory body) to operate as a CLEC within that state.

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Therefore, a CLEC could be a telecommunications service provider, an IXC, a cable television company, an Internet service provider, a utility company or any company desiring to provide telecommunications services — even a corporation with its own private network that wished to now sell services to other companies. Also keep in mind that most of the traditional lines separating RBOCs, LECs, ILECs, IXCs and CLECs have now been crossed, with most of these types of service providers operating across all areas of telecommunications, providing local and long-distance voice, data and other services, thus blurring the former service provider classifications.

There are basically two types of CLEC operations — facilities-based and nonfacilities-based. Facilities-based providers install their own switching systems and related equipment and may also construct their own interconnecting fiber network. Or they may lease space on other carrier's fiber networks to interconnect their switching centers. Nonfacilities-based providers resell the services of other companies, such as the RBOC or other incumbent local exchange carriers, by collocating equipment in that company's central office switching center, purchasing bulk services from that company at a discounted rate and then reselling the service under their own name to customers. Nonfacilities-based providers could also then lease capacity on other carriers' networks to provide service among multiple central office switches within the city or state or across multiple states.

The fact that virtually any company can function as a CLEC has created a rather muddled market situation for business clients to deal with. Unless business clients thoroughly investigate a CLEC that is proposing to provide services to them, they will not know if that company is a technically competent, true telecommunications service provider with its own network facilities; if it is a nonfacilities-based reseller of services (that may or may not be technically competent and thoroughly knowledgeable of the telecommunications networking services market) or more importantly, if it is a company that has a vested (financial) interest in being in the business (and staying in the business for the long term) in the first place.

Who Are the CLECs?

Three of the original and largest CLECs were Metropolitan Fiber Systems (MFS), Teleport Communications Group (TCG) and MCImetro. WorldCom (along with Brooks Fiber Properties and several other companies) acquired MFS. TCG was acquired by AT&T. MCImetro was part of parent company MCI, which itself was acquired by WorldCom. Largely owing to the success of these three organizations, the CLEC industry began to boom, and it continued to boom as new entrants discovered the huge, growing need for additional bandwidth and network service offerings from business clients of all sizes. The tremendous growth in the Internet and related markets also created a much larger demand for bandwidth and services. During 1999 and 2000 especially, many CLECs, besides the very large ones mentioned, became acquisition targets of IXCs and other companies, often under very attractive financial terms. All of these factors created a general atmosphere that was very favorable to the startup of new CLEC operations as well as to the expansion of established CLEC operations, with plenty of capital funding available to finance them all. However, in the latter part of 2000, and continuing throughout 2001, 2002 and 2003, the economic slowdown hit the U.S. market, resulting in serious financial problems for many CLEC (and other) companies and a significant reduction in available capital funding. As of the end of 2001, several CLECs had already closed their doors and gone out of business, while many others had filed for (Chapter 11) bankruptcy protection, and this trend has continued into 2002 and 2003.

With that in mind, there are still some 200-plus companies operating as, or planning to operate as, CLECs in the U.S. market, although this number is expected to continue declining throughout 2003 and beyond. While detailed information on over 160 of the various CLEC companies can now be found in Gartner's *"Competitive Local Exchange Carriers: Comparison Columns,"* the following list provides the names of over 220 current (and former) CLEC companies, as a source of reference. All companies that have

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reference to Chapter 11 have filed for Chapter 11 protection under U.S. bankruptcy laws (and several successfully emerged from Chapter 11 as well).

- 2-Infinity (out of business in 2001)

- 2nd Century Communications (out of business in 2001)

- 21st Century Telecom Group (acquired by RCN in 2000)

- 3rd Pipe Communications (out of business in 2001)

- @Link Networks (out of business in 2001)

- AARO Broadband Wireless (out of business in 2001)

- AboveNet (new name for Metromedia Fiber Networks when it emerged from Chapter 11 in September 2003)

- ACN Communications (merged with Arrival communications in February 2000)

- Access Integrated Networks (AIN)

- Adelphia Business Solutions (filed Chapter 11 in 2002; changed name to TelCove in March 2003)

- Advanced Radio Telecom (ART) (filed Chapter 11 in 2001 and emerged in 2002 as First Avenue Networks)

- Aeneas Communications

- Aevia (out of business in 2002)

- AirBand Communications

- Alaska Communications Systems (ACS)

- Allegiance Telecom (acquired HarvardNet in early 2001)

- Allied Riser Communications (ARC) (acquired by Cogent Communications in 2002)

- Applied Theory (filed Chapter 11 in 2002 and sold assets in 2002)

- Ardent Communications (filed Chapter 11 in 2001 and sold assets in 2002)

- Arrival Communications (merged with ACN Communications in February 2000)

- AT&T Business Services

- ATX Telecommunications Services (acquired by CoreComm in September 2000; company name changed back to ATX Communications in 2002)

- Avana Communications (out of business in 2001)

- Avista Communications (changed name to One Eighty Communications in 2002)

- Birch Telecom (filed Chapter 11 in July 2002 and emerged in September 2002; merged with Ionex Telecom in 2003, keeping the Birch Telecom name)

- Black Hills FiberCom (a subsidiary of Black Hills)

- BlueStar.net (merged with Covad in September 2000 and then shut down by Covad in June 2001)

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- BrahmaCom

- BroadRiver Communications (out of business in 2001)

- Broadview Networks (acquired assets of Network Plus in 2002)

- Broadwing (from the merger of IXC Communications and Cincinnati Bell; Cincinnati Bell sold assets and name to CIII Communications in June 2003)

- BTI Telecom (announced plans to merge into ITC DeltaCom in July 2003 under the ITC DeltaCom name)

- Buckeye TeleSystem

- Cablevision Lightpath

- CapRock Communications (acquired by McLeodUSA in December 2000)

- Capsule Communications (acquired by Covista Communications in 2002)

- Cavalier Telephone (acquired Conectiv Communications in November 2001 and acquired telecom assets of Net2000 Communications in 2002)

- Cbeyond

- CCC GlobalCom (parent company of Ciera Network Systems)

- CentreCom (out of business in 2002)

- Centurion Telecommunications (out of business in 2002)

- CFW Communications/Intelos (officially changed name to NTELOS in December 2000)

- Choice One Communications (merged with US Xchange in August 2000)

- Ciera Network Systems (subsidiary of CCC GlobalCom)

- ClearData Communications (out of business in 2000)

- ClearWorks Communications (acquired Link 2 Communications in September 2000; merged with Eagle Broadband/Eagle Wireless in January 2001; operating as Eagle Broadband as of 2003)

- Cogent Communications (acquired Allied Riser Communications and Shared Technologies in February 2002, along with U.S. assets of PSINet in April 2002 and FiberCity in September 2002)

- COMAV (out of business in 2000)

- Comcast Business Communications

- Commonwealth Telecom Services (CTSI) (subsidiary of Commonwealth Telephone Enterprises)

- Concentric Network (merged with NEXTLINK to become XO Communications in 2000)

- Conectiv Communications (acquired by Cavalier Telephone in November 2001)

- Con Edison Communications (subsidiary of Consolidated Edison)

- Connecticut Telephone

- Convergent Communications (filed Chapter 11 in 2001 and subsequently sold assets)

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- Conversent Communications (acquired US Data Centers in late 2001 and REON Broadband in mid-2002)

- Cooperative Communications

- CoreComm (acquired ATX Telecommunications in September 2000; also acquired USN Communications; changed name to ATX Communications in 2002)

- Covad Communications (acquired, via merger, BlueStar.net in September 2000 and then shut down BlueStar in June 2001)

- Covista Communications (changed name from Total Tel-USA Communications in September 2000; acquired Capsule Communications in 2002)

- Cox Communications/Cox Digital Telephone and Cox Fibernet

- Crescent Telephone (GEITEL, a subsidiary of Global Information Exchange; out of business in 2000)

- CT Communications

- CTC Communications (filed Chapter 11 in October 2002)

- CTC Telecom (subsidiary of Chibardun Telephone Cooperative)

- Cypress Communications (acquired by U.S. RealTel in 2002)

- D&E Communications (acquired Conestoga Enterprises in 2002)

- Digital Broadband Communications (filed Chapter 11 in December 2000; out of business in 2001)

- Dixie-Net Communications (acquired Ayrix Technologies in October 2001)

- DSL.net (acquired assets of Network Access Solutions and Talking Net in 2003)

- DSLnetworks (out of business in 2001)

- DukeNet Communications Inc. (a subsidiary of Duke Energy)

- DV2

- Eagle Broadband (merged with ClearWorks under Eagle in early 2001)

- Edge Connections (out of business in 2002)

- eLEC Communications (started telecom operations as Essex Communications in 1998; sold most telecom assets in 2003, but continues New York operations as new Rochelle Telephone)

- Electric Lightwave

- eLink Communications (acquired select assets of OnSite Access in 2002; acquired by Eureka GGN in 2002)

- Enron Communications (a subsidiary of Enron; became more of a wholesale carrier; filed for Chapter 11 in December 2001 and started selling off assets in 2002)

- e.NVIZION Communications (was OTC America; acquired Screen Telephony Services in 2000; changed name to e.NVIZION in 2000)

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- Enventis Telecom (was MP Telecom, a subsidiary of Minnesota Power; changed name to Enventis in 2002)

- Epana Networks (acquired Via Communications Group in 2003)

- Epicus

- Eschelon Telecom (acquired Rocky Mountain Telephone in 2001)

- e.spire Communications (formerly ACSI; filed Chapter 11 in March 2001 and sold all assets in 2002)

- Essex Communications (started in 1998; became eLEC Communications; subsequently sold off all but New York assets in 2003)

- Eureka GGN (acquired eLink communications in 2002)

- Everest Broadband Networks

- Everest Connections

- Fastpoint Communications (filed Chapter 11 in December 2000; out of business in 2001)

- FiberCity Networks (acquired by Cogent Communications in 2002)

- FiberNet Telecom Group (became a wholesale carrier in 2000)

- FirstWorld Communications/Verado Holdings (doing Internet Data Center business only as of early 2001)

- Flashcom (filed Chapter 11 in December 2000; out of business in 2001)

- Florida Digital Network (planning to acquire Mpower's Florida and Georgia assets in 2003)

- Focal Communications (entered pre-negotiated Chapter 11 in December 2002 and emerged in July 2003)

- Frontier Communications (a subsidiary of Frontier, merged with Global Crossing in 1999; Global Crossing sold Frontier assets to Citizens Communications in 2001)

- Frontline Communications (CLEC Communications subsidiary; exited the CLEC business in May 2001)

- FullNet Communications (FullTel is the CLEC subsidiary)

- Future One (now part of Internet Commerce & Communications)

- G4 Communications (acquired Vitts Networks in October 2001)

- General Communications (GCI)

- Grande Communications (merged with ClearSource in 2002; acquired assets of TXU Communications in January 2003)

- GST Telecommunications (filed Chapter 11 in late 2000 and assets subsequently acquired by Time Warner Telecom in 2001)

- GTE Communications (subsidiary of GTE; merged with Bell Atlantic to become Verizon)

- Guthrie Center Communications

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- HarvardNet (acquired by Allegiance Telecom in early 2001)

- Hickory Tech (Crystal Communications subsidiary)

- HighSpeed Communications

- ICG Communications/ICG Telecom (filed Chapter 11 in late 2000, filed reorganization plan in late 2001, and emerged in October 2002)

- IdeaOne Telecom

- IDS Telecom

- IDT (acquired assets of WinStar Communications, Net2Phone and Star Telecom in 2002)

- Integra Telecom

- Intermedia Communications (including DIGEX; merged with WorldCom in July 2001)

- Internet Commerce & Communications (including Rocky Mountain Internet and Future One)

- Interpath Communications (subsidiary of Carolina Power & Light; network assets transferred to Progress Telecom at end of 2000)

- Intira (was Digital Broadband Network; no longer operates as a CLEC)

- Ionex Telecommunications (merged with Birch Telecom in 2003 under the name of Birch Telcom)

- IP Communications (out of business in early 2003)

- ITC-DeltaCom (filed Chapter 11 with pre-negotiated plan of reorganization in June 2002 and emerged in October 2002; in July 2003 it was announced that BTI Telecom would be merging into ITC DeltaCom under the ITC DeltaCom name)

- IXnet (subsidiary of IPC; acquired by Global Crossing in June 2000)

- Jaguar Communications

- KMC Telecom Holdings

- LDMI Telecommunications (acquired Mpower's Michigan and Ohio assets in 2003)

- LecStar Communications (acquired residential customers of NuVox in mid-2002; assets transferred to McCormack Avenue in December 2002)

- Level 3 Communications (plans to acquire Genuity in 2003)

- Lighthouse Communications

- Light Networks (acquired by Network Telephone in December 2000)

- Lightship Telecom

- LightWave Communications

- Lightyear Communications (was UniDial Communications)

- LMDS Communications (subsidiary of Prime Companies)

- Local Access Communications

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- Logix Communications (filed Chapter 11 in early 2002; assets acquired by Western Communications in late 2002 but will continue operating as Logix Communications)

- Madison River Communications

- Matrix Telecom

- MCI/WorldCom (changed brand name to MCI in 2003 after filing Chapter 11 in 2002)

- McLeodUSA (acquired Splitrock and CapRock Communications in 2000; sold part of Splitrock assets in 2002; filed Chapter 11 in 2002 and subsequently restructured and emerged from Chapter 11 in 2002)

- MediaOne (subsidiary of MediaOne Group; merged with AT&T in 2000)

- MegaPath Networks (acquired Phoenix Networks in 2002)

- Metricom (filed Chapter 11 in July 2001)

- Metromedia Fiber Networks (filed Chapter 11 in 2002 and emerged in September 2003 under the name of AboveNet)

- MH Telecom

- Mpower Communications (filed Chapter 11 in 2002 and subsequently emerged from Chapter 11 in 2002, but subsequently sold assets in many states in 2003)

- MP Telecom (subsidiary of Minnesota Power; changed name to Enventis in 2002)

- Net2000 Communications (filed Chapter 11 in 2001 and agreed to sell telecom assets to Cavalier Telephone)

- NetCarrier

- NetLojix Communications

- NetVoice Technologies

- Network Access Solutions (NAS) (filed Chapter 11 in 2002; assets acquired by DSL.net in 2003)

- Network Plus (filed Chapter 11 in 2002; assets acquired by Broadview Networks)

- Network Telephone (acquired Light Networks in December 2000; acquired Alltel customers in Alabama, Florida, Georgia and South Carolina in 2002)

- New Edge Networks (acquired some assets of At Home in 2002)

- New Rochelle Telephone (renamed from eLEC Communications for the remaining New York assets of the former company)

- NewSouth Communications

- NEXTLINK Communications (merged with Concentric Network to become XO Communications)

- North American DataCom

- North American Telecom

- NorthPoint Communications (out of business as of April 2001)

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- Northwest Telephone

- NTELOS (was CFW Communications until 2000; merged with R&B Communications in 2001)

- Nucentrix Broadband Networks

- NuVox Communications (formed from merger of Gabriel Communications and TriVergent Communications, formerly State Communications; sold residential customers to LecStar in mid-2002)

- One Eighty Communications (started in 1998; acquired Avista in 1999; reorganized and changed name back to one Eighty in late 2001)

- OnePoint Communications (acquired by Verizon in December 2000)

- OnSite Access (selected assets acquired by eLink Communications in 2002)

- Onvoy (formed from combination of MEANS Telecom and MRNet)

- OrcoNet (out of business)

- PacWest Telecomm

- PaeTec Communications

- Phat Pipe

- Phoenix Networks (business customers acquired by MegaPath Networks in October 2000)

- PointOne Telecommunications

- Prime Companies (operating through LMDS Communications subsidiary)

- Progress Telecom

- Quentra Networks (filed Chapter 11 in December 2001; out of business in 2001)

- Qwest Communications (merged with US WEST and operates as an RBOC in that region, plus as an IXC, and as a CLEC in several areas)

- RCN (acquired 21st Century Telecom Group)

- Rhythms NetConnections (out of business in 2001)

- Rockefeller Group Telecommunications Services

- Rocky Mountain Broadband (subsidiary of Rocky Mountain Internet, which is now part of Internet Commerce & Communications)

- Sage Telecom

- SBC Communications, CLEC operations

- Seren Innovations (subsidiary of Xcel Energy)

- Springboard Telecom

- Sprint Local Telecommunications Division, CLEC operations

- STAR Telecommunications (acquired by World Access)

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- State Communications (changed name to Trivergent and merged with Gabriel Communications to become NuVox Communications)

- Sure West Communications

- Symphony Telecom

- Talk America

- TDS Metrocom

- TelCove (was operating as Adelphia Business solutions until March 2003)

- Telergy

- Teligent (filed Chapter 11 in May 2001 and emerged in September 2002)

- Telseon (most assets acquired by OnFiber Communications in 2002)

- Time Warner Telecom (subsidiary of Time Warner; acquired GST Telecommunications in 2001)

- TotalTel USA Communications (changed name to Covista Communications in September 2000)

- Touch America (subsidiary of Montana Power; filed Chapter 11 in June 2003 and also sold some of its assets to 360networks)

- Twister Communications (out of business)

- TXU Communications (acquired by Grande Communications in early 2003)

- Uni Dial Communications (became Lightyear)

- US LEC (acquired ISP customers of Eagle Communications in Florida, Georgia, North Carolina and Tennessee in early 2003)

- USN Communications (filed Chapter 11, then acquired by CoreComm)

- USOL Holdings (was FirstLink Communications)

- U.S. RealTel (acquired Cypress Communications in 2002)

- US Signal (primarily a wholesale carrier but some enterprise business too)

- US Xchange (merged with ChoiceOne Communications)

- VarTec Telecom

- Vectris (filed Chapter 11)

- Verizon, CLEC operations (formed from the merger of Bell Atlantic and GTE)

- Vitts Networks (acquired by G4 Communications in October 2001)

- Westelcom

- Williams Communications (entered negotiated Chapter 11 in April 2002 and emerged in late 2002 as WilTel Communications)

- WilTel Communications (the new name for the reorganized Williams Communications as of late 2002)

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- WinStar Communications (filed Chapter 11 in April 2001; assets acquired by IDT in 2002)

- WorldCom (filed Chapter 11 in June 2002; changed brand name to MCI in 2003)

- XO Communications (formed from the merger of NEXTLINK and Concentric Network; filed Chapter 11 in June 2002 and emerged in early 2003)

- Xspedius (acquired assets of e.spire in 2002)

- Yipes (filed Chapter 11 in 2002; sold assets to Yipes Enterprise Services in 2002)

- Ztel Communications

As mentioned previously, detailed information on the individual CLEC companies can be found in the Gartner "*Competitive Local Exchange Carriers: Comparison Columns.*" This information is presented in a database format, allowing the reader to compare multiple CLECs using the same format and criteria, along with the capability to generate customized information in a table format. This database of information is frequently updated, and new companies are being added on a regular basis. Information on over 160 companies was included in the Comparison Column listings as of July 2003.

What Services Do CLECs Offer?

CLEC service offerings vary widely, ranging from local-loop/local access service only to complete portfolios consisting of local, long-distance, international long-distance, basic and enhanced data services; Internet access; Web hosting; e-commerce/e-business offerings; conferencing; paging; Centrex; Integrated Services Digital Network (ISDN); digital subscriber line (DSL); mobile, wireless and satellite services; and more. Generally speaking, the smaller nonfacilities-based companies tend to offer only a very basic set of services, while the larger facilities-based companies tend to offer a wide array of services, especially those companies that have been in the business for a significant period of time. A brief overview of the types of services offered by the CLECs follows.

- Local-loop/local access and LEC-type features — these consist of basic local access from the customer's premise to the network and may also include features such as private branch exchange (PBX) trunking, Centrex, ISDN, 911, operator services, voice mail and others.

- Long-distance and intelligent network features — providing access to the long-distance carrier of choice, often providing access to international long-distance services as well and, in some cases, supporting intelligent network features, such as virtual private network (VPN), calling cards, toll-free and other services.

- Basic data services — which would typically include Digital Signal Level 0 (DS0) (analog 56/64-Kbps service), digital data storage (DDS) (digital 56/64-Kbps service), fractional T1/DS1 (digital service at speeds in multiples of 56/64 Kbps up to about 768 Kbps), full T1/DS1 (digital service at speeds up to 1.544 Mbps), fractional T3/DS3 (digital service at speeds in multiples of 1.544 Mbps, up to a maximum of around 30 Mbps), full T3/DS3 (digital service at speeds up to 44.736 Mbps) and private-line services (that can range in speed from 546 Kbps to 44.736 Mbps and even higher).

- Enhanced data services — generally offered by CLECs that maintain their own switching facilities and fiber networks. Advanced data services would include such offerings as frame relay, asynchronous transfer mode (ATM) and Synchronous Optical Network (SONET) services, as well as offerings such as LAN connectivity, Fiber Distributed Data Interface (FDDI), VPN, remote access and others. Maximum speeds offered are usually at SONET Optical carrier Rate 3 (OC-3) (155 Mbps), although some CLECs are offering SONET OC-12 (622 Mbps), SONET OC-48 (2.5 Gbps) and higher-speed service.

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- Internet access services — for the most part, any CLEC that offers at least basic data services (and in some cases even local-loop service) will also offer Internet access service. Some of the larger CLECs also have their own Internet backbone networks or operate a separate Internet service provider (ISP) subsidiary. The more advanced CLECs also will offer Internet-related services, such as intranet/extranet offerings, Web hosting, e-commerce/e-business solutions and more.

- Value-added IP services — Many CLECs are now offering a wide range of value-added IP services running over their own (or leased) IP backbone networks, including VoIP, video over IP, IP-based PBX/Centrex, data center services, data storage and backup, and more. In fact, come CLECs have chosen to abandon the CLEC business altogether to focus strictly on this market area.

- Generic digital subscriber line (xDSL) — most of the RBOCs (and other large, independent LECs), along with many of the CLECs are offering xDSL services.

- Wireless, paging and satellite services — wireless (personal communications services [PCS]/cellular) services are typically offered by CLECs under reseller agreements with the large wireless carriers, as is the case for paging service offerings. There are very few instances of CLECs owning/operating their own wireless or paging facilities. Therefore, these services could be offered by virtually any CLEC, be they facilities- or nonfacilities-based. Satellite services are typically offered only by a handful of CLECs that happen to also be involved in the satellite services industry through alliances with other vendors or using subsidiaries that provide these services.

- Managed services – typically, the larger, more experienced and facilities-based CLECs offer a range of managed services capabilities.

- Other offerings — include services such as audioconferencing, videoconferencing, broadcast TV/distance learning, fixed wireless broadband, Ethernet and Gigabit Ethernet, multitenant service provisioning, bundled services, converged services, integrated access services, voice over DSL and more.

Recommended Gartner Research

Competitive Local Exchange Carriers: Comparison Columns, DPRO-90627

Insight

According to Gartner Dataquest, the CLEC industry accounted for about 11 percent of the total access lines in the U.S. at the end of 2001, which represented about 24 million lines. By the end of 2002, the number of CLEC access lines had increased to approximately 28 million (again according to the Gartner Dataquest), representing about 13 percent of the U.S. total. By 2006, Gartner Dataquest predicts that the CLEC market share will increase to over 43 million access lines or just over 20 percent of access lines in the U.S. So despite the gloom and doom in the telecom market, particularly with regards to the state of the CLEC segment of the industry, many CLECs continue to do rather well. Over the short term, more CLECs (and alternative service providers from the cable television, wireless broadband and public utility markets) may emerge on the scene. In the longer term, the number of traditional CLECs should continue to decrease as more and more companies merge together, are acquired by larger carriers and service providers, or are forced out of the market due to a lack of available funding or as the result of having a poor business plan in the first place. Expect to also see a decline in the number of nonfacilities-based reseller organizations as customers demand more and more from their network service providers, especially in the areas of solutions integration, managed services, complete service portfolios and extremely high levels of technical competence and support. And, as stated earlier in this report, business users must constantly evaluate the state of individual CLEC (and other service) providers as a standard

part of their telecommunications reviews. Business users can no longer sign telecom service contracts and then just monitor the quality and performance of the services provisioned — they must evaluate their service providers on a regular and consistent basis and have backup plans ready at all times.

MARKET ANALYSIS

U.S. IP VPN Services 2005–2009 Forecast

Ron Kaplan

IDC OPINION

Virtual private networks (VPNs) using IP (known as IP VPNs) represent a rapidly growing wide area network (WAN) technology and will continue to increase at a rapid rate throughout the next five years. IP VPNs are now a mainstream WAN solution that is displacing private lines and frame relay. Key market trends and highlights include:

☒ IP VPN services will become the most popular WAN technology by the end of the forecast period. IDC believes that nearly every medium-sized and large company will have an IP VPN in place in some part of its organization by the end of 2009.

☒ The IP VPN services market was worth $12.5 billion in 2004 and will grow to $20.9 billion in 2009.

☒ Although end users cite remote access as a key driver of IP VPN adoption, site-to-site IP VPNs produce a far greater share of revenue, $9.6 billion in 2004.

☒ Do it yourself (DIY) is by far the largest "provider" of IP VPN services in the United States, accounting for $9.2 billion in revenue in 2004.

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IP VPNs represent a popular and growing WAN technology. They use the public Internet or a private IP network in a secure way, allowing companies to send corporate data traffic over IP connections. Throughout the forecast period of this study, IP VPNs will increase year over year as a percentage of the overall WAN marketplace and in absolute dollar terms. They are a mainstream WAN connectivity solution for U.S. businesses.

Methodology

IDC used the same methodology as in years past for the 2005 IP VPN services forecast. IDC's methodology began with the total number of companies in the United States as reported by the U.S. Census Bureau and forecast through 2008 using the conservative growth rate for number of companies of under 1% per year. The number of companies is broken down by company size: small (99 or fewer employees), medium sized (100–499 employees), and large (500+ employees).

IDC then applied *U.S. WAN Manager Survey* data to the number of companies of each size category that use IP VPNs and the percentage of their corporate sites and number of remote users who use them. IDC thus calculated the number of sites and remote users using IP VPNs.

IDC then applied pricing and cost estimates for each company size and remote user group to reach a revenue figure. The calculation also included the actual cost in the marketplace of IP connectivity, including the local loop, and an estimate for the value-added portion of IP VPNs over and above connectivity. Because DIY is a much larger "provider" of IP VPN services than are carriers, and because DIY implementers typically purchase hardware or software platforms to perform IP VPN functions, IDC estimated the yearly depreciated cost of purchasing this gear and operations costs after discussions with IP VPN vendors and end users.

Actual contract and market prices for equipment and services were obtained and utilized in the forecast assumptions. The connectivity and value-added portions of IP VPN costs were then applied to the number of IP VPN sites and the number of IP VPN remote users and aggregated to produce a marketwide revenue figure for IP VPN services.

The calculations for market sizes for DIY, carrier, and combination DIY/carrier were determined with *U.S. WAN Manager Survey* data, as were the breakouts for customer premises equipment (CPE) versus network IP VPNs and implementation type for various CPE devices and network-based solutions. IDC also utilized end-user and carrier sources to corroborate survey data.

SITUATION OVERVIEW

The percentage of companies using IP VPNs was 46.8% in early 2005. This number reflects adoption at all U.S. businesses — small, medium sized, and large. Among medium-sized and large businesses, over half have implemented IP VPN (see Figure 1).

Customers cite a variety of reasons for implementing IP VPNs. The top reason is security (36.2%), which we interpret to mean in contrast to using the public Internet or another less secure method. The second reason is cost savings (22.2%), meaning that the customer found IP VPN to be cheaper than alternative technologies (see Figure 2).

Crossing the previous two figures, implementation plans and primary reasons for implementation, we get some interesting results. Of customers identified as having already implemented IP VPN, security was their leading motivator (71.4%). But for companies planning to implement IP VPN in the future, security is a given. For them, the other reasons listed in Figure 2 outranked security. Companies planning to implement IP VPN in the future are being driven more by requirement of IP applications, laws and regulations, and the need for extranet capability than by security concerns (see Figure 3).

Remote access has always been a big driver of IP VPN implementation. Customers turned to IP VPN because their Layer 2 frame relay and ATM services did not do remote access well. Figure 4 shows that remote access continues to be the leading primary use of IP VPNs.

Figure 5 shows the percentage of sites that are connected by IP VPN according to company size. Small and medium-sized business connect the highest percentage of their sites by IP VPN, 44.7% and 47.5%, respectively. Large companies connect 21.5% of their sites with IP VPN. Small and medium-sized companies are more likely to have one WAN technology and therefore connect a larger percentage of their sites with it. Large companies tend to have more than one WAN technology and use them for different purposes. A large company is likely to have IP VPN for remote access and to connect smaller or newer sites.

FIGURE 1

IP VPN Usage

Q. Is IP VPN currently implemented at your organization, are there plans to implement it, or
are there no plans to implement it?
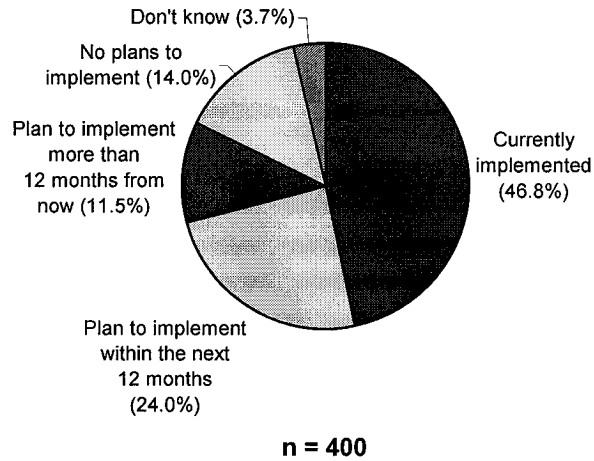
n = 400

Notes:

Data is weighted by time zone and company size.

Use caution when interpreting results based on low sample sizes.

Source: IDC's *WAN Manager Survey*, 2005

Primary Reason for Implementing an IP VPN

Q.   *What is your organization's primary reason for implementing an IP VPN?*
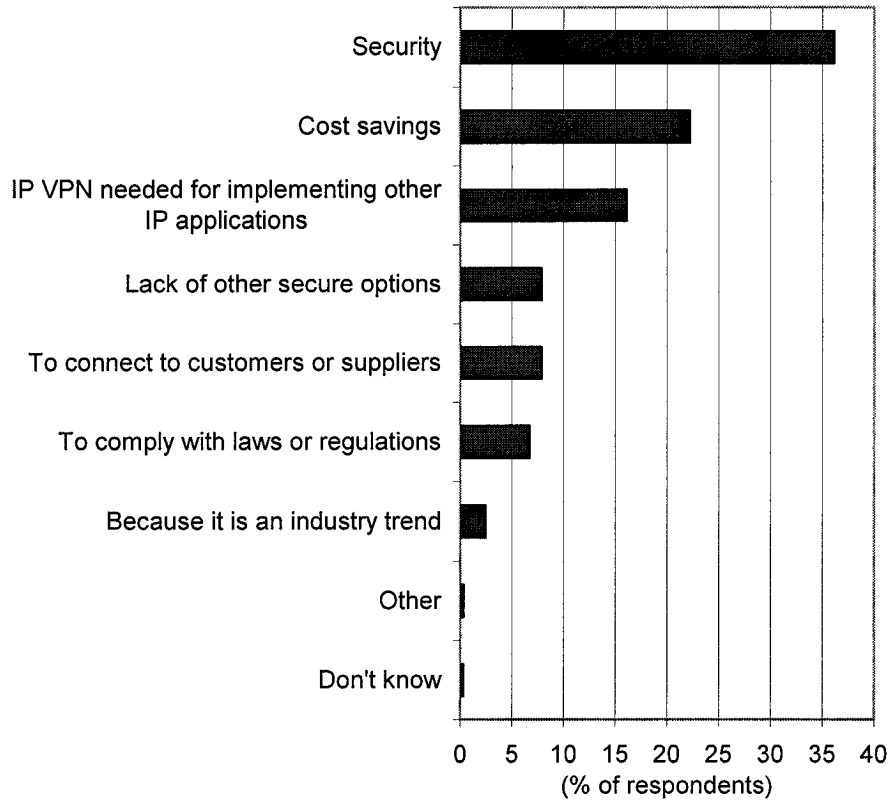
n = 329

Notes:

Data is weighted by time zone and company size.

Use caution when interpreting results based on low sample sizes.

Source: IDC's *WAN Manager Survey,* 2005

IP VPN Usage by Primary Reason for Implementation
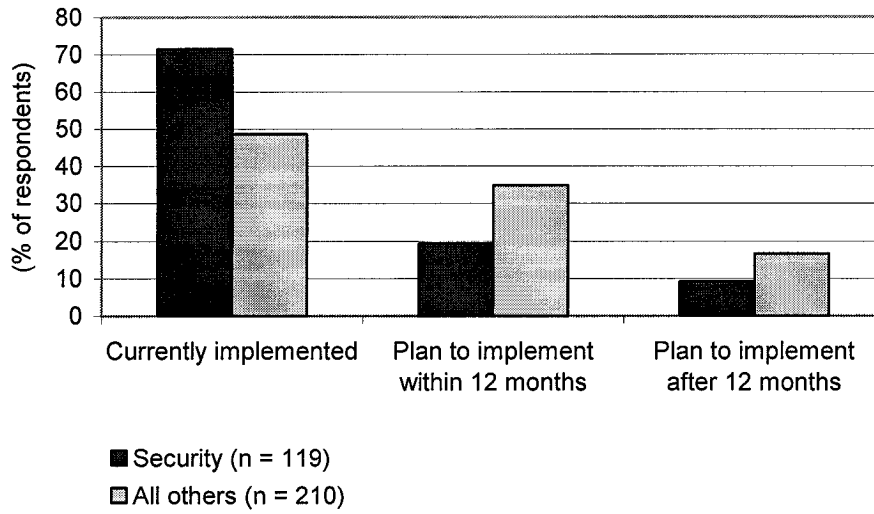
Note: Data is weighted by time zone and company size.

Source: IDC's *WAN Manager Survey*, 2005

FIGURE 4

Primary Use of IP VPN

Q. What is the primary use of your IP VPN?
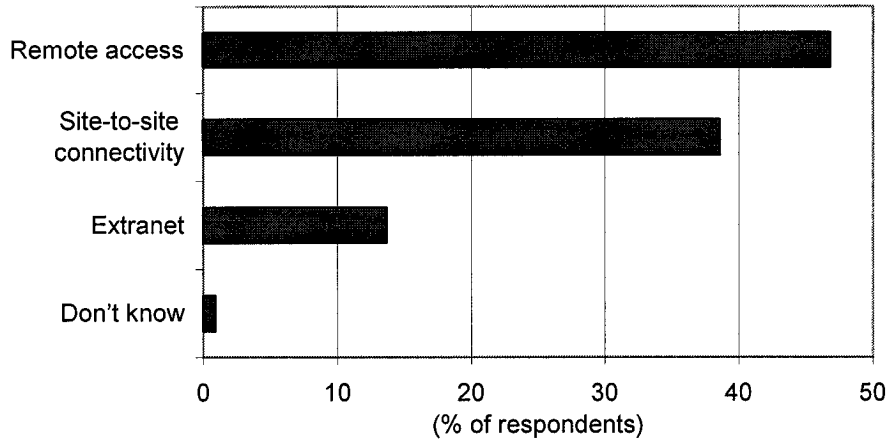
n = 329

Notes:

Data is weighted by time zone and company size.

Use caution when interpreting results based on low sample sizes.

Source: IDC's *WAN Manager Survey, 2005*

FIGURE 5

Percentage of Sites Connected by IP VPN

Q. *What percentage of your sites are connected to each of the following?*
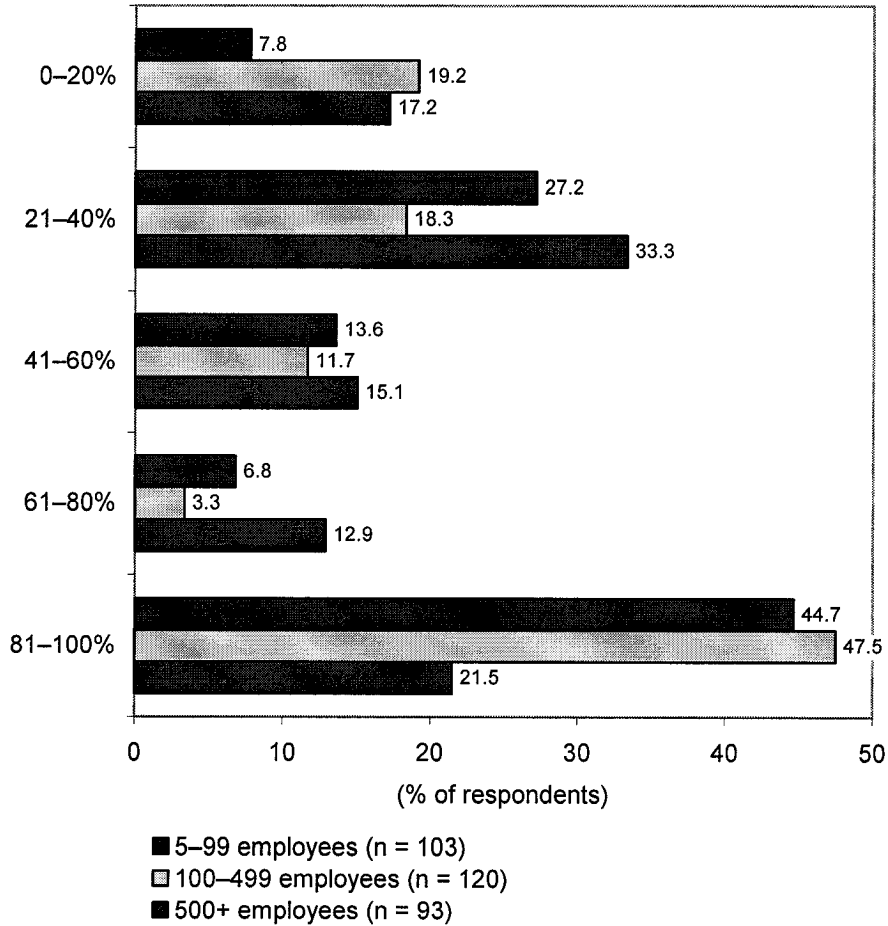
(% of respondents)

■ 5–99 employees (n = 103)
☐ 100–499 employees (n = 120)
■ 500+ employees (n = 93)

Notes:

Data is weighted by time zone and company size.

Use caution when interpreting results based on low sample sizes.

Source: IDC's *WAN Manager Survey,* 2005

FUTURE OUTLOOK

Forecast and Assumptions

Table 1 presents IDC's key forecast assumptions for the U.S. IP VPN services market.

TABLE 1

Key Forecast Assumptions for the U.S. IP VPN Services Market, 2005–2009

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Macroeconomics				
Economy	Consensus Economics expects U.S. GDP growth in 2005 will be 3.1%.	**Moderate.** The economy is now a positive influence on IT spending	↑	★★★★☆
Number of companies in the United States	The number of companies will increase slowly, corresponding to historical trends.	**Moderate.** IP VPNs are widely deployed, so a greater number of companies means a larger potential market.	↑	★★★☆☆
Growth in IT spending	IDC's leading macroeconomic indicator, IDC FutureScan, indicates modest growth in IT spending over the next 12 months.	**Moderate.** Continued macroeconomic stability will increase willingness to spend on IT and telecom initiatives, including IP VPN deployments.	↔	★★★☆☆
Policy	Compliance is still driving some IT spending, including Sarbanes-Oxley, Basel II, and HIPAA. We do not expect compliance spending to crowd out other IT initiatives; in fact, compliance record-keeping could spur initiatives in other areas as companies clean up their act. The end of the Jobs and Growth Tax Relief Act in the United States may have spurred a tiny bit of IT spending in 4Q04.	**Moderate.** This could result in net new IT spending if compliance projects do not displace other IT projects on a 1:1 basis.	↑	★★★★☆

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TABLE 1

Key Forecast Assumptions for the U.S. IP VPN Services Market, 2005–2009

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Profits	2005 profits will be less than 2004's 15%+ growth but are still positive. Consensus Economics' January 2005 poll calls for U.S. profit growth of 8.6% in 2005 after 17% in 2003 and 2004. Much of the early growth was from cost cutting, but more is now coming from revenue.	**Moderate.** IT and telecom spending will continue to increase as individual company profits improve and begin to flow back into the company.	↑	★★★★☆
Profit expectations	We expect no major surprises, either up or down, overall. Oil-dependent industries will feel a crunch, but the market has already taken that into account. We still believe as a result of past surveys that companies expect IT spending to lag profit recovery by a quarter or more.	**Moderate.** This affects business confidence, which affects IT investment.	↑	★★★☆☆
Technology/service developments				
Broadband deployment	Increased availability of broadband enables increased IP VPN penetration, particularly at the low end of the market.	**High.** Much of the CPE-based IP VPN connections are over broadband. Sites that did not previously have a WAN connection will become connected due to the low price point of broadband relative to private line access.	↑	★★★★☆
IP growth	IP will continue to grow.	**High.** The growth of IP is partly a cause of IP VPN and partly an effect of IP VPN growth.	↑	★★★☆☆
Number of IP applications	The number of IP applications will continue to increase.	**High.** More IP-based applications give greater rationale for IP VPN deployment.	↑	★★★★☆
Ease of adoption/ deployment	IP VPNs will become easier to adopt and deploy.	**Moderate.** IP VPNs are complex, and some companies may avoid them until they are easier.	↑	★★☆☆☆

TABLE 1

Key Forecast Assumptions for the U.S. IP VPN Services Market, 2005–2009

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Complexity	IP VPNs will become more complex, with remote users, more sites, and larger extranets.	**Moderate.** Complexity will negatively affect sales, but management tools easing it will positively offset the effect.	↑	★★★☆☆
Management options scarcity	Carrier deployment and management services will improve but continue to be less than comprehensive for most end users.	**Moderate.** Carrier outsourcing options will improve, with more implementation and management options, increasing the carrier IP VPN market, but most end users will not find their ideal solutions with carrier services.	↑	★★☆☆☆
Vendor improvements/ rollouts	Vendors will continue to improve their equipment's functionality and management systems to run IP VPNs.	**Moderate.** Equipment improvements will positively affect IP VPN deployments.	↑	★★★☆☆
Extranets	Extranets will increase, and interest in them will grow.	**High.** Many IP VPN deployments utilize extranet functionality. Deployment of extranets and interest in doing so will drive IP VPNs.	↑	★★★★☆
IP VPN price declines	IP VPN services pricing will decline over time, boosting adoption to more companies but hampering market revenue growth.	**High.** IP VPNs are generally viewed as cheaper than other WAN options. The greater the price differential between IP VPN and frame relay, the greater the positive effect on IP VPNs.	↑	★★★★☆
Pricing of competing technologies	Frame relay pricing will continue to decline and hamper IP VPN growth.	**Moderate.** Price declines make frame relay closer in cost to IP VPN and slows migration of frame relay customers to IP VPN.	↓	★★☆☆☆

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TABLE 1

Key Forecast Assumptions for the U.S. IP VPN Services Market, 2005–2009

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Labor supply				
Availability of expertise	No constraints are envisioned. In the monthly CIO Tech Poll (U.S.), a question addresses the IT labor supply. In January 2005, 10% said it was "hard to find," up from a low of 3% in May 2003 but down from over 50% in January of 2001.	**Low.** IP VPNs will become easier to deploy and manage, increasing the number of professionals capable of running an IP VPN.	↑	★★★★☆
Capitalization				
Investor confidence in carriers	Investor confidence in carriers is reviving.	**Low.** Carrier financial difficulties will negatively affect the carrier-managed IP VPN market but will help drive the DIY IP VPN market.	↓	★★☆☆☆
Market characteristics				
Evolutionary or revolutionary	The growth of IP VPNs will remain evolutionary.	**Moderate.** IP VPNs have grown and will continue to grow at a steady pace.	↑	★★★★☆
Degree of supplier concentration	The number of suppliers for both equipment and services will continue to increase.	**Low.** The number of competitors will increase and drive down pricing, which will negatively affect the market size but cause more IP VPN deployments, offsetting the price decline.	↑	★★☆☆☆
Degree of customer concentration	The potential customer base will remain virtually the entire universe of U.S. businesses.	**Low.** Almost all companies are candidates for IP VPNs.	↑	★★★☆☆
Barriers to entry	Barriers to entry to IP VPN services will decrease with equipment vendor improvements.	**Moderate.** Equipment improvements will decrease barriers to DIY deployments and small ISP deployments/ management.	↑	★★★☆☆

TABLE 1

Key Forecast Assumptions for the U.S. IP VPN Services Market, 2005–2009

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Power/drag of installed base	The installed base will slowly drive additional IP VPN deployments through extranets.	**Moderate.** The more companies with IP VPNs are using them for extranets, the more additional companies will deploy IP VPNs with network effects.	↑	★★★★☆
Learning curve/ economy of scale	The learning curve will become slightly less steep, with vendor improvements and better carrier implementations.	**Moderate.** Equipment improvements will ease IP VPN deployment and management, positively affecting the DIY IP VPN market.	↑	★★★★☆
Market ecosystem				
Platform demographics	IP VPNs will remain dependent on IP application development.	**Moderate.** IP VPN deployment is positively correlated with IP-based application deployments in a moderate way.	↑	★★★★☆
Channel diversity	The sources of IP VPN services will continue to increase with better outsourcing options.	**Low.** Better outsourcing options will drive the carrier IP VPN market, but DIY will remain the largest, therefore limiting the positive effect of greater channel diversity.	↓	★★★☆☆
Consumption				
Identifiable buyers	The potential buyer base is extremely diverse, with its universe consisting of nearly all U.S. businesses.	**Low.** The potential customer base for IP VPN is in effect all U.S. companies, making sales more difficult.	↓	★★★☆☆
Others				
Perception of security threats	Security threats will both drive and hinder IP VPN deployments, as each company looks at such threats either as a reason to deploy IP VPNs or a reason not to deploy them, depending upon the point of view of the WAN or IT manager at each company in the United States.	**Low.** The perception that security threats have increased will slightly increase interest in IP VPNs. The effect of security threats will cause some IP VPN deployments and hinder other deployments, leaving an overall slightly positive effect for the IP VPN market.	↑	★☆☆☆☆

Legend: ★☆☆☆☆ very low, ★★☆☆☆ low, ★★★☆☆ moderate, ★★★★☆ high, ★★★★★ very high

Source: IDC, 2005

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IDC's forecast of the U.S. IP VPN services market is presented in Table 2 and Figure 6. In 2004, the IP VPN services market was $12.5 billion, and IDC expects the market to grow to $20.9 billion in 2009, for a compound annual growth rate (CAGR) of 10.8%.

TABLE 2

U.S. IP VPN Services Revenue, 2004–2009

	2004	2005	2006	2007	2008	2009	2004–2009 CAGR (%)
Revenue ($M)	12,495	13,596	14,898	16,444	18,358	20,869	10.8
Growth (%)	NA	8.8	9.6	10.4	11.6	13.7	

Note: See Table 1 for key forecast assumptions.

Source: IDC, 2005

FIGURE 6

U.S. IP VPN Services Revenue, 2004–2009
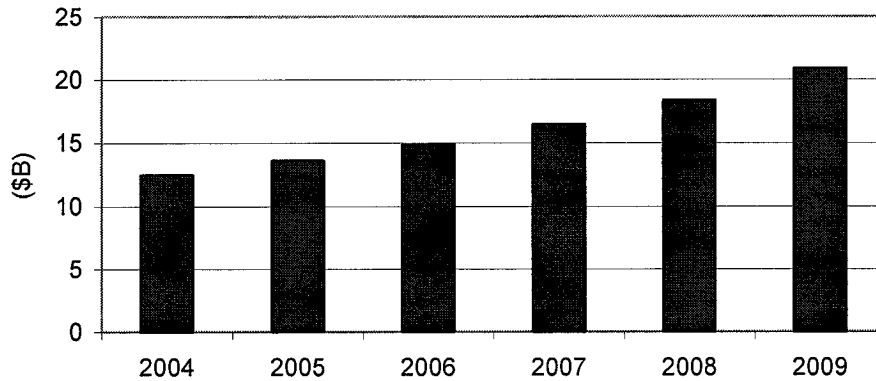
Source: IDC, 2005

Table 3 and Figure 7 show the breakout of the market total into site-to-site and remote-user components. IP VPNs are used for both connecting sites and allowing remote employees access to corporate network resources. Extranets are not broken out specifically because they represent just one use of an IP VPN and do not typically have separate price components apart from site-to-site or remote-user categories.

TABLE 3

U.S. IP VPN Revenue by Type, 2004–2009 ($M)

	2004	2005	2006	2007	2008	2009	2004–2009 CAGR (%)
Site to site	9,619	10,313	11,097	11,964	13,002	14,281	8.2
Remote user	2,875	3,283	3,802	4,480	5,356	6,588	18.0
Total	12,495	13,596	14,898	16,444	18,358	20,869	10.8

Note: See Table 1 for key forecast assumptions.

Source: IDC, 2005

FIGURE 7

U.S. IP VPN Services Revenue by Type, 2004–2009

■ Site to site
☐ Remote user
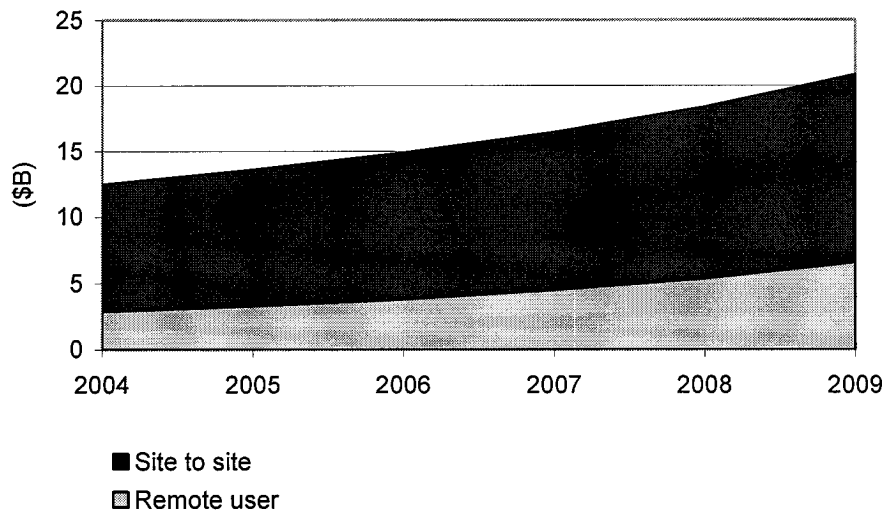
Source: IDC, 2005

The market for site-to-site IP VPNs will increase from $9.6 billion in 2004 to $14.3 billion in 2009, for a CAGR of 8.2%. Remote-user IP VPNs will increase faster, from $2.9 billion in 2004 to $6.6 billion in 2009, for a CAGR of 18.0%. The higher rate for remote-user IP VPNs is partly due to the fact that this market segment starts from a lower base than does site to site. Additionally, survey data shows consistently greater use of remote access technologies by more companies and for a larger number of their employees. Although site-to-site IP VPN growth typically comes at the expense of other WAN technologies such as frame relay and private lines, remote access IP VPNs represent a greenfield area in which most employees are first given access via IP VPN.

Table 4 shows the breakout of the total IP VPN market into CPE and network segments. IP VPN functions such as encryption or traffic partitioning can be done either on devices at the customer site (i.e., CPE) or once the traffic hits the carrier network. If IP VPN functions are performed at the customer site, IDC classifies the service as a CPE-based IP VPN.

TABLE 4

U.S. IP VPN Services Revenue by Platform, 2004–2009 ($M)

	2004	2005	2006	2007	2008	2009	2004–2009 CAGR (%)
CPE-based IP VPN	11,510	12,087	12,789	13,677	14,861	16,791	7.8
Network-based IP VPN							
MPLS	640	1,042	1,561	2,186	2,885	3,365	39.4
Other network-based platforms	344	468	548	581	612	714	15.7
Subtotal	984	1,510	2,109	2,767	3,497	4,078	32.9
Total	12,495	13,596	14,898	16,444	18,358	20,869	10.8

Note: See Table 1 for key forecast assumptions.

Source: IDC, 2005

The CPE-based IP VPN segment will increase from $11.5 billion in 2004 to $16.8 billion in 2009, for a CAGR of 7.8%. The network-based IP VPN market will increase from $0.98 billion in 2004 to $4.1 billion in 2009, for a CAGR of 32.9% (see Figure 8).

Network-based IP VPNs can be further segmented based on the technology used. multiprotocol label switching (MPLS) is a technology allowing for network-based IP VPNs that is being rapidly adopted by carriers in the United States and worldwide. Other technologies also provide network-based IP VPN services, including special devices in the network that perform IP VPN functions and firewalls in the network datacenter.

MPLS IP VPNs will increase from $0.6 billion in 2004 to $3.4 billion in 2009, for a CAGR of 39.4%. Other network-based IP VPNs will increase from $0.3 billion in 2004 to $0.7 billion in 2009, for a CAGR of 15.7%.

CPE-based IP VPNs are much larger than their network-based counterparts for many reasons, the most significant being that DIY implementers far outnumber fully managed IP VPNs from a service provider. DIYers by definition cannot use a network-based option because almost no end user owns his or her own physical network. CPE-based IP VPNs are also older than network-based options, and early IP VPN adopters had few choices available, almost all of which were CPE based.

FIGURE 8

U.S. IP VPN Services Revenue by Platform, 2004–2009

■ CPE-based IP VPN
□ Network-based IP VPN
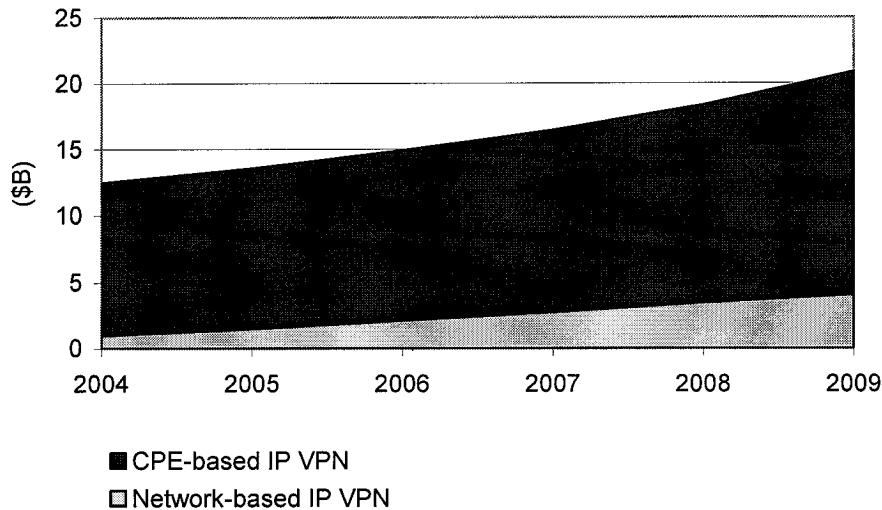
Source: IDC, 2005

Provider type is segmented into DIY, dual DIY/carrier, and carrier managed. DIY is classified as an IP VPN service implemented and run fully by a company's own IT department. Carrier managed is classified as an IP VPN service fully managed by the carrier or service provider. Typically, for a CPE-based carrier service, the carrier owns the CPE and rents it to the customer. The CPE or network devices are owned by the carrier, and the carrier performs the IP VPN functions for the customer.

Dual DIY/carrier is classified as any mixture of fully DIY and fully carrier managed. Dual DIY/carrier may involve a customer that runs the IP VPN on its own and merely has help desk support from a service provider or a customer that owns its own equipment and leaves most management to the service provider.

Table 5 provides breakouts by provider type. DIY, dual DIY/carrier, and carrier are shown at the top of the table. DIY will increase from $8.2 billion in 2004 to $11.3 billion in 2009, for a CAGR of 6.5%. Dual DIY/carrier will expand from $3.4 billion in 2004 to $7.3 billion in 2009, for a CAGR of 16.7%. Carrier will increase from $0.9 billion in 2004 to $2.3 billion in 2009, for a CAGR of 20.3% (see Figure 9).

IDC further breaks out dual DIY/carrier into its DIY and carrier components. IDC took the average costs involved with an IP VPN service, applied WAN manager and end-user interview statistics, and produced a forecast of which portion of the dual market will be provided in-house versus outsourced to carriers. The DIY portion of dual DIY/carrier IP VPNs will increase from $0.9 billion in 2004 to $2.3 billion in 2009, for a CAGR of 18.3%. The carrier portion of dual DIY/carrier IP VPNs will increase from $2.4 billion in 2004 to $5.0 billion in 2009, for a CAGR of 16.1%.

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U.S. IP VPN Services Revenue by Provider Type, 2004–2009

■ DIY IP VPN

☐ Dual DIY/carrier-managed IP VPN

■ Fully carrier-managed IP VPN
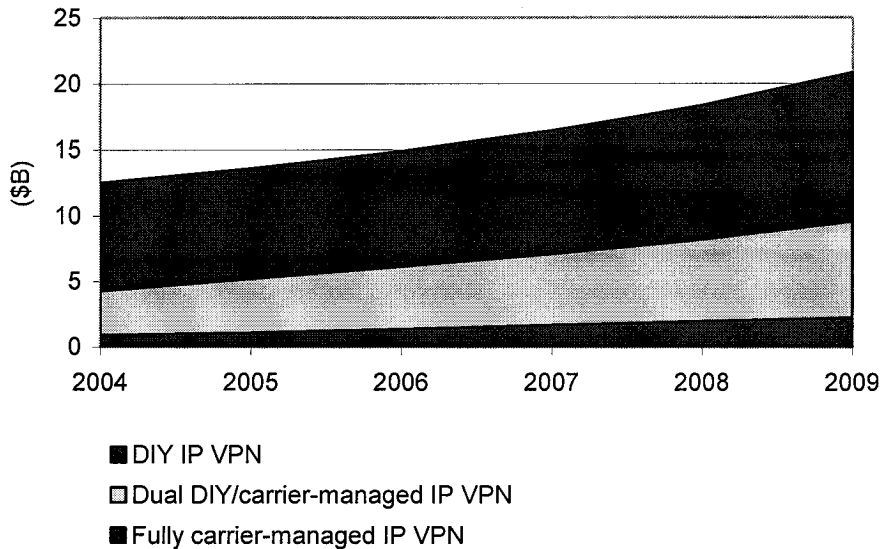
Source: IDC, 2005

The carrier portion is larger primarily because, almost by definition, with a dually managed service, the connectivity is managed by the carrier. Because connectivity represents a majority of IP VPN revenue, the carrier currently takes the largest slice of the dual market. DIY is growing more quickly, however, primarily because connectivity revenue is declining faster than the price decline for IP VPNs overall; hence, the portion of dual that is DIY is holding its pricing better and thereby becoming a larger part of the market over time.

Applying the various pieces of dual DIY/carrier to their DIY and carrier components yields the total DIY and total carrier markets for IP VPN services at the bottom of Table 5. The total market for DIY, including fully DIY and its portion of dual DIY/carrier, will increase from $9.2 billion in 2004 to $13.6 billion in 2009, for a CAGR of 8.1%. The total market for carrier, including fully carrier managed and its portion of dual DIY/carrier, will increase from $3.3 billion in 2004 to $7.3 billion in 2009, for a CAGR of 17.3%. The growth of the carrier segment is attributable almost exclusively to network-based IP VPNs (refer back to Table 4).

TABLE 5

U.S. IP VPN Services Revenue by Provider Type and Market, 2004–2009 ($M)

	2004	2005	2006	2007	2008	2009	2004–2009 CAGR (%)
Provider type							
DIY IP VPN	8,221	8,403	8,760	9,340	10,152	11,290	6.5
Dual DIY/carrier-managed IP VPN							
DIY portion	993	1,221	1,451	1,679	1,962	2,296	18.3
Carrier portion	2,372	2,849	3,306	3,736	4,267	4,993	16.1
Subtotal	3,365	4,069	4,757	5,415	6,229	7,290	16.7
Fully carrier-managed IP VPN	908	1,124	1,381	1,689	1,977	2,289	20.3
Total	12,495	13,596	14,898	16,444	18,358	20,869	10.8
Market							
DIY	9,214	9,623	10,211	11,019	12,114	13,586	8.1
Carrier	3,281	3,973	4,687	5,425	6,244	7,283	17.3
Total	12,495	13,596	14,898	16,444	18,358	20,869	10.8

Note: See Table 1 for key forecast assumptions.

Source: IDC, 2005

Table 6 shows the carrier IP VPN market broken into site-to-site and remote-user components. The carrier site-to-site segment will increase from $2.5 billion in 2004 to $5.0 billion in 2009, for a CAGR of 14.6%. The connectivity portion of site to site will expand from $1.4 billion in 2004 to $2.7 billion in 2009, for a CAGR of 13.6%. The value-added services (all IP VPN services other than local loop, port charges, and IP transit) will increase from $1.1 billion in 2004 to $2.3 billion in 2009, for a CAGR of 15.7%.

TABLE 6

U.S. Carrier IP VPN Services Revenue by Type and Segment, 2004–2009 ($M)

	2004	2005	2006	2007	2008	2009	2004–2009 CAGR (%)
Carrier site-to-site IP VPN							
Connectivity	1,407	1,649	1,882	2,113	2,364	2,663	13.6
Share (%)	55.7	54.7	53.9	53.5	53.5	53.4	
Value-added services	1,119	1,365	1,610	1,834	2,058	2,321	15.7
Share (%)	44.3	45.3	46.1	46.5	46.5	46.6	
Total	2,526	3,014	3,491	3,947	4,422	4,984	14.6
Carrier remote user IP VPN							
Connectivity	632	803	1,000	1,235	1,522	1,921	24.9
Share (%)	83.8	83.7	83.6	83.6	83.6	83.6	
Value-added services revenue	123	156	196	243	299	378	25.3
Share (%)	16.2	16.3	16.4	16.4	16.4	16.4	
Total	755	959	1,196	1,478	1,822	2,299	24.9

Note: See Table 1 for key forecast assumptions.

Source: IDC, 2005

The carrier remote-user segment will increase from $0.7 billion in 2004 to $2.3 billion in 2009, for a CAGR of 24.9%. The connectivity portion of remote user will increase from $0.6 billion in 2004 to $1.9 billion in 2009, for a CAGR of 24.9%. The value-added services segment (all IP VPN services other than dial or broadband connectivity and IP transit) will expand from $0.1 billion in 2004 to $0.4 billion in 2009, for a CAGR of 25.3%.

Table 7 and Figure 10 show the final forecast breakout by company-size category. Small businesses (99 or fewer employees) will increase from $6.6 billion in 2004 to $7.8 billion in 2009, for a CAGR of 3.4%. Medium-sized businesses (100–499 employees) will increase from $3.3 billion in 2004 to $6.6 billion in 2009, for a CAGR of 14.6%. Large businesses (500 or more employees) will increase from $2.5 billion in 2004 to $6.4 billion in 2009, for a CAGR of 20.3%.

The small business category is the largest merely by virtue of the number of small businesses in the United States. Remote access is of less importance to this category, as fewer employees travel and a lack of IT infrastructure exists to support remote users, at least for the smallest small businesses. Remote access is a greater portion of the revenue for the large business segment. Although large organizations also have large numbers of sites, their remote-user bases are larger than those of small and medium-sized businesses.

Growth rates for remote access are the same for each company-size category because they were determined by the overall growth in remote users and then applied to each size category. The site-to-site forecasts were generated by company size, yielding specific growth rates for each company-size category.

TABLE 7

U.S. IP VPN Services Revenue by Company Size and Type, 2004–2009 ($M)

	2004	2005	2006	2007	2008	2009	2004–2009 CAGR (%)
Small (<100 employees)							
Site to site	5,858	5,991	6,148	6,233	6,243	6,130	0.9
Remote user	719	821	950	1,120	1,339	1,647	18.0
Total	6,577	6,812	7,098	7,353	7,582	7,777	3.4
Medium sized (100–499 employees)							
Site to site	2,353	2,591	2,815	3,056	3,558	4,338	13.0
Remote user	1,006	1,149	1,331	1,568	1,875	2,306	18.0
Total	3,359	3,741	4,146	4,624	5,433	6,644	14.6
Large (500+ employees)							
Site to site	1,408	1,731	2,134	2,674	3,201	3,812	22.0
Remote user	1,150	1,313	1,521	1,792	2,142	2,635	18.0
Total	2,558	3,044	3,654	4,466	5,343	6,447	20.3

Note: See Table 1 for key forecast assumptions.

Source: IDC, 2005

#33117

FIGURE 10

U.S. IP VPN Services Revenue by Company Size, 2004–2009

- Small (<100 employees)
- Medium sized (100–499 employees)
- Large (500+ employees)
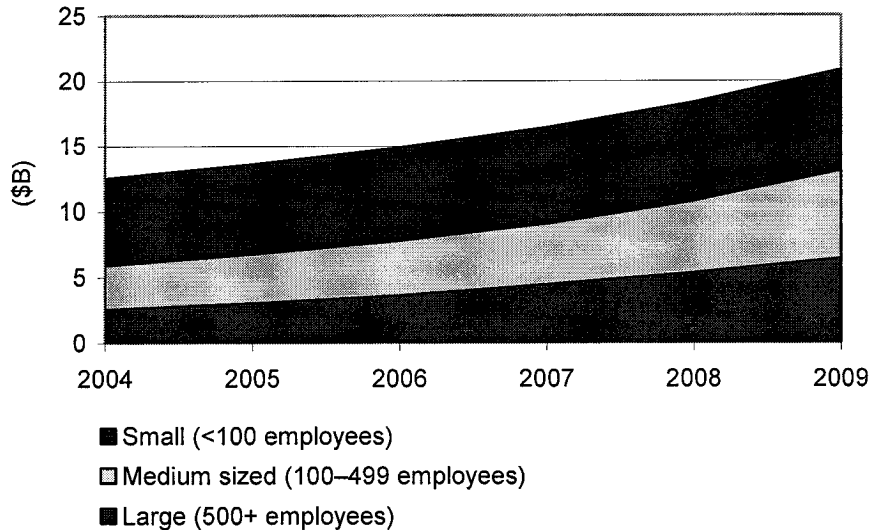
Source: IDC, 2005

ESSENTIAL GUIDANCE

IDC recommends that carriers implement a wide array of IP VPN services, platforms, and management types. The DIY segment is growing in part because carrier solutions do not meet all the needs of most IP VPN users. IDC continues to discern that most U.S. businesses need different platforms and different equipment or software types, and very few are deploying one type of IP VPN across all sites or for all remote users. Instead, many companies are using firewalls at some locations and dedicated IP VPN devices at other locations. Carriers must be able to meet all these varied needs to win sales.

The Network-Based IP VPN Market

Carriers deploying class of service within network-based IP VPN should pay particular attention to developing application-layer monitoring and management features. For companies migrating from frame relay, where class of service is typically not available, the class of service features can make the networks more complex rather than simpler.

To effectively use IP VPN class of service, customers need to know what applications are resident on their networks and then assign classes of service accordingly. In IDC's experience, companies are challenged in discovering what applications run on their network. Some applications are installed legitimately by departments and

divisions on widely dispersed servers without knowledge of the network managers. Other applications such as peer-to-peer music sharing often divert network resources unbeknownst to network managers.

Once the applications are mapped out and the classes of service are assigned, the work is not done. Applications are added, changed, and deleted on a regular basis, and monitoring of applications on the IP VPN should be an ongoing task. Application monitoring and management of classes of service is a prime area where carriers can deliver added value to their customers and ensure that their IP VPN networks run smoothly.

Application monitoring and management of classes of service is a prime area where carriers can deliver added value to their customers.

One reason that DIY segment is so big in the U.S. market relative to the carrier-managed segment is that customers are loathe to give up control of their network to carriers. A Layer 3 network-based solution requires a greater degree of trust in the carrier than does a Layer 2 solution. In a Layer 3 IP VPN, the customer is handing over to the carrier its IP control plane, and the carrier plays a much bigger role in the customer's network.

IDC finds that a key way to convince customers to migrate from a Layer 2 technology, which are mostly self-managed, to a network-based Layer 3 IP VPN, which is carrier managed, is to give the customer more reins of control. This means developing customer portals that give the customer a complete view of their network and its performance and the ability to monitor network performance against service-level agreements (SLAs) and class-of-service parameters. Although customer portals are important for frame relay and ATM, they are even more important for carrier-managed IP VPNs, where the carrier is involved to a greater extent in the customer's network.

The Do-It-Yourself IP VPN Market

Among DIY customers, broadband IP VPNs are huge. A great deal of carriers' DSL sales to businesses are being used in DIY IP VPN implementation. These customers tend to be small and price sensitive. Carriers need to develop low-cost IP VPN packages to bundle with their business DSL sales to capture some of the DIY market. A bare-bones SSL-based IP VPN product designed for the self-managed market is one way to target this market.

Carriers need to develop low-cost IP VPN packages to bundle with their business DSL sales to capture some of the DIY market.

Carriers should also develop specific products targeting the dual DIY/carrier segment. This segment is larger than the fully managed carrier segment and is growing more quickly. A variety of management options, from fully managed to simple IP VPN help desk and engineering support, will provide new opportunities for carriers and service providers.

LEARN MORE

Related Research

☑ *Asia/Pacific (Excluding Japan) IP VPN Services 2004–2009 Forecast and Analysis* (IDC #AP201435M, March 2005)

☑ *Western Europe IP VPN 2003–2009 Forecast* (IDC #HP08L, February 2005)

☑ *Japan IP VPN Services 2004–2008 Forecast* (IDC #JP202218L, January 2005)

☑ *Malaysia IP VPN Services 2004–2008 Forecast and Analysis* (IDC #MY202131L, December 2004)

☑ *Australia IP VPN Services 2004–2008 Forecast and Analysis: Moving Beyond Dumb Pipes* (IDC #AU201225L, December 2004)

☑ *Parting the IP Cloud: Canadian IP VPN Forecast and Analysis 2004–2008* (IDC #CA113TLL, May 2004)

☑ *Brazil IP VPN Services 2004* (IDC #BR1496, May 2004)

☑ *India IP VPN Services Forecast and Analysis, 2003–2008* (IDC #IN201122K, April 2004)

☑ *Nordic IP VPN Services and Equipment Forecast and Analysis, 2002–2007* (IDC #N540405L, March 2004)

☑ *Latin America IP VPN 2004* (IDC #LA1421, March 2004)

☑ *Worldwide IP VPN Services 2004–2008 Forecast and Analysis* (IDC #30904, March 2004)

Definitions

The definition of IP VPN is the same as in the past, but what is included within the definition has changed. An IP VPN is still "a partitioned private network constructed over a shared IP-based backbone that utilizes technologies to ensure privacy of data, either self-implemented or provided by an IP-based service provider."

IP VPNs have two characteristics that differentiate them from a larger family of technologies called VPNs: The IP portion of the definition requires that an IP network be used. VPNs come in many varieties. Frame relay and ATM networks both use virtual circuits, which keep various customers' traffic separate. A frame relay service meets the definition of a VPN, but not of an IP VPN, because the traffic is riding a frame relay network at Layer 2 and not an IP network at Layer 3. However, services that use frame relay local access to connect to a Layer 3 IP-based network are counted as IP VPN. The core of the network is the determining factor.

MPLS also partitions data much like a frame relay permanent virtual circuit (PVC) and typically does not include encryption for IP VPN services. However, an MPLS network-based IP VPN service would be considered an IP VPN under IDC's definition as long as it is using an IP network that operates at Layer 3 or uses a protocol implementation referred to as RFC 2547.

Local loop revenue is now also included in dollar totals for connectivity and total IP VPN revenue.

Other definitions typically involved with IP VPNs include:

- **Authentication:** A security method that verifies the identity of a user who logs on to a computer or network (Authentication measures can also be used to confirm the integrity of a received message; traditional methods include username/password, server-based systems, LDAP-compliant directory services, tokens, and digital certificates.)

- **Digital certificate:** A security measure using software that verifies an association between a user's public key and a user's identity and public privileges

- **Encryption:** A security method that applies an algorithm to data to change its appearance, thereby making it unreadable to recipients not authorized to see it

- **Extranet:** An intranet to which external customers, trading partners, or suppliers have authorized access for conducting electronic commerce

- **Firewall:** A software- or hardware-based system that blocks unauthorized access to corporate networks (A firewall can be located either at the customer's site or in "firewall farms" located in datacenters on the carrier's network.)

- **Internet Protocol Security (IPSec):** A security standard for IP networking that incorporates standards for the use of authentication, encryption, and other security and tunneling measures to keep data private

- **Layer 2 Tunneling Protocol (L2TP):** A protocol that combines the functions of Microsoft's Point-to-Point Tunneling Protocol and Cisco's Layer 2 Forwarding Protocol (L2TP is transport independent and, therefore, can operate with IP packets, ATM cells, and frame relay frames, for example.)

- **Multiprotocol label switching (MPLS):** An Internet Engineering Task Force (IETF) encapsulating protocol that allows various transport protocols to be switched by an IP network (MPLS contains many new features for switching, including the ability of the first edge router to designate a path through the carrier network by which all following packets will be transmitted. MPLS is a technology employed by carriers in their networks and not normally considered a service offered to end users per se.)

- **Remote authentication dial-in user service (RADIUS):** A security administration clearinghouse based on stored user authentication profiles for dial-in users

- **Tunneling:** Creating a virtually private environment within a public or shared network by making data traveling between two endpoints via encrypting IP packets secure (A broader definition of tunneling can include partitioning IP VPN data from the data of others using MPLS, but IDC does not use this definition in this study.)

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Published Under Services: IP VPNs

MARKET ANALYSIS

U.S. Landline 2004–2008 Forecast

Courtney Munroe   William Stofega
Wu Zhou

IDC OPINION

The U.S. wireline telecommunications services sector continues its precipitous decline. The industry will lose over $5 billion in revenue during 2004 and will decline across all segments. Overall revenue will decrease at a compound annual growth rate (CAGR) of 1.6% from 2003 to 2008. However, this masks the rapid decline of traditional voice services, which will decline by 6% per year over that period. This will be counterbalanced by the growth of VoIP services during that time frame. Other important trends over the forecast period include the following:

☑ **Industry consolidation.** The landline telecom sector has too many service providers chasing a declining market. IDC expects that over the next year the industry will experience supply-side consolidation. This could occur in a few different ways. Because of their relatively strong financial position, most people are predicting some form of ILEC/IXC acquisitions, with AT&T and MCI being the most vulnerable. However, other interesting mergers could include systems integrators such as IBM and telcos or telcos and cable MSOs.

☑ **Technology substitution.** Wireless and broadband continue to chip away at the bedrock of the landline sector. Access lines and landline minutes of use will continue to decline as users migrate to fixed-rate plans.

☑ **The consumer sector will decline a bit faster than the business sector.** Barriers to entry in the former are lower and make for a much more competitive segment. Even the large IXCs such as AT&T and MCI have announced their retreat from this segment. In the business segment, the competitive small business segment will experience the fastest decline.

☑ **Technology migration.** The data segment will experience significant change. In the business sector, private lines will decline the fastest, but will remain an important segment. IP VPNs and Ethernet are making significant inroads, while frame relay and ATM will decline.

IN THIS STUDY

This IDC study presents an overview of the U.S. landline telecommunications market. It provides an analysis of the local, long distance, and network access markets and forecasts revenue growth in these sectors through 2008. This study also forecasts telecommunications minutes of use (MOUs) for local, intra–local access and transport area (intra-LATA) toll, and inter-LATA as well as consumer and business splits. Forecast assumptions, key regulatory issues, and technology trends as they pertain to the small businesses market are included as well.

Methodology

The analysis and forecasts contained in this study draw on multiple sources of information, both public and proprietary. Research was conducted to identify industry trends, market shares, and growth curves for individual carriers as well as for specific telecommunications segments. The resulting projections reflect a compilation of IDC analyst perspectives spanning a range of industry segments. Data sources included financial reports filed with the SEC, industry data available from the FCC, and interviews with both local and long distance. Finally, the opinions and forecasts included in this document reflect ongoing IDC research and data collected in IDC surveys.

SITUATION OVERVIEW

Perhaps the biggest surprise of 2003 in the U.S. landline telecom market was the renewed interest in deploying VoIP services. Prior to the telecom nuclear winter, full-scale deployment of IP telephony and the death of the PSTN was imminent. However, economic uncertainty and the learning curve related to deploying IP-based services have slowed the migration to next-generation networks. A slow but steady economic recovery, renewed regulatory initiatives, and announcements by several carriers have converged to ignite interest in deploying VoIP. However, traditional circuit-switched telephony will continue to dominate over the next five years. Other findings include:

☑ **Technology substitution.** In the consumer sector, approximately 21% of all households have migrated to broadband services. This includes both DSL and cable modem services. This has and will continue to have a dramatic effect on dial access and thus second-line subscriptions. In addition, over 60% of consumer households currently subscribe to a wireless service. This has led to the reduction in demand for second lines from nearly 20% of all homes to less than 5%. Concurrently, the resulting loss in local and long distance usage has led to an average loss of 5% per year in access lines for ILECs. There is some evidence that the decline of access lines seems to be leveling off as the consumer wireless market becomes saturated. However, the ILECs should still expect to see continued migration to broadband and wireless-only households, as VoIP and wireless reliability improves in this sector. In the business sector, technology substitution focuses on the migration to converged IP-based circuits, away from frame relay and ATM dedicated services.

☑ **Bundling.** In the consumer segment, bundling has evolved as a key strategic instrument for the ILECs and MSOs as they battle for wallet share. This has currency in the small business segment. As seen in previous years, the ability to offer a bundle that includes local and long distance and voice is key to forming a successful bundle. However, in offering a bundle, small businesses expect at least a 20% discount in return for their loyalty to one provider. Although there will continue to be opportunities for those carriers that focus on data services, carriers that offer additional options will have a significant advantage.

☑ **Competition.** Competition in the landline space has centered around price and regulatory issues. Pricing has been a double-edge sword for telcos this year. Many, including RBOCs and IXCs, use pricing as a market-entry strategy to win contracts. However, giving the trends toward bundling, and the fact that enterprises continue to spend less every year, it is impossible for telcos to increase spending with enterprises come renewal time. One solution has been to increase market penetration. ILECs are doing this by plunging into long distance and data services. The emergence of a recharged MCI from bankruptcy has added some fuel to the market, as MCI has been very competitive on prices, a development that is an ongoing source of concern for survivors of the telecom crash. As part of its overall strategy, MCI will continue to target the small business customers for traditional voice and data products. However, in a slight shift in strategy, it seems that the new MCI is putting more marketing muscle behind its large enterprise products. Although competitors expect MCI to aggressively price its products, it is inconceivable that a strategy based solely on price will prevail. SBC is aggressively rolling out its national strategy, while Verizon and BellSouth are content to beef up their offerings within their regions. The IXCs' march into the local loop has withered with loss of the UNE-P battle. As a result, AT&T and MCI have retreated from the consumer market.

☑ **Regulatory.** Over the past three years and several court rulings, the FCC has been struggling to reshape the rules related to unbundled network elements. In August 2003, the FCC released its revised UNE rules. Although designed to clarify and stabilize, the ambiguities and overall dissatisfaction with the latest version of the rules has promptly sent incumbents and competitors to file briefs with the federal courts. Still, the current version of the rules clearly anticipates the end of UNE-P availability and also removes next-generation transmission and fiber loops from the UNE pricing scheme. Overall, regulatory uncertainty should not have a negative effect on small business landline deployments, but could shift revenue away from non-facilities-based carriers. In addition, carriers such as AT&T have launched a VoIP product for small businesses that does not rely upon last-mile access.

FUTURE OUTLOOK

Forecast and Assumptions

The U.S. landline telecom market is currently $221 billion. However, the market will decline over the next five years to just over $203 billion. The major reasons are priced-based competition among the 1,200 local services providers and hundreds of

long distance and virtual service providers. In addition, as stated earlier, technology substitution in the form of wireless and broadband services is also having an effect on the overall telecom sector.

Despite these challenging trends, the landline telecom market is still heavily dependent on voice services. As Table 1 shows, this segment still derives 75% or $168 billion of its revenue from the provision of voice services (IDC includes the provision of both TDM and IP-based voice services in this category). Pure data services will grow from $55 billion at year-end 2004 to approximately $63 billion or 31% of the overall market in 2008.

TABLE 1

U.S. Telecommunications Services Revenue by Segment, 2003–2008

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Revenue ($M)							
Telephony	168,556	160,798	154,007	148,271	144,226	140,470	-3.6
Data	52,686	55,046	57,331	59,222	61,385	63,128	3.7
Total	221,242	215,844	211,337	207,493	205,611	203,597	-1.6
Share (%)							
Telephony	76.2	74.5	72.9	71.5	70.1	69.0	
Data	23.8	25.5	27.1	28.5	29.9	31.0	
Total	100.0	100.0	100.0	100.0	100.0	100.0	

Notes:

Telephony includes local and long distance service, private line service, connection and access charges.

The forecast excludes directory assistance, advertising, and publishing.

Data services include X.25, frame relay, ATM, and IP services.

Wireless services are not included.

See Table 12 for key forecast assumptions.

Source: IDC, 2004

Table 2 shows IDC's revenue estimate and forecast for the business and residential markets. IDC is forecasting slower revenue growth for the consumer sector. Price competition will have an impact on revenue growth as more companies will battle for wallet share via bundling.

TABLE 2

U.S. Business and Residential Telecommunications Services Revenue, 2003–2008

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Revenue ($M)							
Business	121,223	118,509	116,346	114,580	114,252	112,909	-1.4
Residential	100,019	97,335	94,991	92,914	91,358	90,688	-1.9
Total	221,242	215,844	211,337	207,493	205,611	203,597	-1.6
Share (%)							
Business	54.8	54.9	55.1	55.2	55.6	55.5	
Residential	45.2	45.1	44.9	44.8	44.4	44.5	
Total	100.0	100.0	100.0	100.0	100.0	100.0	

Notes:

Telephony includes local and long distance service, private line service, connection and access charges.

Data services include X.25, frame relay, ATM, and IP services.

Wireless services are not included.

See Table 12 for key forecast assumptions.

Source: IDC, 2004

Table 3 shows IDC's forecast of voice telephony services. This is segmented into local, long distance, and miscellaneous services. The long distance sector is declining the fastest, due to the tremendous price competition and migration to wireless and voice over broadband. The local sector will be partly shielded by state tariff regulations. However, toward the end of the forecast, IP-based voice services will accelerate the decline of TDM voice.

Table 4 shows IDC's business services forecast. The forecast is segmented by voice and data services. IDC is forecasting an increase in data service revenue over the forecast time frame. This growth is down considerably from the double-digit increases of a few years ago and the stable and declining rates of the last two years. However, IDC believes that despite price compression, the migration to IP and the adoption of managed services will result in slow but steady gains for service providers.

TABLE 3

U.S. Wireline Telephony Revenue by Service, 2003–2008

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Revenue ($M)							
Local	97,792	94,687	91,988	90,198	90,083	89,902	-1.7
Long distance	60,045	55,284	51,084	47,029	42,989	39,302	-8.1
Other	10,719	10,826	10,934	11,044	11,154	11,266	1.0
Total	168,556	160,798	154,007	148,271	144,226	140,470	-3.6
Share (%)							
Local	58.0	58.9	59.7	60.8	62.5	64.0	
Long distance	35.6	34.4	33.2	31.7	29.8	28.0	
Other	6.4	6.7	7.1	7.4	7.7	8.0	
Total	100.0	100.0	100.0	100.0	100.0	100.0	

Notes:

Telephony includes local and long distance service, connection and access charges.

The forecast excludes directory assistance, advertising, and publishing.

See Table 12 for key forecast assumptions.

Source: IDC, 2004

TABLE 4

U.S. Business Telecommunications Services Revenue by Service, 2003–2008 ($M)

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Local	53,757	52,083	50,477	49,174	49,305	48,720	-1.9
Long distance	34,460	31,746	29,429	27,107	24,660	22,439	-8.2
Data	29,448	31,086	32,811	34,633	36,585	38,010	5.2
Other	3,558	3,594	3,630	3,666	3,703	3,740	1.0
Total	121,223	118,509	116,346	114,580	114,252	112,909	-1.4

Notes:

Telephony includes local and long distance service, private line service, connection and access charges.

Data services include X.25, frame relay, ATM, and IP services.

Wireless services are not included.

See Table 12 for key forecast assumptions.

Source: IDC, 2004

In the small business market, IDC expects landline revenue to decline over the forecast period due to the effects of increased competition, VoIP adaptation, and bundles. The decline in voice revenue will be counterbalanced over the next few years by an increase in data revenue. Broadband Internet access and other managed services such as IP Centrex will contribute to a growth rate of 5.7% over the forecast period. Although the VoIP technology is now considered by many to be "battle hardened," only widespread deployment and adaptation by customers can confirm this observation. IDC does not expect any issues such as security and scalability to suddenly appear and adversely affect penetration. However, next-generation technologies have been subject to unforeseen problems (see Table 5).

TABLE 5

U.S. Small Business Telecommunications Services Revenue by Service, 2003–2008 ($M)

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Local	26,413	25,398	24,443	23,739	24,117	24,124	-1.8
Long distance	13,419	12,077	11,231	10,445	9,401	8,461	-8.8
Data	8,073	8,534	9,022	9,539	10,085	10,664	5.7
Other	1,013	1,023	1,033	1,044	1,054	1,065	1.0
Total	48,918	47,032	45,730	44,767	44,657	44,312	-2.0

Notes:

Small businesses have 1–99 employees.

Telephony includes local and long distance service, private line service, connection and access charges.

Data services include X.25, frame relay, ATM, and IP services.

Wireless services are not included.

See Table 12 for key forecast assumptions.

Source: IDC, 2004

The medium-sized business segment will experience a bit more stability than the small business sector. IDC is forecasting a slower decline in voice revenue and approximately the same growth in data services. The key for this segment will be the managed services sector. If service providers can cement their value proposition to this segment, they will stem revenue declines due to price competition and convergence in the data segment (see Table 6).

The all-important large enterprise segment will also remain stable over the next five years. There will be steep declines in long distance. The local sector will remain stable, as the large enterprise segment will be relatively slow to migrate to VoIP, and when they do, IDC is not forecasting a decline in spending in local services. Service providers will find additional opportunities in managing the transition to VoIP, as well as the provision of managed and other value-added services (see Table 7).

TABLE 6

U.S. Medium-Sized Business Telecommunications Services Revenue by Service, 2003−2008 ($M)

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Local	13,565	13,287	13,015	12,782	12,714	12,515	-1.6
Long distance	10,935	10,169	9,457	8,795	8,180	7,607	-7.0
Data	10,032	10,592	11,181	11,803	12,471	12,922	5.2
Other	1,020	1,030	1,041	1,051	1,061	1,072	1.0
Total	35,552	35,079	34,693	34,431	34,426	34,117	-0.8

Notes:

Medium-sized businesses have 100–499 employees.

Telephony includes local and long distance service, private line service, connection and access charges.

Data services include X.25, frame relay, ATM, and IP services.

Wireless services are not included.

See Table 12 for key forecast assumptions.

Source: IDC, 2004

TABLE 7

U.S. Large Business Telecommunications Services Revenue by Service, 2003−2008 ($M)

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Local	2,948	2,795	2,656	2,597	2,878	3,101	1.0
Long distance	10,107	9,500	8,740	7,866	7,080	6,372	-8.8
Data	11,343	11,960	12,608	13,291	14,029	14,425	4.9
Other	1,525	1,540	1,556	1,571	1,587	1,603	1.0
Total	25,922	25,796	25,559	25,325	25,573	25,500	-0.3

Notes:

Large businesses have 500 or more employees.

Telephony includes local and long distance service, private line service, connection and access charges.

Data services include X.25, frame relay, ATM, and IP services.

Wireless services are not included.

See Table 12 for key forecast assumptions.

Source: IDC, 2004

Tables 8 and 9 show IDC's forecast of the local access line segment and a breakout of business and residential access lines. IDC expects continued across-the-board declines in landlines. Due to their large dense markets and the easy availability of alternatives such as Ethernet and broadband, the RBOCs will experience the fastest declines.

The residential segment is migrating to wireless and broadband. The business segment will experience consolidation of access and long distance circuits. Small businesses and the smaller sites of medium-sized and large enterprises will migrate to T1 circuits, Ethernet, and broadband solutions.

TABLE 8

U.S. Access Lines by Service Provider Type, 2003–2008

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Access lines (000)							
RBOC	138,932	130,593	125,824	118,749	109,816	100,005	-6.4
CLEC	27,000	26,460	23,814	22,623	22,171	21,727	-4.3
ITC	16,000	16,160	16,322	15,995	15,675	15,362	-0.8
Total	181,932	173,213	165,960	157,367	147,662	137,094	-5.5
Share (%)							
RBOC	76.4	75.4	75.8	75.5	74.4	72.9	
CLEC	14.8	15.3	14.3	14.4	15.0	15.8	
ITC	8.8	9.3	9.8	10.2	10.6	11.2	
Total	100.0	100.0	100.0	100.0	100.0	100.0	

Notes:

RBOC numbers do not include wholesale or UNE-P lines.

CLEC numbers include retail UNE-P lines.

See Table 12 for key forecast assumptions.

Source: IDC, 2004

TABLE 9

U.S. Residential and Business Access Lines, 2003–2008

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Access lines (000)							
Residential	108,262	102,849	97,706	91,844	85,415	78,582	-6.2
Business	71,820	68,607	66,583	63,937	60,740	57,081	-4.5
Other	1,850	1,758	1,670	1,586	1,507	1,431	-5.0
Total	181,932	173,213	165,960	157,367	147,662	137,094	-5.5
Share (%)							
Residential	59.5	59.4	58.9	58.4	57.8	57.3	
Business	39.5	39.6	40.1	40.6	41.1	41.6	
Other	1.0	1.0	1.0	1.0	1.0	1.0	
Total	100.0	100.0	100.0	100.0	100.0	100.0	

Note: See Table 12 for key forecast assumptions.

Source: IDC, 2004

Table 10 shows IDC's forecast of landline MOUs. As in the access line and revenue, IDC is predicting declines in TDM minutes. Similarly, long distance will decline almost twice as fast as the local sector.

Table 11 shows MOU segmentation between business and residential usage. IDC expects a faster decline in the business sector as this sector migrates from switched access lines to private lines and broadband circuits.

Table 12 contains the key assumptions used to generate the forecast tables.

TABLE 10

U.S. Minutes of Use by Call Type, 2003–2008 (B)

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Local	3,690	3,454	3,264	3,132	3,008	2,893	-4.8
Long distance							
Intrastate	429	391	359	335	313	292	-7.4
Interstate	524	472	429	396	366	339	-8.3
Subtotal	953	863	788	731	679	631	-7.9
Reported domestic total	4,643	4,317	4,052	3,863	3,687	3,524	-5.4
Real domestic total (reported/2)	2,322	2,159	2,026	1,932	1,844	1,762	-5.4
International (originating domestically)	37	40	41	41	42	43	3.1
Total	2,358	2,198	2,067	1,973	1,886	1,805	-5.2

Note:

Wireline MOUs include voice traffic but exclude data and Internet telephony.

See Table 12 for key forecast assumptions.

Source: IDC, 2004

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TABLE 11

U.S. Residential and Business Minutes of Use, 2003–2008

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Minutes of use (B)							
Residential	1,172	1,097	1,046	1,014	975	937	-4.4
Business	1,186	1,101	1,021	959	911	868	-6.1
Total	2,358	2,198	2,067	1,973	1,886	1,805	-5.2
Share (%)							
Residential	49.7	49.9	50.6	51.4	51.7	51.9	
Business	50.3	50.1	49.4	48.6	48.3	48.1	
Total	100.0	100.0	100.0	100.0	100.0	100.0	

Notes:

Wireline MOUs include voice traffic but exclude data and Internet telephony.

See Table 12 for key forecast assumptions.

Source: IDC, 2004

TABLE 12

Key Forecast Assumptions for the U.S. Wireline Telecommunications Services Market, 2004–2008

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Macroeconomics				
Market dependence on economy	There will be steady economic growth. GDP growth shows a positive correlation with the demand for access lines, broadband circuits, and MOUs.	**High.** Strong economic growth will have an immediate impact in the consumer sector and is mitigating the decline in enterprise spending.	↑	★★★★★
Industry specificity				
Regulatory policy	There will be continued uncertainty as major issues such as UNE-P, access reform, and VoIP regulation are litigated.	**High.** Regulatory uncertainty and bickering over the legal status of VoIP will serve to squelch the growth of VoIP and stabilize the decline or slightly increase the growth of traditional landline service.	↑	★★★★☆
Monopolization	Incumbent carriers will continue to hold last-mile advantage. However, competition from cable MSOs and virtual network operators deploying VoIP will blunt the last-mile monopoly and bring increased competition and new services to consumers.	**High.** The advantages inherent in controlling the last mile will begin to melt away as VoIP service begins to grow and replace traditional circuit switched service.	↓	★★★☆☆
Technology/ service developments				
VoIP	Despite regulatory bickering, VoIP will eat away at traditional landline deployments. Carriers such as AT&T, Verizon, Comcast, and Vonage will promote VoIP services to consumers. This will reduce the number of voice landlines purchased by consumers.	**Moderate.** Gains will be limited due to uncertainty and misunderstandings about technology. However, the impact of this technology could be felt toward the end of the forecast period. Furthermore, unless VoIP providers can offer compelling new services, IP telephony will become nothing more than price arbitrage.	↓	★★★★☆

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			Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
TABLE 12				
Key Forecast Assumptions for the U.S. Wireline Telecommunications Services Market, 2004–2008				
Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Bundling	Bundled products will continue to be popular with consumers. However, continued success of bundling will depend upon how well carriers are able to differentiate their bundles and integrate them into a seamless integrated service.	**High.** Aggressive discounts and "all you can eat plans" will help mitigate loss to other technologies. Also, voice MOUs will increase as customers talk longer and more frequently to justify higher purchase prices. In many cases, in order to be eligible for maximum discount, some carriers will require purchase of traditional landline service.	↑	★★★☆☆
Wireless substitution	Increasing reliance on wireless service will continue to erode wireline revenue and MOUs. However, adoption of wireless services by consumers is beginning to reach a saturation point. In addition, the number of consumers that have totally abandoned their wireline phone remains relatively small.	**Moderate.** Wireless substitution will continue to negatively influence wireline growth. However, IDC does not expect a huge drop in the number of landlines until the deployment of next-generation services. In addition, quality of services, reliability, and emergency issues will help soften the appeal of wireless substitution in the forecast period.	↓	★★★★★

Legend: ★☆☆☆☆ very low, ★★☆☆☆ low, ★★★☆☆ moderate, ★★★★☆ high, ★★★★★ very high

Source: IDC, 2004

ESSENTIAL GUIDANCE

☑ **Recognize that voice and landline are still relevant.** TDM voice still rules and will remain a crucial aspect of the telecom environment for several years. There is no doubt that VoIP is the way of the future. However, carriers that ignore traditional wireline technologies in favor of premium-priced next-generation services risk alienating a significant number of today's small business customers.

☑ **Monitor technology demand.** The oft-repeated phrase "stay close to your customer" is especially important during technological shifts. While landline growth is essentially flat over the forecast period, service providers will need to pay close attention to shifts in favor of next-generation technologies. Significant landline deterioration and higher broadband penetration by small business

customers could mark the beginning of a major shift away from traditional landline service. Also, maintaining close tabs with sales account managers will help anticipate shifts.

☑ **Emphasize quality.** Despite regulatory oversight, traditional landline services, especially voice, are now a commodity subject to significant pricing pressure. This situation will intensify as more virtual service providers enter the VoIP market. However, given the history of quality that has been associated with the PSTN-based services, associating lesser quality with commodity pricing will increase churn as well as win back costs.

☑ **Educate to differentiate.** This will help preserve revenue from legacy technologies and ensure that end users understand the technology that they purchase and it matches up with their needs. For a large number of small business customers, traditional landline services will continue to meet their communications requirements for the foreseeable future. IDC believes that these customers exist primarily in the smallest of business customers. In preparation for the future, carriers should develop a campaign to educate current and potential customers regarding the advantages of VoIP. A successful campaign will underscore the ease of moving from TDM to IP-based service.

LEARN MORE

Related Research

☑ *Regulating VoIP: Can the FCC Untie the Gordian Knot?* (IDC #31003, March 2004)

☑ *Come Together: Covad Acquires GoBeam* (IDC #30998, March 2004)

☑ *All Inclusive: BellSouth Enhances Integrated Solutions* (IDC #30899, March 2004)

☑ *U.S. Cable Telephony 2004–2008 Forecast: Golden Egg or Lead Balloon?* (IDC #30797, February 2004)

☑ *U.S. SMB Demand for Data Network Services: Opportunity Analysis Report* (IDC multiclient study #3900, November 2003)

Definitions

IDC defines landline communications as terrestrial, fixed-transmission services. Landline communications include telephony and data services that are delivered via the public switched access network as well as over private lines. Landline revenue is segmented into telephony and data. Local, long distance, connection/access, and private-line services are included in telephony revenue. Data revenue includes asynchronous transfer module (ATM), frame relay, and IP-based services. This study focuses on the telephony portion of landline services and provides revenue and

market splits for this segment. Carrier revenue generated from wireless services, data services, directory publishing, and similar sources are excluded from this study.

The following terms are used throughout this study:

☒ **Competitive local exchange carrier (CLEC).** CLECs are carriers that were formed after the local communications market was deregulated. They provide telecommunications services in direct competition with incumbent local exchange carriers (ILECs). CLECs may provide a variety of services, ranging from local, long distance, and international telephone services to Internet access, cable TV, and video on demand (VOD).

☒ **Incumbent local exchange carrier (ILEC).** ILECs are the Bell and independent telephone companies that had the exclusive right to provide local transmission and switching services prior to the Telecommunications Act of 1996. Due to deregulation of the local telephone market, ILECs now face competition from CLECs.

☒ **Independent telephone company (ITC).** ITCs are telephone companies, such as GTE, that formerly had the exclusive right to provide local service in regions not serviced by regional Bell operating companies.

☒ **Interexchange carrier (IXC).** IXCs are carriers that are allowed to provide inter–local access and transport area (inter-LATA) service. IXCs may also act as CLECs by providing local and intra-LATA toll service in certain regions.

Forecast Definitions

The following terms are used throughout this study with respect to forecasts:

☒ **Access line.** Typically, this term refers to the number of telephone lines a business or home has activated.

☒ **Minute of use (MOU).** Usage of many telecommunications services can be measured in increments of minutes, each of which is referred to as an MOU. Since MOUs are reported by originating and terminating carriers, they are double-counted. For this reason, IDC divides the total reported MOUs in half.

☒ **Local service.** These services allow customers to make telephone calls that originate and terminate within the same local service area. Typically, local phone companies bill for local service at a flat monthly rate. These services include a number of features, such as caller ID and call waiting, as well as enhanced services, such as voice messaging.

☒ **Long distance service.** These services allow customers to make telephone calls that terminate in local service areas other than the areas from which they originate. Long distance service generally refers to any traffic terminating outside the local service calling area, such as intra-LATA toll, inter-LATA, and international calls. These calls may be made via dial-tone or dial-around services, calling cards, or prepaid calling cards.

- ☑ **Access/connection charge.** Access charges are mandated in order to compensate LECs for the use of their local access networks. A local network connects a customer to long distance networks. There are two types of access charges. The end-user *customer access charge* applies to all local loops, and the *carrier access charge* applies to all IXCs that connect to the LEC.

- ☑ **Other telephony.** Other telephony refers to miscellaneous revenue, including operational and billing revenue.

- ☑ **Unbundled network element (UNE).** This refers to parts of the ILECs' networks that CLECs can access on an unbundled basis through a collocation agreement. UNEs are defined by the Telecommunications Act of 1996 as any "facility or equipment used in the provision of a telecommunications service," as well as "features, functions, and capabilities that are provided by means of such facility or equipment." For CLECs, access to the local loop via UNE connects the ILEC switches to the ILEC's present customers, which then allows the CLECs to connect their switches with the ILEC's switches, thus giving them access to ILEC customers.

Published Under Services: Business Network Services

MARKET ANALYSIS

U.S. Web Hosting Services 2004–2008 Forecast

Melanie Posey

IDC OPINION

The U.S. Web hosting services market has begun to recover from the multiple shocks of economic recession, Internet industry meltdown, and supply-side turmoil. Service providers will continue to find market opportunities within their existing customer bases, but the greater prize will be the "conversion" of in-house hosters. Market highlights include the following:

☑ IDC expects the market to increase at a five-year compound annual growth rate (CAGR) of 13.6%, increasing from $5.5 billion in 2003 to $10.4 billion in 2008.

☑ The retreat from outsourced Web hosting that began in 2001 has abated, as have enterprise concerns about the stability and viability of the sector overall.

☑ Factors fueling market growth include increased spending by existing outsourced Web hosting customers (primarily higher-end enterprise customers using complex managed services) and increased Web site adoption and outsourced service usage among small businesses.

☑ The shared/small business hosting market will remain a competitive arena, given the relatively low barriers to entry. The result will be a continued "arms race" emphasizing service features, pricing, and packaging/bundling.

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MARKET ANALYSIS

Worldwide IT Security Software, Hardware, and Services 2004–2008 Forecast: The Big Picture

Brian E. Burke
Christian A. Christiansen
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Charles J. Kolodgy
Sally Hudson

IDC OPINION

IT security spending remains a top priority in many organizations, and the total IT security market achieved a level of $22.8 billion in 2003, representing 19% growth over 2002. IDC currently forecasts this market to reach $52.2 billion in 2008, representing a compound annual growth rate (CAGR) of 18%. Highlights are as follows:

☒ Worldwide security software revenue will increase from $8.4 billion in 2003 to $16.3 billion in 2008, representing a CAGR of 14.04%. Secure content management (SCM) solutions and security and vulnerability management (SVM) solutions represent the greatest growth opportunities.

☒ Worldwide security services revenue will increase from $10.6 billion in 2003 to over $26 billion in 2008, representing a 19.8% CAGR. Implementation services for security solutions will grow slightly faster than operational services such as managed security services.

☒ Worldwide security hardware revenue will increase from $3.8 billion in 2003 to $9.9 billion in 2008, representing a 21% CAGR. Unified threat management (UTM) appliances that integrate firewall/VPN with intrusion prevention and content filtering offer the greatest opportunity for growth.

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Executive Summary

This IDC study examines the worldwide IT security market for the period 2003–2008. Worldwide market sizes and trends are provided for 2003, and a five-year growth forecast for this market is shown for 2004–2008. This study also identifies current trends in the IT security market and addresses the characteristics that vendors will need to be successful in the future.

Methodology

Please note the following:

☑ The information contained in this study was derived from the IDC Software Market Forecaster database as of July 6, 2004.

☑ Total software revenue is defined as license revenue plus subscription maintenance fees plus other software function–related services fees such as the implicit or stated value of software included in an application service provider's (ASP's) or other hosted software arrangement.

☑ IDC's revenue information for companies and software markets is based on recognized revenue as defined in U.S. practice rather than on bookings. IDC bases its reporting of, and forecasts for, the software market on revenue as defined by GAAP.

☑ All numbers in this document may not be exact due to rounding.

For more information on IDC's software definitions and methodology, see *IDC's Software Taxonomy, 2004* (IDC #30838, February 2004).

IT Security Market Definition

Information Security Software

Information security software includes a comprehensive set of client, server, and gateway solutions. IDC's definition of information security software includes the following discrete software solutions:

☑ Secure content management software

❑ Antivirus (virus, worm, trojan, spyware)

❑ Web filtering

❑ Messaging security (antispam, content filtering, encrypted email)

☑ Identity and access management (IAM) software

   ❏ Web SSO

   ❏ Host SSO

   ❏ User provisioning

   ❏ Advanced authentication

   ❏ Legacy authorization

   ❏ Public key infrastructure (PKI)

   ❏ Directory services

☑ Security and vulnerability management software

   ❏ Security information and event management

   ❏ Patch and remediation management

   ❏ Policy and compliance management

   ❏ Security systems and configuration management

   ❏ Network forensics

   ❏ Vulnerability assessment

   ❏ Vulnerability management

☑ Intrusion detection and prevention (ID&P) software

   ❏ Intrusion detection

   ❏ Intrusion prevention

☑ Firewall/VPN software

   ❏ Enterprise firewall/VPN

   ❏ Corporate desktop firewalls

   ❏ Consumer desktop firewalls

☑ Other security software

   ❏ Encryption tools and algorithms

   ❏ File encryption

   ❏ Database and storage security

Information Security Services

Information security services involve a holistic view of all activities necessary to plan, design, build, and manage secure network infrastructures and comprehensive security programs. IDC's definition of information security services includes the following discrete service activities:

☒ Consulting

- ❑ Security strategy and planning
- ❑ Assessment
- ❑ Compliance audit
- ❑ Architecture analysis and review
- ❑ Incident response and forensics

☒ Implementation

- ❑ Design
- ❑ Hardware and software procurement
- ❑ Integration of security architecture
- ❑ Performance testing
- ❑ Transition/migration
- ❑ Knowledge transfer

☒ Management

- ❑ Managed security services
- ❑ Intelligence services

☒ Education and training

- ❑ Instructor-led training
- ❑ Technology-based training
- ❑ Text-based training

Information Security Hardware

Information security software includes a mix of gateway security appliances as well as hardware authentication solutions. IDC's definition of information security hardware includes the following discrete hardware solutions:

☑ Security appliances

- ❏ Network intrusion detection and prevention appliances

- ❏ Secure content management appliances

- ❏ Firewall/VPN appliances

- ❏ Unified threat management appliances

- ❏ Secure content and application delivery appliances

- ❏ Other security appliances (IP VPN, XML and HTML firewalls, SSL VPN, crypto accelerators)

☑ Hardware authentication

- ❏ Biometrics

- ❏ Authentication tokens

- ❏ IT smart cards

Figure 1 shows IDC's Security Taxonomy.

FIGURE 1

IDC's Security Taxonomy
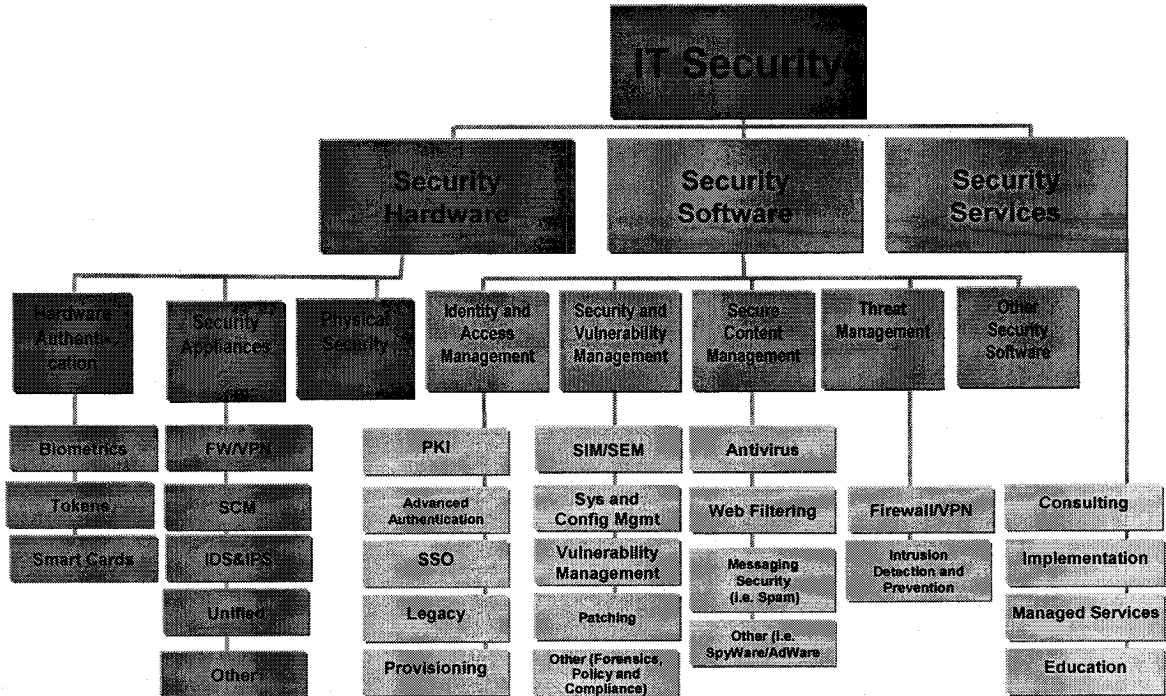
Source: IDC, 2004

SITUATION OVERVIEW

Viruses and worms continue to be the most serious threat facing corporations today. According to a 2004 IDC survey of more than 600 firms across North America, 31% of respondents indicated viruses, trojans, and malicious code as being the single greatest threat and another 10% indicated network worms as the greatest threat, as shown in Figure 2. The interesting finding in the study was that spyware ranked fourth on the list of single greatest threats in 2004. This result clearly shows that spyware is moving up the priority list of corporate security concerns.

FIGURE 2

Threats to Enterprise Security

Q. *What is the single greatest threat to your company's enterprise network security?*

(% of respondents)
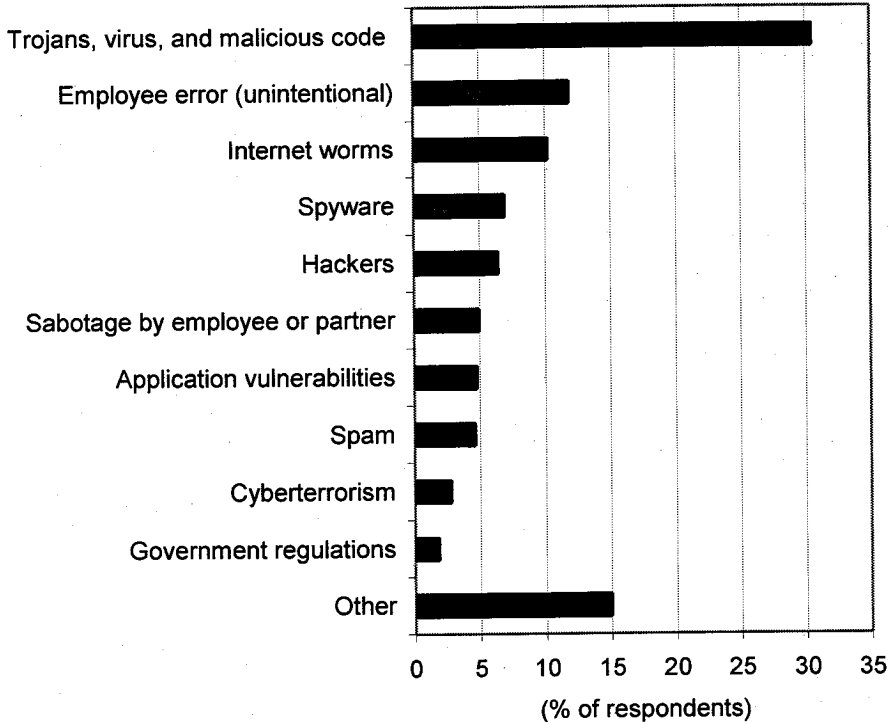
n = 606

Source: IDC's *Security Survey*, 2004

Key Trends

Information Security Software

Secure Content Management Software

☒ Spyware is the newest pest wreaking havoc with corporate and consumer users alike. Spyware is no longer just a consumer nuisance; it is quickly becoming a major concern in the corporate environment. The fact that spyware can gather information about employees or organizations without their knowledge is causing corporate security departments to take notice. Spyware is often installed without the user's consent, as a drive-by download or as the result of clicking some option in a deceptive pop-up window. What concerns corporate security departments is that spyware can also be used to monitor keystrokes, scan files, install additional spyware, reconfigure Web browsers, and snoop email and other applications. Some of the more sophisticated spyware can even capture screenshots or turn on Webcams.

☑ The convenience and efficiency of electronic mail have been dramatically reduced by the extremely rapid growth in the volume of unsolicited commercial electronic mail. Spam has become more than just a nuisance; it is quickly becoming both a major productivity drain and a potential legal liability in organizations across the globe. Spam fills networks, servers, and inboxes with unwanted and often offensive content. The business impact of spam only grows more serious as the volume of spam continues to rise. The volume of spam messages sent worldwide every day will jump from 7 billion in 2002 to 23 billion in 2004, according to IDC estimates.

☑ The challenge of controlling electronic communications as they flow into and out of an organization is becoming increasingly more critical. Government and industry regulations such as HIPAA, Sarbanes-Oxley, and Gramm-Leach-Bliley have placed unprecedented pressure on corporations to secure the use of their electronic communications. Each of these regulations can carry criminal penalties and/or civil penalties.

Identity and Access Management Software

☑ In the past, the mix of in-house, open source, and partner software was presented to customers as 3A, but these disparate products had little affinity for one another. As a result, system integration costs were very high. Customers soon began to demand a more comprehensive set of solutions to not just reduce costs but also increase security and productivity. Three or four years ago, systems integration (SI) costs for 3A solutions were a multiple of the initial purchase price of the license and annual software support contract. In fact, this SI multiple often reached 7–10x the purchase price of the software. Over the last year, customers pushed vendors for greater integration within their own products and their partners. As a result, IDC saw the shift toward IAM solutions and the SI multiples fall to 3–5x in large corporate environments. In small and medium-sized businesses (SMBs), however, customers will tolerate only a 1.5x multiple because they worry about their reseller's ability to handle large integration projects and they lack budget for this kind of work. Overall, customers increasingly demanded a high level of integration right out of the box. This drove 3A vendors to develop more integrated IAM solutions. IDC expects to see more and more hardware in the identity management area. Tokens, smart cards, and biometrics, to a lesser extent, will become parts of comprehensive identity and access management solutions.

Security and Vulnerability Management Software

☑ Integration of security with current system and network management systems, assurance of high uptime for network and applications, administrative cost reduction (help desk), and a singular view of the IT environment are driving the convergence of security and vulnerability management solutions. The time and costs associated with coordinating and managing the updates, patches, and upgrades for the multiple security technologies deployed throughout organizations are overwhelming IS departments and corporate executives alike.

☒ Today's ebusiness world requires fully integrated and more comprehensive security management solutions to deal with the multiple security products implemented across the enterprise. Consolidated consoles for managing various security solutions along with aggregated reporting, analysis, and control functions can reduce IT administration chores and costs as well as personnel costs.

Intrusion Detection and Prevention Software

☒ The ID&P market is slowly making a transition from pure detection to prevention. As IDC has stated, the technologies are complementary — prevention requires detection. What is happening is the technology is advancing to the point that customers are more comfortable using the prevention capabilities of the products. Host intrusion prevention has been successful because its use does not shut down a network. However, network intrusion prevention is increasing in acceptance as false alerts are reduced and attacks become more damaging. IDC research estimates that about 80% of those purchasing intrusion prevention–capable products are using some of the blocking features in the product. Only a fraction (about a third) of the total prevention features are being used at this time, but as confidence levels grow, so should the level of prevention enabled. Vendors are not missing this adoption curve. Many vendors are releasing prevention within their detection products. In this way a customer can purchase a product for detection now and eventually and gradually institute prevention.

☒ To increase ID&P performance and manageability, vendors and customers are turning to appliance-based network ID&P products. IDC expects that the usage of dedicated appliances will dwarf the software-only market. The software will probably only be that delivered to appliance vendors under an OEM arrangement.

Firewall/VPN Software

☒ Software firewall/VPN products have considerable challenges brought on by the popularity of appliances and new infrastructures and technologies. The market will need to transform to remain a central part of an enterprise security posture.

☒ Enterprise firewall/VPN software will gradually become part of a threat management security market. This market will incorporate the firewall/VPN software, along with firewall/VPN security appliances, and intrusion detection and prevention. This is already happening in that all enterprise-level firewalls (both software and hardware) are incorporating more sophisticated intrusion and worm protection capabilities. The creation of a threat management market will allow security vendors more opportunity to develop the products that best support enterprise network security needs. Desktop firewalls are also more involved in threat management. The desktop products are becoming complete end-point security solutions that incorporate intrusion prevention (especially at the application layer), worm protection, and being tied to antivirus and other content security capabilities.

Information Security Services

Incremental but healthy growth is anticipated during the forecast period due to a number of drivers in the marketplace:

☑ **Government regulations.** The regulatory environment is becoming more intense as legislation is passed with specific mandates for industries and organizations in general. This translates into increased demand for compliance auditing and risk assessments.

☑ **New technologies.** Communications methods, such as instant messaging, wireless, and the adoption of voice over IP and Web services all have implications to corporate security. Many of these technologies will drive the demand for architecture and design services as well as security strategy and planning.

☑ **Threat focus.** Proactive security services such as intelligence services, patch management services, and application testing and development services can help alleviate the pain experienced by many organizations.

☑ **Application security.** Over the past 12 months, interest in remediating application security issues has increased markedly. Blended threats and attacks often exploit software/application vulnerabilities. Therefore, organizations should be shifting their security efforts from the network layer (Layers 2 and 3) to the application layers (Layers 4–7) to mitigate a troublesome part of their risk. In response, security service providers have attacked the problem in a two-prong strategy: First, develop methodologies and techniques to instill security into the code creation/development process, and second, work with ISVs to create best practices for deploying their applications into enterprise infrastructure environments.

☑ **Identity management.** Who needs access, what's the appropriate level of access, and what applications and resources can be accessed? These are the questions to ask as organizations provision resources to various constituencies including business partners, suppliers, customer, employees, and stakeholders. Some regulations such as Sarbanes-Oxley and HIPAA require access controls to specific pieces of information.

☑ **Managed security services.** Albeit with a slower-than-expected growth curve, managed security services are gaining traction in the marketplace. The economics make sense; however, trust and control have always been major hurdles to acceptance. Managed security service providers have invested heavily in educating the marketplace on the value of outsourcing components of their security, maturing their back-end operations, and demonstrating customer value-add.

Information Security Hardware

Security Appliances

The security appliance market has had strong growth, but with the challenges posed by infrastructures and technologies, the market will need to adapt to maintain stable growth. Developments that will shape this market in the future include the following:

☒ A UTM security appliance has emerged. IDC previously stated that the firewall market would move toward consolidated gateways with multiple applications. This prediction is finally becoming reality. There has constantly been an arms race between attackers and defenders. The attackers gained an advantage with blended threats. Defenders have responded: Protection from blended threats requires a comprehensive security solution that contains unified layers of defense and response mechanisms with centralized management.

☒ Firewalls have been upgraded to include improved packet inspection, application awareness, intrusion detection and prevention, worm protection, and improved authentication mechanisms. These products are now being referred to by IDC as threat management products. Gateway AV is the latest application to be unified with the firewall. Those products with Gateway AV are referred to as unified threat management security appliances.

☒ By offering additional security features, UTM appliances provide the potential customer with more options on which to build its security infrastructure. UTM appliances provide customers with considerable deployment flexibility while at the same time offering a standard management platform. All of the functions of a UTM can be utilized, or the product can be used for a specialized purpose — maybe for gateway AV or for internal intrusion detection. When used as a point product, the enterprise does get the advantage of consolidated management, and it can still turn on any feature it requires without needing to deploy new appliances.

Hardware Authentication

The need for multifactor authentication continues to increase. Many factors contribute to IDC's forecast that the market will experience growth over the next few years. New challenges, technologies, and opportunities that will shape this market in the future including the following:

☒ Enterprises are beginning to realize that passwords aren't free. With an average of seven to 10 passwords per user, forgotten passwords are common, making help desk calls also common, and those calls can cost an enterprise between $10 and $25 each. Many organizations are moving toward tokens that can eliminate or greatly reduce costs from lost passwords.

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☑ Enterprises have been interested in finding ways to reduce the large number of passwords users are required to juggle. Tokens offer a method that can help to establish "single sign on" or, at a minimum, to alleviate the pain of multiple passwords. Traditional tokens, coupled with their authentication servers and with external user databases, can be used to provide a single form of authentication. USB authentication tokens, on the other hand, can intercept all authentication requests and provide the correct authentication information, such as a username and password, or serve up a certificate.

☑ Organizations are opening up access to their networks to more and more remote users. In most cases they are employees who are traveling or working offsite. Remote access, in many cases, is done via virtual private networks (VPN), both IPSec and SSL based. Although the communication is encrypted, the tunnel must be established with an authorized user. Given that passwords are not very secure in these situations, many organizations require the use of tokens. This has been one of the primary applications for traditional tokens, although the use of USB is growing in this area, especially in association with SSL VPN. All of the major token vendors have some form of relationship with one or more VPN vendors, either to support or to provide tokens as part of the VPN solution.

☑ The use of wireless networking is a similar problem to remote access, the only difference being the area of coverage. For WLAN, a valid authentication should be required prior to allowing access to the network. Because there is considerable concern about the security of wireless access, enterprises may determine that token authentication is a prerequisite to the use of such technology.

☑ Web services could be a boon to the token market, especially SLATs. Under a full-blown Web services environment, devices and applications are communicating without human intervention. Authentication of those transactions is required, and SLATs could be used in such cases. A USB-based SLAT could handle the authentication between the software applications. The SLAT would need to expand to be able to handle digital signatures, but given the developments in the token markets, this should not be a problem, especially with so many SLAT vendors also offering USB authentication tokens.

FUTURE OUTLOOK

Forecast and Assumptions

The total IT security market achieved a level of $22.8 billion in 2003, representing 19% growth over 2002. IDC currently forecasts this market to reach $52.2 billion in 2008, representing a compound annual growth rate (CAGR) of 18% (see Table 1 and Figure 3). Key forecast assumptions for the IT security software market are shown in Table 2.

TABLE 1

Worldwide IT Security Revenue by Market and Product Segment, 2003–2008 ($M)

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Software							
Secure content management	3,426.9	4,206.2	4,993.5	5,814.6	6,664.6	7,476.8	16.9
Identity and access management	2,213.1	2,408.5	2,642.2	2,904.1	3,195.4	3,508.0	9.7
Security and vulnerability management	1,210.2	1,488.7	1,808.9	2,175.9	2,592.6	3,043.4	20.3
Intrusion detection and prevention	365.5	373.7	380.9	391.4	402.4	415.6	2.6
Firewall/VPN	911.9	982.5	1,041.4	1,098.1	1,152.7	1,203.4	5.7
Other security	307.1	353.8	412.0	475.7	547.9	622.8	15.2
Software subtotal	8,434.8	9,813.4	11,278.9	12,859.9	14,555.5	16,269.9	14.04
Services							
Consulting	3,156.6	3,740.2	4,470.2	5,331.5	6,365.3	7,565.8	19.1
Implementation	4,306.8	5,183.7	6,287.2	7,619.1	9,194.1	11,033.1	20.7
Management	1,865.1	2,215.3	2,656.6	3,200.8	3,861.2	4,633.3	20.0
Education and training	1,232.7	1,443.0	1,673.4	1,980.5	2,351.0	2,801.4	17.8
Services subtotal	10,561.3	12,582.2	15,087.4	18,132.0	21,771.6	26,033.5	19.8
Hardware							
Network ID&P appliances	222.9	356.6	499.3	624.1	717.7	825.4	29.9
SCM appliances	130.8	228.9	377.7	585.4	848.8	1,145.9	54.4
Firewall/VPN	1,479.1	1,667.7	1,791.6	1,804.4	1,623.5	1,462.3	-0.2
UTM security appliances	104.9	225.0	517.5	828.0	1,324.8	1,987.2	80.1
Hardware authentication tokens	317.8	362.0	409.1	458.9	523.4	607.2	13.8
Biometrics/smart cards	106.0	125.0	146.0	169.0	195.0	220.3	15.8
Secure content and application delivery	184.0	205.0	230.0	250.0	270.0	280.0	8.8
Other	1,265.2	1,626.5	2,006.2	2,412.2	2,862.2	3,365.9	21.6
Hardware subtotal	3,810.7	4,796.8	5,977.4	7,132.1	8,365.5	9,894.2	21.0
Total IT security	22,806.8	27,192.4	32,343.7	38,124.0	44,692.5	52,197.6	18.0

Note: See Table 2 for key forecast assumptions.

Source: IDC, 2004

FIGURE 3

Worldwide IT Security Revenue by Market, 2002–2008

- Software
- Services
- Hardware
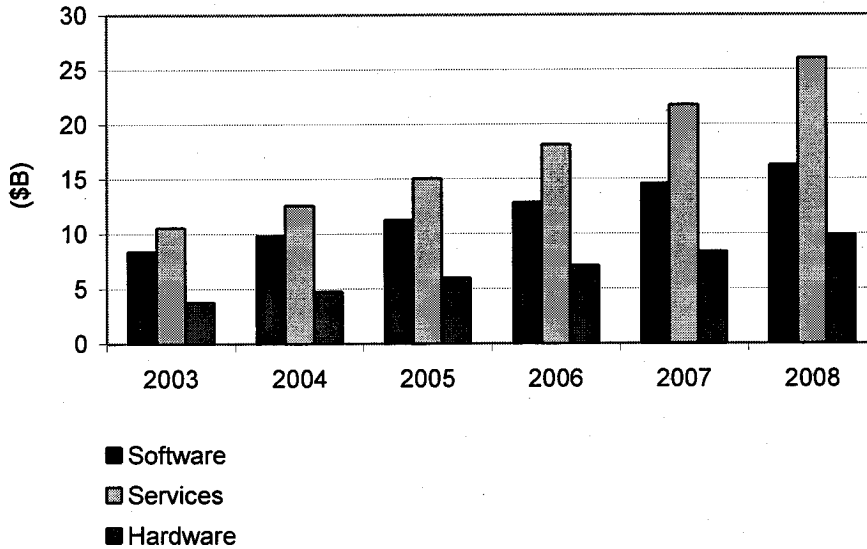
Source: IDC, 2004

TABLE 2

Key Forecast Assumptions for the Worldwide IT Security Market, 2004–2008

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Macroeconomics				
Economy	Worldwide economic growth will continue to recover slowly from 2001 levels to traditional levels, which will be slightly below those in Consensus Economics' April 4 forecast.	**Moderate.** Economic growth will begin to have a positive impact on IT spending.	↑	★★★★☆
Policy	Alan Greenspan is saying that the deficit may be dangerous, hinting that interest rates may rise. It is possible that the real estate bubble will burst. Healthcare costs will continue to rise.	**Moderate.** The deficit and rising interest rates could result in net-new IT spending if compliance projects don't displace other IT projects on a 1:1 basis.	↓	★★★★☆

TABLE 2

Key Forecast Assumptions for the Worldwide IT Security Market, 2004–2008

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Profits	Pretax profits will be more than 10% in the United States. Consensus Economics' April 4 forecast will hold.	**Moderate.** IT spending will begin to increase as individual company profits improve.	↑	★★★★☆
Iraq	The war in Iraq will continue, with Saddam Hussein deposed and discredited. Travel restrictions will be lifted, and the aura of uncertainty affecting business decisions will dissipate. The war is still being financed with U.S. government debt.	**Low.** Economic uncertainty over Iraq will impact IT spending.	↓	★★★☆☆
Post-Iraq	There will be no Iraq-like war and no abnormal activity one way or the other.	**Low.** There will be no impact.	↔	★★★☆☆
Contagion	There are no major contagions on the immediate horizon.	**Low.** The impact of any outbreaks will likely be limited to small local areas. The exception could be the discovery of substantial mad cow disease in the United States.	↔	★★★★☆
Other geopolitics	The threat of terrorism at home and other potential armed political conflict will neither escalate nor abate.	**Moderate.** Business decisions and project initiation will begin in-line with a better economic outlook.	↔	★★★☆☆
U.S. elections	U.S. elections are a wild card for the forecast period in the short term.	**Moderate.** Traditionally, election years have been good for the economy; the issue will be what happens in 2005.	↔	★★★★☆
Energy	Oil prices are on the rise.	**High.** Oil prices are less predictable, which is not so good for business.	↓	★★★★☆

TABLE 2

Key Forecast Assumptions for the Worldwide IT Security Market,
2004–2008

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Inflation	Inflation will remain under control. Over the next three years (according to Consensus Economics), expectations for the United States, Western Europe, and Asia/Pacific are that consumer prices will rise by less than 2%. Eastern Europe and Latin America, however, will continue to see double-digit inflation. There will be no deflation.	**Moderate.** Business confidence will be unaffected.	↔	★★★★☆
Unemployment	Unemployment will slowly tail off but remain above 5% in the United States and flat in Europe. There will not be a lot of job creation in the United States.	**Moderate.** More employment will drive more need for IT infrastructure and is a lagging indicator of an economic recovery; job creation should be accompanied by a willingness to invest in other areas.	↑	★★★☆☆
Telecom	The telecom industry will begin to recover.	**Low.** The IT industry has already factored this in.	↔	★★★★☆
Government and trade	Government budget deficits and trade imbalances will remain neutral in their impact on IT. The dollar may strengthen somewhat. The mood of Europe toward the United States is a concern; anger over the war in Iraq may create an informal protectionism.	**Moderate.** The strengthening of the dollar may help U.S. software companies somewhat.	↔	★★★☆☆
Scandals	The Enron, WorldCom, Tyco, and Parmalat scandals will recede into memory, and business and consumer confidence will begin to return.	**Low.** There will be no change.	↔	★★★★☆

TABLE 2

Key Forecast Assumptions for the Worldwide IT Security Market, 2004-2008

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Exchange rates	Improved profits in the United States, with the possibility of interest rates going up, may strengthen the U.S. dollar somewhat. Top IT vendors' growth will be attributable mainly to the decline in the dollar.	**Moderate.** This may accelerate IT exports from exporting countries into the United States.	↔	★★★☆☆
Expansion of the eurozone	Increases will need to manage business automation and integration.	**Low.** There will be a balance of spending, with jobs/production moving to Eastern Europe (shutting down of some existing systems), freeing up alternative IT spending in Western Europe.	↔	★★★★☆
Compliance	With regulations such as Sarbanes-Oxley, Basel II, and HIPAA, increased compliance legislation within the United States and Western Europe will increase transparency in many industries.	**Moderate.** Compliance regulations may begin to have an effect on software spending in 2005 and beyond. Compliance will affect areas of infrastructure software and services such as security and storage and applications areas such as records management, content management, and business performance management (to name a few).	↑	★★★★☆
Technology/ service developments				
Software complexity	Years of add-on and point-to-point integration strategies have resulted in an overcomplex infrastructure. Demand for simplicity and agility will require a focus on business process as opposed to technology itself.	**Moderate.** The complexity crisis will maintain the need for integration, but the demand for high quality and productivity could deter skeptical buyers from existing product offerings. Increasingly, this functionality may be delivered as an IT or business service.	↔	★★★★☆

TABLE 2

Key Forecast Assumptions for the Worldwide IT Security Market, 2004–2008

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Linux	Technical IT users will lead application deployment, with homegrown applications moving first. Mainstream software is also moving toward application serving on Linux.	**Low.** This will have a downward impact on price pressures.	↔	★★★★☆
Mobility	Application and user-focused mobile deployments are now addressing business needs, which are being driven by line of business. The need for more devices with useful applications will continue.	**Low.** This will have a low impact on overall software growth.	↑	★★★★☆
Utility computing	Multinational vendors will continue to drive the concept of utility computing in various forms, but the concept is not well defined in the marketplace.	**Low.** This will have a low near-term impact on software revenue. Software spending may pick up toward the end of the forecast period.	↑	★★☆☆☆
Killer apps	New technology (e.g., Web services, wireless LANs, storage area networks, clustering, and high-growth software areas) will help drive price performance to attractive levels that support new IT spending growth.	**Moderate.** No killer apps or new technologies will come to drive overall industry growth in the same way Windows and Office suites did in the 1980s or the Internet did in the late 1990s. Web services will continue to be mostly a software development technique.	↔	★★★★☆
Labor supply				
Productivity management	Job creation in the United States and Europe will not be prevalent.	**Moderate.** This will impact increasing software revenue growth.	↑	★★★☆☆
Offshoring	Skill supplies will be fulfilled with offshore software development. Developer jobs will not be returning to the United States or Western Europe.	**Low.** This will have little impact on overall software growth. The job market and pricing pressure are already major factors in Western Europe.	↔	★★★★☆

Key Forecast Assumptions for the Worldwide IT Security Market, 2004–2008

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Capitalization				
Venture	Venture funding will begin to pick up, but funding amounts will be smaller.	**Low.** Money will continue to open up.	↑	★★★★☆
Stocks	There will be a modest upward trend worldwide, but the U.S. stock market may be overpriced and may go down, causing some small increases in inflation in the United States.	**Moderate.** This will create decreased business confidence in the United States.	↓	★★☆☆☆
Market characteristics				
Large enterprise software renewals	There will be extreme price pressure on large enterprise software renewals.	**Moderate.** This will have an impact on changing software revenue growth.	↓	★★★★☆
Software licensing	Attention to building predictable revenue streams through nontraditional software licensing models will increase.	**Moderate.** Short term, there will be less of an impact on overall software revenue. Toward the back end of the forecast period, the impact on software revenue will be higher.	↑	★★★★★
U.S. homeland security	There will be an increase in government programs to improve homeland security and protect against terrorism.	**Low.** Security spending is not significantly on software yet; spending is currently on physical security. Software growth will be affected beyond the five-year forecast period.	↔	★★★☆☆
Services-oriented architectures	Services-oriented architectures will allow companies to speed the development of modularized applications and respond faster to new business pressure.	**Moderate.** In the short term, existing systems will be rearchitected and new integration technologies will be deployed, which will improve business processes/ automation. In the midterm, applications will begin to be replaced.	↑	★★★★☆

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TABLE 2

Key Forecast Assumptions for the Worldwide IT Security Market, 2004–2008

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Application verticalization	There will be demand for clear and unique software vendor product differentiation, faster implementation, and more relevant "out of box" solutions.	**High.** This demand will require vendors to develop more sophisticated partnerships and increase market applicability of offered solutions (particularly to SMEs).	↔	★★★★☆
Market ecosystem				
Services	IT services will continue to grow as companies attempt to concentrate on what they do best and rely on IT services to handle complexity they cannot. Companies clearly see the advantages of using outside services and outsourcers. IT services will grow faster than the overall IT market as budgets shift from internal spending to external companies.	**Moderate.** These trends are already factored in.	↔	★★★★☆
Consumption				
Buying sentiment	IT buyers will begin to moderately spend again as the economy improves; CIOs will begin to replace hardware and operating systems, begin to spend on mobility, and regain the attitude that IT spending is critical to the well-being of a company (or household). IT spending as a percentage of revenue (or income) will increase.	**Moderate.** These trends are already factored in.	↑	★★★★☆
Saturation	PC and Internet markets will continue to saturate, but emerging geographies will invest and new applications will drive users to multiplatform usage.	**Moderate.** These trends are already factored in.	↔	★★★★☆

Legend: ★☆☆☆☆ very low, ★★☆☆☆ low, ★★★☆☆ moderate, ★★★★☆ high, ★★★★★ very high

Source: IDC, July 2004

ESSENTIAL GUIDANCE

IDC expects the IT security market to continue to enjoy healthy growth across the geographic regions and market segments. We believe the fragmented nature of the competitive landscape requires IT security vendors to be especially prudent in examining the options open to them and assessing the opportunities and strategies to best position them to thrive in the evolving marketplace. Vendors within the IT security market should consider the following actions:

☑ **Customize and articulate marketing messages.** When developing go-to-market strategies, take into consideration the different nuances, buying behaviors, and security requirements of small, medium-sized, and large organizations, in addition to the various industries in which they operate. Each segment and industry carries its own values and measurements for risk and return on investment.

☑ **Progressively move up the value chain.** Within an organization's decision-making process, more constituents have been involved in security purchasing decisions and direction of security strategy. These influencers are typically not in the IT department but at the management (e.g., line of business) or executive level. IDC believes it is important — and challenging — to reach this level and gain their mindshare pertaining to security solutions execution. For some vendors that recognize their limitations, partnering has proven to be an effective strategy to penetrate this corporate ceiling.

☑ **Use a consultative approach to client problems.** Newer opportunities such as identity management, risk management, and application security still lack generally accepted definitions. They are too recent and/or too broad to have become defined solution areas. As a result, vendors should emphasize their ability to enhance productivity, reduce risk, and lower total cost of ownership by linking prospects' business problems with their security solutions.

☑ **Keep in mind that security products and services that can simplify the complexity associated with managing multiple security solutions, while at the same time increasing the effectiveness of protection, will be key.** Government and industry regulations will continue to put unprecedented pressure on corporations to secure access to information and applications not just with employees but also with customers, partners, and contractors. Moreover, budgetary and staffing constraints will continue to drive organizations to look for better ways to cost-effectively manage their security infrastructure.

☑ Remember that the keys to success in the threat management security appliance market will be product differentiation through improved performance and features. With the proliferation of so many appliances, customer confusion can occur. For vendors to win in such a competitive environment, they need to stand out in the marketplace. This can be done in a number of ways: price, performance, the mix of security functions incorporated in the device, improved manageability, security knowledge services, or security certification.

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LEARN MORE

Related Research

- *Worldwide Security and Vulnerability Management 2004–2008 Forecast and 2003 Vendor Shares: The Death of Security 3A, Part II* (IDC #32008, November 2004)

- *Worldwide Identity and Access Management 2004–2008 Forecast and 2003 Competitive Vendor Shares: The Death of Security 3A, Part I* (IDC #31997, November 2004)

- *Worldwide Vulnerability Assessment and Management 2004–2008 Forecast and 2003 Vendor Shares: Assessing Risk and Compliance* (IDC #32026, October 2004)

- *Worldwide Intrusion Detection and Prevention 2004–2008 Forecast and 2003 Vendor Shares: Introducing the FireDoor* (IDC #32004, October 2004)

- *Worldwide Threat Management Security Appliances 2004–2008 Forecast and 2003 Vendor Shares: The Rise of the Unified Threat Management Security Appliance* (IDC #31840, September 2004)

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- *Worldwide Secure Content Management 2004–2008 Forecast Update and 2003 Vendor Shares: A Holistic View of Antivirus, Web Filtering, and Messaging Security* (IDC #31598, August 2004)

- *IDC's Software Taxonomy, 2004* (IDC #30838, February 2004)

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MARKET ANALYSIS

Worldwide Storage Services Market 2005–2009 Forecast

Doug Chandler

IDC OPINION

IDC forecasts that the worldwide storage services market will grow at a compound annual growth rate (CAGR) of 5.8% from 2005 to 2009. IDC forecasts that the U.S. storage services market will grow at a 4.3% CAGR during the same period. Key trends in the storage services market forecast include the following:

☑ Leading storage firms are expanding their professional services coverage by both developing services offerings in-house as well as partnering with more specialized firms when appropriate.

☑ Continued pressure to run cost-efficient, user-friendly storage technical support operations is driving vendors to invest in support automation tools and also put certain functions offshore to reduce labor costs.

☑ Customers continue to look for outside help in consolidating their storage operations, improving their backup-and-recovery process, and developing a strategy regarding regulatory compliance issues pertaining to storage.

IN THIS STUDY

Methodology

The forecast presented in this study represents IDC's best estimates and projections for 2005–2009 based on the following:

☒ Reported and observed trends and events in 2004 and their predicted impact on the particular services market for the five-year period (The base year is 2004, and the forecast years are 2005–2009.)

☒ Analyst predictions of future segment-specific developments, including the anticipated impacts of customer behavior, supplier actions, market competition, and relevant changes in the regulatory environment (These predictions are based on demand- and supply-side research conducted by IDC analysts on an ongoing basis in the form of interviews, surveys, case studies, and analysis of company and market data.)

☒ IDC's worldwide services forecasting process, which gathers and reconciles input from local IDC analysts in 43 countries as well as dedicated regional service analysts from IDC's services expertise centers in Europe, Asia/Pacific, and Latin America (Market numbers are collected at the local level and then aggregated at the regional level before they are finally rolled up to the worldwide level.)

☒ IDC services spending surveys, in which IDC speaks with end users to understand what would drive or hinder their services spending to help forecast change in services spending

☒ An IDC-wide set of general economic and geopolitical assumptions

☒ An IDC services–wide set of assumptions about the IT and business services industries

In addition, please note the following:

☒ This document is based on information obtained by IDC as of March 9, 2005.

☒ This document replaces the forecast and analysis published in IDC's *Worldwide and U.S. Storage Services 2004–2008 Forecast: The Opportunity Shifts* (IDC #31042, March 2004).

For more information on IDC's services taxonomy, see *IDC's Worldwide Services Taxonomy, 2005* (IDC #32904, March 2005).

SITUATION OVERVIEW

The Storage Services Market in 2004

The overall data storage market continued on its uneven growth path in 2004. Overall, the disk storage systems market showed modest growth of 3.2%, year-over-year, even as the total amount of storage hardware capacity sold continued to climb, reflecting the continuing commoditization of disk capacity. Storage software revenue, on the other hand, grew by over 16% compared with 2003 — a significant jump. Meanwhile, the worldwide storage services market also showed solid growth of over 10% year over year in 2004.

Much of the growth in the services market pertained to the sheer amount of storage capacity that continues to be purchased and installed by customers of all sizes. With this capacity growth comes the need to introduce the automation (software) as well as the management expertise (services) that will allow these growing environments to be run efficiently.

On the services side, we have entered a new era where traditional support and maintenance is being increasingly automated, through advances in remote monitoring and diagnostics tools, customer support automation, and better leveraging of networks to provide global services. Meanwhile, many traditional storage technology firms have invested more in professional services as they pursue the opportunity to provide consulting and integration services across complex, networked storage environments.

FUTURE OUTLOOK

Forecast and Assumptions

Table 1 summarizes the IDC-wide set of macroeconomic and geopolitical assumptions and IDC services–wide set of macrolevel services industry assumptions that provide a common context for the current set of IDC worldwide and U.S. services market forecasts. The specific set of key assumptions influencing this forecast are presented in separate tables.

IDC believes that the storage services market will continue to show growth across all regions through 2009, with the greatest growth occurring in Asia/Pacific during this period (see Table 2). The United States, representing the single largest market by country, will also show growth, albeit at a slower pace than other regions shown here (see Table 3). The specific set of key assumptions influencing this forecast are presented in Tables 4 and 5.

A more detailed analysis of the storage services market in 2004, including storage services spending by services segment as well as vendor revenue and shares, will be published later in 2005.

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TABLE 1

IDC Macroeconomic and Macrolevel Services Assumption Summary

Market Force	Assumption
Macroeconomics	
Economy	Worldwide economic growth will continue to recover slowly to traditional levels.
Exchange rates	In the long term, there could be further declines tied to the U.S. trade imbalance and deficits. For 2005, IDC believes Asian banks will continue to invest in U.S. securities and keep the dollar from falling precipitously. We do expect the dollar to fall slightly in 2005.
Stocks	In 2004, the stock market remained essentially flat. In 2005, we expect the stock market to stay flat in the short term and then slowly rise again.
Corporate profits	Profit growth, though lower than in 2004, is expected to be positive, especially for the United States. Much of the early growth was from cost cutting, but more is now coming from revenue.
Consumption	
Buying sentiment	IT buyers have switched from neutral to optimistic, although they are still more concerned with "doing more with less" than developing breakthrough applications for competitive advantage. In the latest monthly polls of IT and business executives in the September 2004 IDC FutureScan, the combined expectation was 8.5% growth in IT spending in the next 12 months. Lines of business are beginning to drive new initiatives as they try to take advantage of the improving economy. Key areas include sales force performance; upgrades to their ERM, CRM, and supply chain systems; business intelligence and customer insight; and gaining a single view of their customers.
Offshore sourcing	The rise of offshore IT services is creating a new dynamic for IT services firms. On the one hand, they now face price competition from offshore providers; on the other hand, they are impelled to make their own investments in offshore capabilities. IDC forecasts that by 2008, $12 billion worth of U.S. IT services will be outsourced to low-cost offshore firms. This will be a highly political issue in the United States and Western Europe, but the real impact on IT forecasts is what it means for services firms.
Market ecosystem	
Hardware	Hardware markets will continue to consolidate, but pockets of growth will occur. Infrastructures acquired before Y2K will be replaced and upgraded in 2005, but increasing price pressure will negate significant revenue gain. Consolidation will slow, and consolidated centers will begin to buy new equipment to keep up with the workload. Some major infrastructure upgrades are possible in 2005.
Software	The software market will remain a mix of slow-growth and high-growth markets, with the latter beginning to dominate during the forecast period.

Notes:

These assumptions update those found in IDC's *Worldwide and U.S. Storage Services 2004–2008 Forecast: The Opportunity Shifts* (IDC #31042, March 2004).

See Tables 4 and 5 for key forecast assumptions for the storage services market.

Source: IDC, 2005

TABLE 2

Worldwide Storage Services Spending by Region, 2004–2009 ($M)

	2004	2005	2006	2007	2008	2009	2004–2009 CAGR (%)
Americas	11,837	12,725	13,347	13,911	14,282	14,660	4.4
Asia/Pacific	2,637	2,930	3,249	3,571	3,922	4,326	10.4
EMEA	11,273	12,125	12,932	13,683	14,413	15,120	6.0
Worldwide	25,746	27,779	29,528	31,165	32,617	34,106	5.8

Notes:

This forecast updates the one found in IDC's *Worldwide and U.S. Storage Services 2004–2008 Forecast: The Opportunity Shifts* (IDC #31042, March 2004).

See Table 4 for key forecast assumptions.

Source: IDC, 2005

TABLE 3

U.S. Storage Services Spending, 2004–2009

	2004	2005	2006	2007	2008	2009	2004–2009 CAGR (%)
Spending ($M)	11,289	12,144	12,732	13,260	13,592	13,930	4.3
Growth (%)	NA	7.6	4.8	4.1	2.5	2.5	

Notes:

This forecast updates the one found in IDC's *Worldwide and U.S. Storage Services 2004–2008 Forecast: The Opportunity Shifts* (IDC #31042, March 2004).

See Table 5 for key forecast assumptions.

Source: IDC, 2005

TABLE 4

Key Forecast Assumptions for the Worldwide Storage Services Market, 2005–2009

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Macroeconomics				
Economy	Worldwide economic growth will continue to recover slowly to traditional levels.	**High.** The economy is now a positive influence on IT spending.	↑	★★★★☆
Consumption				
Move to networked storage	Medium-sized and small businesses will move rapidly to networked storage implementations and will need help in doing so.	**Moderate.** The demand for services in this segment may not be met adequately by either OEMs or channel partners.	↑	★★★★☆
Data management and protection	Customers will continue to look for help in improving their backup-and-recovery processes, through a combination of software and services.	**Moderate.** Some customers will focus on software investment rather than externally provided services.	↑	★★★★☆
Market ecosystem				
Storage hardware market trends	Hardware pricing pressures will impact hardware support and other hardware-specific services.	**High.** With hardware devices becoming more modular and less expensive, service pricing will be directly impacted.	↓	★★★☆☆
Storage software market trends	Customers will not yet benefit from the promises of virtualization software and, in fact, will need help designing virtualization deployments, and implementing them, once they've committed to this technology.	**Moderate.** Demand for help with virtualization will be tempered by customer uncertainty about its promises.	↑	★★★★☆

TABLE 4

Key Forecast Assumptions for the Worldwide Storage Services Market, 2005–2009

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Market characteristics				
Solutions sales strategy	Vendors' storage solutions strategies will focus on software and services, but success to date has varied by supplier.	**Moderate.** Many customers will turn to external services whether or not they are packaged as part of a "solution."	↔	★★★☆☆
Utility or grid IT	Customers will continue to be largely confused or indifferent to "utility IT" options, except for certain niche applications.	**Low.** With few utility storage options available, most customers stick with traditional storage acquisition practices.	↔	★★★☆☆
Regulatory compliance	Storage services players will see spending that can be tied to customers' compliance concerns, but in many cases a compliance specialist firm will benefit most from the services spend.	**Moderate.** The impact of compliance varies by vertical industry and organization size.	↔	★★★☆☆

Legend: ★☆☆☆☆ very low, ★★☆☆☆ low, ★★★☆☆ moderate, ★★★★☆ high, ★★★★★ very high

Note: These assumptions update those found in IDC's *Worldwide and U.S. Storage Services 2004–2008 Forecast: The Opportunity Shifts* (IDC #31042, March 2004).

Source: IDC, 2005

Key Forecast Assumptions for the U.S. Storage Services Market, 2005–2009

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Macroeconomics				
Economy	Worldwide economic growth will continue to recover slowly to traditional levels.	**High.** The economy is now a positive influence on IT spending.	↑	★★★★☆
Geopolitical	Terrorism alerts will remain high, and terrorism acts outside the Middle East will have diminished. The Iraq war will cause more uncertainty over geopolitics than ever. IDC assumes that there will be no activities or initiatives sufficient to affect IT market forecasts.	**Low.** There is little reason for economic uncertainty over Iraq to impact IT spending. Peace in the region would improve foreign investment and, ultimately, lessen terrorism. Business decisions and project initiation will begin in line with a better economic outlook.	↔	★★☆☆☆
Consumption				
Move to networked storage	Medium-sized and small businesses will move rapidly to networked storage implementations and will need help in doing so.	**Moderate.** The demand for services in this segment may not be met adequately by either OEMs or channel partners.	↑	★★★★☆
Data management and protection	Customers will continue to look for help in improving their backup-and-recovery processes, through a combination of software and services.	**Moderate.** Some customers will focus on software investment rather than externally provided services.	↑	★★★★☆
Market ecosystem				
Storage hardware market trends	Hardware pricing pressures will impact hardware support and other hardware-specific services.	**High.** With hardware devices becoming more modular and less expensive, service pricing will be directly impacted.	↓	★★★☆☆
Storage software market trends	Customers will not yet benefit from the promises of virtualization software and, in fact, will need help designing virtualization deployments and implementing them once they've committed to this technology.	**Moderate.** Demand for help with virtualization will be tempered by customer uncertainty about its promises.	↑	★★★★☆

TABLE 5

Key Forecast Assumptions for the U.S. Storage Services Market, 2005–2009

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Market characteristics				
Solutions sales strategy	Vendors' storage solutions strategies focus on software and services, but success to date has varied by supplier.	**Moderate.** Many customers will turn to external services whether or not they are packaged as part of a "solution."	↔	★★★☆☆
Utility or grid IT	Customers will continue to be largely confused or indifferent to "utility IT" options, except for certain niche applications.	**Low.** With few utility storage options available, most customers stick with traditional storage acquisition practices.	↔	★★★☆☆
Regulatory compliance	Storage services players will see spending that can be tied to customers' compliance concerns, but in many cases a compliance specialist firm will benefit most from the services spend.	**Moderate.** The impact of compliance varies by vertical industry and organization size.	↔	★★★☆☆

Legend: ★☆☆☆ very low, ★★☆☆☆ low, ★★★☆☆ moderate, ★★★★☆ high, ★★★★★ very high

Note: These assumptions update those found in IDC's *Worldwide and U.S. Storage Services 2004–2008 Forecast: The Opportunity Shifts* (IDC #31042, March 2004).

Source: IDC, 2005

ESSENTIAL GUIDANCE

IDC identifies the following as key challenges for competitors in the storage services market, especially storage technology firms:

☑ Training the sales force on a more consultative/solutions sales model

☑ Providing excellent support/maintenance while keeping internal costs down through automation and other methods

☑ Determining when to develop the services offering in-house and when to partner for it

☑ Developing and managing effective programs to sell and deliver service through indirect channel partners

☑ Developing and offering options to customers for usage-based pricing and managed services

IDC identifies the following as key storage services opportunities, again with storage technology firms as the focal point:

☑ The development of high levels of customer satisfaction through excellent services, which help keep the client as a loyal customer even as challenges develop regarding the supplier's technology market leadership

☑ The creation of deeper customer relationships as a "trusted partner" at multiple levels within the customer's organization

☑ The creation of professional services offerings around specific, proprietary intellectual property

☑ The following specific services-related opportunities:

   ❑ Information life-cycle management (ILM)

   ❑ Consolidation and data migration

   ❑ Managed services

   ❑ Compliance

   ❑ Business continuity/data protection

IDC expects to see continued pressure on storage services pricing and profit margins. This is partly related to the overall downward pressure on IT services pricing overall. It is also tied to the continued fall in prices for storage hardware, as well as the fact that the storage subsystems segment showing the greatest growth for technology sales is the midrange storage (versus high-end) segment. Customers today are exercising greater leverage about what they'll pay for, regarding storage services as well as services in general. Software licensing practices, in particular, have come under fire from frustrated customers, leaving the future of software support pricing somewhat in doubt.

Even so, storage hardware and software suppliers can still count on relatively healthy margins from their services businesses, compared with those derived now from hardware sales, especially. For some firms, healthy customer support margins are used to subsidize initiatives in professional services.

LEARN MORE

Related Research

☑ *GlassHouse, Eyeing Further Expansion, Is Awarded a GSA Schedule Contract* (IDC #32260, November 2004)

☑ *Hitachi Data Systems Pursues a Solutions Strategy* (IDC #32075, October 2004)

Definitions

Storage services includes professional services (e.g., consulting, integration, and management) and support services that augment or manage an organization's storage infrastructure (from *IDC's Worldwide Services Taxonomy, 2005,* IDC #32904, March 2005).

What We Mean by Storage Services

This study focuses on the market for externally provided services that pertain specifically to storage hardware, software, and associated network devices. These storage-related services include consulting, implementation, integration, management, and support services. These services are often (but not exclusively) sold in the context of storage product sales. Although the storage utility or SSP market is related to the storage services market, the focus here is on services delivered on storage infrastructure that is owned and operated by the customer. The exception would be storage management that is provided in the context of a traditional (not on-demand) outsourcing agreement.

Storage Services Definitions

☑ **Consulting:** Storage consulting typically consists of assessment and design services pertaining to storage devices and software. It may include an in-depth total cost of ownership (TCO) and/or ROI assessment of a client's currently installed storage or potential storage technology purchases. In particular, many storage consulting engagements today focus on customers' migration from direct-attached storage to networked storage infrastructures.

For the purposes of IDC's storage services forecast, we include training as an element of storage consulting.

☑ **Implementation/integration:** This category captures both the implementation and integration of direct-attached storage devices as well as networked storage technology (including fabric and devices). These services may be purchased within larger consulting/integration contracts in which initial assessments are made before actual implementation and integration begins. In the case of heterogeneous implementations such as SANs, much of the integration work focuses on making a variety of technology types and brands operate together. (Note: Spending on installation of storage devices is also captured in this category.)

☑ **Management:** Storage management services typically consist of ongoing sets of offerings designed to deliver maximum utilization and performance from a customer's installed storage. Much storage management today is provided under large outsourcing contracts. Services may include change management, device optimization and tuning, hardware upgrades, and other services that are delivered on a periodic basis. IDC distinguishes between storage monitoring services (often delivered remotely), which focus primarily on reporting pertinent data, such as capacity usage and system failures, and actual management services, which involve periodic changes made to storage infrastructures and typically require at least occasional onsite visits from storage engineers.

☑ **Support:** Storage support services include onsite maintenance, telephone support, and other remedial services, usually delivered in response to partial or total system failures. Parts repair and remote monitoring/diagnostics also are captured in this category when they are delivered as part of support agreements. Some service providers also deliver change management services under support contracts.

Technology Terms

☑ **Disk storage system:** IDC defines a disk storage system as a set of storage elements, including controllers, cables, and (in some instances) a host bus adapter associated with three or more disk drives. A system may be located outside of or within a server cabinet. Thus, nearly all storage within large-, medium-, and small-scale servers are considered by IDC to be storage systems.

☑ **External storage:** External storage encompasses all disk storage systems outside of the server enclosure. It includes JBOD storage as well as RAID. By definition, the RAID controller must reside within the external disk storage enclosure for the system to be classified as external RAID.

☑ **Just a bunch of disks (JBOD):** JBOD is a storage system that does not contain any disk redundancy levels.

☑ **Redundant array of independent/inexpensive disks (RAID):** RAID encompasses all storage systems shipped with RAID capability. IDC categorizes RAID either as internal (the disks and RAID controller are contained within a server) or external (the disks and RAID controller are located within an external storage cabinet).

☑ **External RAID:** This is external storage with RAID protection provided by a controller located within the (external) disk storage system. If RAID functionality is provided to an external disk system by a server-based controller, server base RAID on motherboard, or software, the storage system is classified as JBOD.

☑ **Internal RAID:** This is storage located within the server enclosure that affords RAID functionality via either software or a RAID controller.

☑ **Networked storage:** This refers to all disk storage systems that are not directly attached to a server.

☑ **Fibre Channel (FC) SAN:** This is networked storage that supplies data to one or more server/systems by connecting to them through a hub or switch. In this document, SAN revenue includes the value of the disk storage arrays and host bus adapters when the latter are sold at the initial point of sale. The value of hubs and switches within the SAN fabric is not included. SAN management software is also excluded from the valuation.

☑ **ESCON/FICON SAN:** This refers to ESCON and FICON director-based storage.

☑ **iSCSI SAN:** This refers to any storage system that supports the standard iSCSI protocol, which is based on the transfer of block-level storage over the IP.

☑ **Fabric SAN:** This refers to the combination of FC SAN and iSCSI SAN.

☑ **Total SAN:** This refers to the combination of FC SAN, ESCON/FICON SAN, and iSCSI SAN.

☑ **Network-attached storage (NAS):** NAS is an external disk storage system that attaches to a LAN, communicates at a file level, and contains an internal operating system optimized for file serving. NAS gateways, or "heads," are not segmented separately in this study.

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SMB Web Hosting Trends—Private-Label Strategy and Critical Success Factors

YANKEE
G R O U P

Web hosts employ various strategies to grow their business

The company web site is becoming integral to how SMBs service existing customers, gain trust and credibility with new customers and business partners, and market and advertise their company (see the Yankee Group research note, *Evolving SMB Web Hosting Market Dynamics Require Web Hosts to Change*, July 2004). In the next 12 months, web hosts are poised to grow their business organically by acquiring new customers (compared with growing mainly through acquisitions). The timing is good since our checks into the market show more SMBs are spending to grow their business—transitioning from operating purely for survival. This research note highlights our opinions of some key growth strategies and initiatives launched by major players in the SMB hosting space.

Question

Is private labeling or wholesaling shared hosting solutions a viable strategy for long-term growth?

Answer

Yes, only if the hosting company can (1) sell value-added services on top of basic hosting to drive higher ARPU and (2) find a distribution partner with skin in the game and is committed to sell hosting.

Wholesale pricing for hosting is going down and margins are getting squeeze. To build scale and maintain profit margins, web hosts need to optimize their platforms for cost and productivity efficiency. The positive impact of declining hardware costs is offset by a larger negative impact of ballooning customer care costs. Investment in online tools may help, but there's no question that customer expectations have risen, making it more challenging to deliver quality customer care. A web host needs to deliver an integrated set of value-added services like advertising, marketing and e-commerce services and design to offset declining ARPUs for a basic, undifferentiated, no-frills, shared hosting web space. Software automation companies, such as Ensim and Sphera, can help web hosts (mainly smaller hosts) achieve efficiency on the order provisioning and billing. However, web hosts need to have a value-added services offering strategy to maintain profit margins for the long term.

Finding the right partners is essential for success. This model is a not new. Major companies that are strongly branded in the SMB market, such as Bank of America, Staples and Office Depot, tried to resell hosting but were met with limited success for various reasons. The SBC-Yahoo! Web Hosting partnership is an example of a mutually beneficial partnership where both companies work closely together, co-market and co-brand their offerings and refer their respective customers to each other services.

The telco channel continues to have potential. Web hosting is not a typical service that telcos lead with to pitch a sale to SMB customers, but it is a tablestake service for DSL and DIA bundles that telcos target at SMBs. Working with telcos, particularly larger ones, requires handholding, resources and patience for the web host. The web host also needs to understand the telcos' back-end and front-end processes, which are optimized for voice versus usage-based hosting. They constantly look for tighter integration with other products and opportunities to directly control cost. A partnership with telcos requires understanding of and integration with their business and operational processes, including billing rating and billing feed, order provisioning, one-number customer care, etc.

Question

What are critical success factors for a web host? What are some examples of notable initiatives launched by web hosts?

Answer

Three major critical success factors for a web host are:

- **Lead with a value-based value proposition:** The fundamental value proposition that a web host needs to incorporate into their overall product and marketing strategy is helping SMBs succeed online. Selling customers a web site is only one piece of the story. Long-term strategy as a cost leader is unsustainable. The online lifecycle of a SMB starts with a domain name, e-mail address and web site followed by integrated web functions, such as design, merchandising, cross-channel marketing, catalog management, etc. A web host must be able to keep up with the customers' evolving needs. Exhibit 1 shows examples of value-based taglines used by leading SMB web hosts.

Exhibit 1.
Value Propositions from Leading SMB Web Hosts

Company	Tagline/Value Proposition	Estimated SMB Shared Hosted Web Sites
Affinity Internet	*"Guiding one million people to success"* *"Explore. Create. Succeed"*	190,000
Hostway	*"Hostway's plans and tools quickly and easily help you to build a Web presence, grow your business, attract new customers and sell online."*	N/A
Interland	*"Succeed Online: Interland has helped millions of small businesses reach their full potential. Don't dream of online success—achieve it!"*	181,000
Yahoo! Web Hosting	*"Your source for Web success"*	304,000

Source: The Yankee Group, 2004

- **Strengthen the company brand and grow organically:** The SMB web hosting market continues to be highly fragmented. Data from the *Yankee Group SMB Applications and Web Survey* show that not one company commands more than 5% to 7% of the SMB hosting market. Price continues to be the number one selection criterion in choosing a web host. Web hosts need to invest heavily in branding their companies as premium providers to gain market leadership in an undifferentiated marketplace. Gaining brand leadership will also give web hosts better customer ownership (via increased brand perception) and leverage when negotiating with partners and distributors.

Offering new services provide both upsell and new sales opportunities. On October 5th, Affinity Internet launched ValueTraffic, which is a full-service online advertising agency offering and positioned as an extension of the customer's sales and marketing department. For $100 a month, Affinity will develop an online marketing strategy for the customer, monitor its progress and guarantee a minimum of 10,000 ad views per month for ads placed on designated search engines and advertised web site sites. This offer helps Affinity Internet grow monthly ARPU of existing customers and also reaches out to win new customers that may or may not have a published web site but have the desire to advertise their business over the Internet.

Another strategy for web hosts to gain new customers is to lower the barrier of entry for small businesses to succeed online. Yahoo!Web hosting announced in August that it is now selling domain names for $9.95 per year; a one page starter web page is included. The strategy is to attract customers that are at the beginning of the online lifecycle and to upsell additional services when these businesses are ready to move along the internet services adoption curve.

- **Form strong distribution partnerships:** Reaching the 5.6 million SMBs in the United States is difficult because it requires extensive market coverage. Going to market will require distribution partners to gain a critical mass of SMB customers. However, web hosts must be selective in their partnerships and partner with companies that believe selling web services is key to growing customer ARPU and commit resources and dollars to make the partnership successful.

An example of such a partnership is Interland's recent announcement of its partnerships with Advanta, a financial services firm, and Dex Media, a Yellow Pages directory operating in the Qwest 14-state footprint to help more small businesses get online. Although it is too soon to determine how successful these partnerships will be, encouraging signs are that both partners seem to have skin in the game. In the Advanta partnership, the company will invest in the marketing of Interland's web services and will drop 1 million direct marketing mail pieces to its customers. According to Interland, Dex Media's direct salesforce is highly incentivized to sell Dex Web Clicks—the name of the private-labeled version of Interland's small business Web services.

Question

What are some leading and emerging web hosts to look out for?

Answer

We would include Affinity Internet, Yahoo!Web hosting, Interland, Hostway, GoDaddy, 1&1 Internet, Concentric, Verio, and CI Host as leading and emerging web hosts.

MARKET ANALYSIS

U.S. Landline 2004–2008 Forecast

Courtney Munroe   William Stofega
Wu Zhou

IDC OPINION

The U.S. wireline telecommunications services sector continues its precipitous decline. The industry will lose over $5 billion in revenue during 2004 and will decline across all segments. Overall revenue will decrease at a compound annual growth rate (CAGR) of 1.6% from 2003 to 2008. However, this masks the rapid decline of traditional voice services, which will decline by 6% per year over that period. This will be counterbalanced by the growth of VoIP services during that time frame. Other important trends over the forecast period include the following:

- ☒ **Industry consolidation.** The landline telecom sector has too many service providers chasing a declining market. IDC expects that over the next year the industry will experience supply-side consolidation. This could occur in a few different ways. Because of their relatively strong financial position, most people are predicting some form of ILEC/IXC acquisitions, with AT&T and MCI being the most vulnerable. However, other interesting mergers could include systems integrators such as IBM and telcos or telcos and cable MSOs.

- ☒ **Technology substitution.** Wireless and broadband continue to chip away at the bedrock of the landline sector. Access lines and landline minutes of use will continue to decline as users migrate to fixed-rate plans.

- ☒ **The consumer sector will decline a bit faster than the business sector.** Barriers to entry in the former are lower and make for a much more competitive segment. Even the large IXCs such as AT&T and MCI have announced their retreat from this segment. In the business segment, the competitive small business segment will experience the fastest decline.

- ☒ **Technology migration.** The data segment will experience significant change. In the business sector, private lines will decline the fastest, but will remain an important segment. IP VPNs and Ethernet are making significant inroads, while frame relay and ATM will decline.

IN THIS STUDY

This IDC study presents an overview of the U.S. landline telecommunications market. It provides an analysis of the local, long distance, and network access markets and forecasts revenue growth in these sectors through 2008. This study also forecasts telecommunications minutes of use (MOUs) for local, intra–local access and transport area (intra-LATA) toll, and inter-LATA as well as consumer and business splits. Forecast assumptions, key regulatory issues, and technology trends as they pertain to the small businesses market are included as well.

Methodology

The analysis and forecasts contained in this study draw on multiple sources of information, both public and proprietary. Research was conducted to identify industry trends, market shares, and growth curves for individual carriers as well as for specific telecommunications segments. The resulting projections reflect a compilation of IDC analyst perspectives spanning a range of industry segments. Data sources included financial reports filed with the SEC, industry data available from the FCC, and interviews with both local and long distance. Finally, the opinions and forecasts included in this document reflect ongoing IDC research and data collected in IDC surveys.

SITUATION OVERVIEW

Perhaps the biggest surprise of 2003 in the U.S. landline telecom market was the renewed interest in deploying VoIP services. Prior to the telecom nuclear winter, full-scale deployment of IP telephony and the death of the PSTN was imminent. However, economic uncertainty and the learning curve related to deploying IP-based services have slowed the migration to next-generation networks. A slow but steady economic recovery, renewed regulatory initiatives, and announcements by several carriers have converged to ignite interest in deploying VoIP. However, traditional circuit-switched telephony will continue to dominate over the next five years. Other findings include:

☑ **Technology substitution.** In the consumer sector, approximately 21% of all households have migrated to broadband services. This includes both DSL and cable modem services. This has and will continue to have a dramatic effect on dial access and thus second-line subscriptions. In addition, over 60% of consumer households currently subscribe to a wireless service. This has led to the reduction in demand for second lines from nearly 20% of all homes to less than 5%. Concurrently, the resulting loss in local and long distance usage has led to an average loss of 5% per year in access lines for ILECs. There is some evidence that the decline of access lines seems to be leveling off as the consumer wireless market becomes saturated. However, the ILECs should still expect to see continued migration to broadband and wireless-only households, as VoIP and wireless reliability improves in this sector. In the business sector, technology substitution focuses on the migration to converged IP-based circuits, away from frame relay and ATM dedicated services.

- ☑ **Bundling.** In the consumer segment, bundling has evolved as a key strategic instrument for the ILECs and MSOs as they battle for wallet share. This has currency in the small business segment. As seen in previous years, the ability to offer a bundle that includes local and long distance and voice is key to forming a successful bundle. However, in offering a bundle, small businesses expect at least a 20% discount in return for their loyalty to one provider. Although there will continue to be opportunities for those carriers that focus on data services, carriers that offer additional options will have a significant advantage.

- ☑ **Competition.** Competition in the landline space has centered around price and regulatory issues. Pricing has been a double-edge sword for telcos this year. Many, including RBOCs and IXCs, use pricing as a market-entry strategy to win contracts. However, giving the trends toward bundling, and the fact that enterprises continue to spend less every year, it is impossible for telcos to increase spending with enterprises come renewal time. One solution has been to increase market penetration. ILECs are doing this by plunging into long distance and data services. The emergence of a recharged MCI from bankruptcy has added some fuel to the market, as MCI has been very competitive on prices, a development that is an ongoing source of concern for survivors of the telecom crash. As part of its overall strategy, MCI will continue to target the small business customers for traditional voice and data products. However, in a slight shift in strategy, it seems that the new MCI is putting more marketing muscle behind its large enterprise products. Although competitors expect MCI to aggressively price its products, it is inconceivable that a strategy based solely on price will prevail. SBC is aggressively rolling out its national strategy, while Verizon and BellSouth are content to beef up their offerings within their regions. The IXCs' march into the local loop has withered with loss of the UNE-P battle. As a result, AT&T and MCI have retreated from the consumer market.

- ☑ **Regulatory.** Over the past three years and several court rulings, the FCC has been struggling to reshape the rules related to unbundled network elements. In August 2003, the FCC released its revised UNE rules. Although designed to clarify and stabilize, the ambiguities and overall dissatisfaction with the latest version of the rules has promptly sent incumbents and competitors to file briefs with the federal courts. Still, the current version of the rules clearly anticipates the end of UNE-P availability and also removes next-generation transmission and fiber loops from the UNE pricing scheme. Overall, regulatory uncertainty should not have a negative effect on small business landline deployments, but could shift revenue away from non-facilities-based carriers. In addition, carriers such as AT&T have launched a VoIP product for small businesses that does not rely upon last-mile access.

FUTURE OUTLOOK

Forecast and Assumptions

The U.S. landline telecom market is currently $221 billion. However, the market will decline over the next five years to just over $203 billion. The major reasons are priced-based competition among the 1,200 local services providers and hundreds of

long distance and virtual service providers. In addition, as stated earlier, technology substitution in the form of wireless and broadband services is also having an effect on the overall telecom sector.

Despite these challenging trends, the landline telecom market is still heavily dependent on voice services. As Table 1 shows, this segment still derives 75% or $168 billion of its revenue from the provision of voice services (IDC includes the provision of both TDM and IP-based voice services in this category). Pure data services will grow from $55 billion at year-end 2004 to approximately $63 billion or 31% of the overall market in 2008.

TABLE 1

U.S. Telecommunications Services Revenue by Segment, 2003–2008

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Revenue ($M)							
Telephony	168,556	160,798	154,007	148,271	144,226	140,470	-3.6
Data	52,686	55,046	57,331	59,222	61,385	63,128	3.7
Total	221,242	215,844	211,337	207,493	205,611	203,597	-1.6
Share (%)							
Telephony	76.2	74.5	72.9	71.5	70.1	69.0	
Data	23.8	25.5	27.1	28.5	29.9	31.0	
Total	100.0	100.0	100.0	100.0	100.0	100.0	

Notes:

Telephony includes local and long distance service, private line service, connection and access charges.

The forecast excludes directory assistance, advertising, and publishing.

Data services include X.25, frame relay, ATM, and IP services.

Wireless services are not included.

See Table 12 for key forecast assumptions.

Source: IDC, 2004

Table 2 shows IDC's revenue estimate and forecast for the business and residential markets. IDC is forecasting slower revenue growth for the consumer sector. Price competition will have an impact on revenue growth as more companies will battle for wallet share via bundling.

U.S. Business and Residential Telecommunications Services Revenue, 2003–2008

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Revenue ($M)							
Business	121,223	118,509	116,346	114,580	114,252	112,909	-1.4
Residential	100,019	97,335	94,991	92,914	91,358	90,688	-1.9
Total	221,242	215,844	211,337	207,493	205,611	203,597	-1.6
Share (%)							
Business	54.8	54.9	55.1	55.2	55.6	55.5	
Residential	45.2	45.1	44.9	44.8	44.4	44.5	
Total	100.0	100.0	100.0	100.0	100.0	100.0	

Notes:

Telephony includes local and long distance service, private line service, connection and access charges.

Data services include X.25, frame relay, ATM, and IP services.

Wireless services are not included.

See Table 12 for key forecast assumptions.

Source: IDC, 2004

Table 3 shows IDC's forecast of voice telephony services. This is segmented into local, long distance, and miscellaneous services. The long distance sector is declining the fastest, due to the tremendous price competition and migration to wireless and voice over broadband. The local sector will be partly shielded by state tariff regulations. However, toward the end of the forecast, IP-based voice services will accelerate the decline of TDM voice.

Table 4 shows IDC's business services forecast. The forecast is segmented by voice and data services. IDC is forecasting an increase in data service revenue over the forecast time frame. This growth is down considerable from the double-digit increases of a few years ago and the stable and declining rates of the last two years. However, IDC believes that despite price compression, the migration to IP and the adoption of managed services will result in slow but steady gains for service providers.

U.S. Wireline Telephony Revenue by Service, 2003–2008

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Revenue ($M)							
Local	97,792	94,687	91,988	90,198	90,083	89,902	-1.7
Long distance	60,045	55,284	51,084	47,029	42,989	39,302	-8.1
Other	10,719	10,826	10,934	11,044	11,154	11,266	1.0
Total	168,556	160,798	154,007	148,271	144,226	140,470	-3.6
Share (%)							
Local	58.0	58.9	59.7	60.8	62.5	64.0	
Long distance	35.6	34.4	33.2	31.7	29.8	28.0	
Other	6.4	6.7	7.1	7.4	7.7	8.0	
Total	100.0	100.0	100.0	100.0	100.0	100.0	

Notes:

Telephony includes local and long distance service, connection and access charges.

The forecast excludes directory assistance, advertising, and publishing.

See Table 12 for key forecast assumptions.

Source: IDC, 2004

U.S. Business Telecommunications Services Revenue by Service, 2003–2008 ($M)

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Local	53,757	52,083	50,477	49,174	49,305	48,720	-1.9
Long distance	34,460	31,746	29,429	27,107	24,660	22,439	-8.2
Data	29,448	31,086	32,811	34,633	36,585	38,010	5.2
Other	3,558	3,594	3,630	3,666	3,703	3,740	1.0
Total	121,223	118,509	116,346	114,580	114,252	112,909	-1.4

Notes:

Telephony includes local and long distance service, private line service, connection and access charges.

Data services include X.25, frame relay, ATM, and IP services.

Wireless services are not included.

See Table 12 for key forecast assumptions.

Source: IDC, 2004

In the small business market, IDC expects landline revenue to decline over the forecast period due to the effects of increased competition, VoIP adaptation, and bundles. The decline in voice revenue will be counterbalanced over the next few years by an increase in data revenue. Broadband Internet access and other managed services such as IP Centrex will contribute to a growth rate of 5.7% over the forecast period. Although the VoIP technology is now considered by many to be "battle hardened," only widespread deployment and adaptation by customers can confirm this observation. IDC does not expect any issues such as security and scalability to suddenly appear and adversely affect penetration. However, next-generation technologies have been subject to unforeseen problems (see Table 5).

TABLE 5

U.S. Small Business Telecommunications Services Revenue by Service, 2003–2008 ($M)

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Local	26,413	25,398	24,443	23,739	24,117	24,124	-1.8
Long distance	13,419	12,077	11,231	10,445	9,401	8,461	-8.8
Data	8,073	8,534	9,022	9,539	10,085	10,664	5.7
Other	1,013	1,023	1,033	1,044	1,054	1,065	1.0
Total	48,918	47,032	45,730	44,767	44,657	44,312	-2.0

Notes:

Small businesses have 1–99 employees.

Telephony includes local and long distance service, private line service, connection and access charges.

Data services include X.25, frame relay, ATM, and IP services.

Wireless services are not included.

See Table 12 for key forecast assumptions.

Source: IDC, 2004

The medium-sized business segment will experience a bit more stability than the small business sector. IDC is forecasting a slower decline in voice revenue and approximately the same growth in data services. The key for this segment will be the managed services sector. If service providers can cement their value proposition to this segment, they will stem revenue declines due to price competition and convergence in the data segment (see Table 6).

The all-important large enterprise segment will also remain stable over the next five years. There will be steep declines in long distance. The local sector will remain stable, as the large enterprise segment will be relatively slow to migrate to VoIP, and when they do, IDC is not forecasting a decline in spending in local services. Service providers will find additional opportunities in managing the transition to VoIP, as well as the provision of managed and other value-added services (see Table 7).

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TABLE 6

U.S. Medium-Sized Business Telecommunications Services Revenue by Service, 2003–2008 ($M)

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Local	13,565	13,287	13,015	12,782	12,714	12,515	-1.6
Long distance	10,935	10,169	9,457	8,795	8,180	7,607	-7.0
Data	10,032	10,592	11,181	11,803	12,471	12,922	5.2
Other	1,020	1,030	1,041	1,051	1,061	1,072	1.0
Total	35,552	35,079	34,693	34,431	34,426	34,117	-0.8

Notes:

Medium-sized businesses have 100–499 employees.

Telephony includes local and long distance service, private line service, connection and access charges.

Data services include X.25, frame relay, ATM, and IP services.

Wireless services are not included.

See Table 12 for key forecast assumptions.

Source: IDC, 2004

TABLE 7

U.S. Large Business Telecommunications Services Revenue by Service, 2003–2008 ($M)

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Local	2,948	2,795	2,656	2,597	2,878	3,101	1.0
Long distance	10,107	9,500	8,740	7,866	7,080	6,372	-8.8
Data	11,343	11,960	12,608	13,291	14,029	14,425	4.9
Other	1,525	1,540	1,556	1,571	1,587	1,603	1.0
Total	25,922	25,796	25,559	25,325	25,573	25,500	-0.3

Notes:

Large businesses have 500 or more employees.

Telephony includes local and long distance service, private line service, connection and access charges.

Data services include X.25, frame relay, ATM, and IP services.

Wireless services are not included.

See Table 12 for key forecast assumptions.

Source: IDC, 2004

Tables 8 and 9 show IDC's forecast of the local access line segment and a breakout of business and residential access lines. IDC expects continued across-the-board declines in landlines. Due to their large dense markets and the easy availability of alternatives such as Ethernet and broadband, the RBOCs will experience the fastest declines.

The residential segment is migrating to wireless and broadband. The business segment will experience consolidation of access and long distance circuits. Small businesses and the smaller sites of medium-sized and large enterprises will migrate to T1 circuits, Ethernet, and broadband solutions.

TABLE 8

U.S. Access Lines by Service Provider Type, 2003–2008

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Access lines (000)							
RBOC	138,932	130,593	125,824	118,749	109,816	100,005	-6.4
CLEC	27,000	26,460	23,814	22,623	22,171	21,727	-4.3
ITC	16,000	16,160	16,322	15,995	15,675	15,362	-0.8
Total	181,932	173,213	165,960	157,367	147,662	137,094	-5.5
Share (%)							
RBOC	76.4	75.4	75.8	75.5	74.4	72.9	
CLEC	14.8	15.3	14.3	14.4	15.0	15.8	
ITC	8.8	9.3	9.8	10.2	10.6	11.2	
Total	100.0	100.0	100.0	100.0	100.0	100.0	

Notes:

RBOC numbers do not include wholesale or UNE-P lines.

CLEC numbers include retail UNE-P lines.

See Table 12 for key forecast assumptions.

Source: IDC, 2004

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TABLE 9

U.S. Residential and Business Access Lines, 2003–2008

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Access lines (000)							
Residential	108,262	102,849	97,706	91,844	85,415	78,582	-6.2
Business	71,820	68,607	66,583	63,937	60,740	57,081	-4.5
Other	1,850	1,758	1,670	1,586	1,507	1,431	-5.0
Total	181,932	173,213	165,960	157,367	147,662	137,094	-5.5
Share (%)							
Residential	59.5	59.4	58.9	58.4	57.8	57.3	
Business	39.5	39.6	40.1	40.6	41.1	41.6	
Other	1.0	1.0	1.0	1.0	1.0	1.0	
Total	100.0	100.0	100.0	100.0	100.0	100.0	

Note: See Table 12 for key forecast assumptions.

Source: IDC, 2004

Table 10 shows IDC's forecast of landline MOUs. As in the access line and revenue, IDC is predicting declines in TDM minutes. Similarly, long distance will decline almost twice as fast as the local sector.

Table 11 shows MOU segmentation between business and residential usage. IDC expects a faster decline in the business sector as this sector migrates from switched access lines to private lines and broadband circuits.

Table 12 contains the key assumptions used to generate the forecast tables.

TABLE 10

U.S. Minutes of Use by Call Type, 2003–2008 (B)

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Local	3,690	3,454	3,264	3,132	3,008	2,893	-4.8
Long distance							
Intrastate	429	391	359	335	313	292	-7.4
Interstate	524	472	429	396	366	339	-8.3
Subtotal	953	863	788	731	679	631	-7.9
Reported domestic total	4,643	4,317	4,052	3,863	3,687	3,524	-5.4
Real domestic total (reported/2)	2,322	2,159	2,026	1,932	1,844	1,762	-5.4
International (originating domestically)	37	40	41	41	42	43	3.1
Total	2,358	2,198	2,067	1,973	1,886	1,805	-5.2

Note:

Wireline MOUs include voice traffic but exclude data and Internet telephony.

See Table 12 for key forecast assumptions.

Source: IDC, 2004

TABLE 11

U.S. Residential and Business Minutes of Use, 2003–2008

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Minutes of use (B)							
Residential	1,172	1,097	1,046	1,014	975	937	-4.4
Business	1,186	1,101	1,021	959	911	868	-6.1
Total	2,358	2,198	2,067	1,973	1,886	1,805	-5.2
Share (%)							
Residential	49.7	49.9	50.6	51.4	51.7	51.9	
Business	50.3	50.1	49.4	48.6	48.3	48.1	
Total	100.0	100.0	100.0	100.0	100.0	100.0	

Notes:

Wireline MOUs include voice traffic but exclude data and Internet telephony.

See Table 12 for key forecast assumptions.

Source: IDC, 2004

Key Forecast Assumptions for the U.S. Wireline Telecommunications Services Market, 2004–2008

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Macroeconomics				
Market dependence on economy	There will be steady economic growth. GDP growth shows a positive correlation with the demand for access lines, broadband circuits, and MOUs.	**High.** Strong economic growth will have an immediate impact in the consumer sector and is mitigating the decline in enterprise spending.	↑	★★★★★
Industry specificity				
Regulatory policy	There will be continued uncertainty as major issues such as UNE-P, access reform, and VoIP regulation are litigated.	**High.** Regulatory uncertainty and bickering over the legal status of VoIP will serve to squelch the growth of VoIP and stabilize the decline or slightly increase the growth of traditional landline service.	↑	★★★★☆
Monopolization	Incumbent carriers will continue to hold last-mile advantage. However, competition from cable MSOs and virtual network operators deploying VoIP will blunt the last-mile monopoly and bring increased competition and new services to consumers.	**High.** The advantages inherent in controlling the last mile will begin to melt away as VoIP service begins to grow and replace traditional circuit switched service.	↓	★★★☆☆
Technology/ service developments				
VoIP	Despite regulatory bickering, VoIP will eat away at traditional landline deployments. Carriers such as AT&T, Verizon, Comcast, and Vonage will promote VoIP services to consumers. This will reduce the number of voice landlines purchased by consumers.	**Moderate.** Gains will be limited due to uncertainty and misunderstandings about technology. However, the impact of this technology could be felt toward the end of the forecast period. Furthermore, unless VoIP providers can offer compelling new services, IP telephony will become nothing more than price arbitrage.	↓	★★★★☆

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TABLE 12

Key Forecast Assumptions for the U.S. Wireline Telecommunications Services Market, 2004–2008

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Bundling	Bundled products will continue to be popular with consumers. However, continued success of bundling will depend upon how well carriers are able to differentiate their bundles and integrate them into a seamless integrated service.	**High.** Aggressive discounts and "all you can eat plans" will help mitigate loss to other technologies. Also, voice MOUs will increase as customers talk longer and more frequently to justify higher purchase prices. In many cases, in order to be eligible for maximum discount, some carriers will require purchase of traditional landline service.	↑	★★★☆☆
Wireless substitution	Increasing reliance on wireless service will continue to erode wireline revenue and MOUs. However, adoption of wireless services by consumers is beginning to reach a saturation point. In addition, the number of consumers that have totally abandoned their wireline phone remains relatively small.	**Moderate.** Wireless substitution will continue to negatively influence wireline growth. However, IDC does not expect a huge drop in the number of landlines until the deployment of next-generation services. In addition, quality of services, reliability, and emergency issues will help soften the appeal of wireless substitution in the forecast period.	↓	★★★★★

Legend: ★☆☆☆☆ very low, ★★☆☆☆ low, ★★★☆☆ moderate, ★★★★☆ high, ★★★★★ very high

Source: IDC, 2004

ESSENTIAL GUIDANCE

☑ **Recognize that voice and landline are still relevant.** TDM voice still rules and will remain a crucial aspect of the telecom environment for several years. There is no doubt that VoIP is the way of the future. However, carriers that ignore traditional wireline technologies in favor of premium-priced next-generation services risk alienating a significant number of today's small business customers.

☑ **Monitor technology demand.** The oft-repeated phrase "stay close to your customer" is especially important during technological shifts. While landline growth is essentially flat over the forecast period, service providers will need to pay close attention to shifts in favor of next-generation technologies. Significant landline deterioration and higher broadband penetration by small business

customers could mark the beginning of a major shift away from traditional landline service. Also, maintaining close tabs with sales account managers will help anticipate shifts.

☑ **Emphasize quality.** Despite regulatory oversight, traditional landline services, especially voice, are now a commodity subject to significant pricing pressure. This situation will intensify as more virtual service providers enter the VoIP market. However, given the history of quality that has been associated with the PSTN-based services, associating lesser quality with commodity pricing will increase churn as well as win back costs.

☑ **Educate to differentiate.** This will help preserve revenue from legacy technologies and ensure that end users understand the technology that they purchase and it matches up with their needs. For a large number of small business customers, traditional landline services will continue to meet their communications requirements for the foreseeable future. IDC believes that these customers exist primarily in the smallest of business customers. In preparation for the future, carriers should develop a campaign to educate current and potential customers regarding the advantages of VoIP. A successful campaign will underscore the ease of moving from TDM to IP-based service.

LEARN MORE

Related Research

☑ *Regulating VoIP: Can the FCC Untie the Gordian Knot?* (IDC #31003, March 2004)

☑ *Come Together: Covad Acquires GoBeam* (IDC #30998, March 2004)

☑ *All Inclusive: BellSouth Enhances Integrated Solutions* (IDC #30899, March 2004)

☑ *U.S. Cable Telephony 2004–2008 Forecast: Golden Egg or Lead Balloon?* (IDC #30797, February 2004)

☑ *U.S. SMB Demand for Data Network Services: Opportunity Analysis Report* (IDC multiclient study #3900, November 2003)

Definitions

IDC defines landline communications as terrestrial, fixed-transmission services. Landline communications include telephony and data services that are delivered via the public switched access network as well as over private lines. Landline revenue is segmented into telephony and data. Local, long distance, connection/access, and private-line services are included in telephony revenue. Data revenue includes asynchronous transfer module (ATM), frame relay, and IP-based services. This study focuses on the telephony portion of landline services and provides revenue and

market splits for this segment. Carrier revenue generated from wireless services, data services, directory publishing, and similar sources are excluded from this study.

The following terms are used throughout this study:

☑ **Competitive local exchange carrier (CLEC).** CLECs are carriers that were formed after the local communications market was deregulated. They provide telecommunications services in direct competition with incumbent local exchange carriers (ILECs). CLECs may provide a variety of services, ranging from local, long distance, and international telephone services to Internet access, cable TV, and video on demand (VOD).

☑ **Incumbent local exchange carrier (ILEC).** ILECs are the Bell and independent telephone companies that had the exclusive right to provide local transmission and switching services prior to the Telecommunications Act of 1996. Due to deregulation of the local telephone market, ILECs now face competition from CLECs.

☑ **Independent telephone company (ITC).** ITCs are telephone companies, such as GTE, that formerly had the exclusive right to provide local service in regions not serviced by regional Bell operating companies.

☑ **Interexchange carrier (IXC).** IXCs are carriers that are allowed to provide inter–local access and transport area (inter-LATA) service. IXCs may also act as CLECs by providing local and intra-LATA toll service in certain regions.

Forecast Definitions

The following terms are used throughout this study with respect to forecasts:

☑ **Access line.** Typically, this term refers to the number of telephone lines a business or home has activated.

☑ **Minute of use (MOU).** Usage of many telecommunications services can be measured in increments of minutes, each of which is referred to as an MOU. Since MOUs are reported by originating and terminating carriers, they are double-counted. For this reason, IDC divides the total reported MOUs in half.

☑ **Local service.** These services allow customers to make telephone calls that originate and terminate within the same local service area. Typically, local phone companies bill for local service at a flat monthly rate. These services include a number of features, such as caller ID and call waiting, as well as enhanced services, such as voice messaging.

☑ **Long distance service.** These services allow customers to make telephone calls that terminate in local service areas other than the areas from which they originate. Long distance service generally refers to any traffic terminating outside the local service calling area, such as intra-LATA toll, inter-LATA, and international calls. These calls may be made via dial-tone or dial-around services, calling cards, or prepaid calling cards.

- ☑ **Access/connection charge.** Access charges are mandated in order to compensate LECs for the use of their local access networks. A local network connects a customer to long distance networks. There are two types of access charges. The end-user *customer access charge* applies to all local loops, and the *carrier access charge* applies to all IXCs that connect to the LEC.

- ☑ **Other telephony.** Other telephony refers to miscellaneous revenue, including operational and billing revenue.

- ☑ **Unbundled network element (UNE).** This refers to parts of the ILECs' networks that CLECs can access on an unbundled basis through a collocation agreement. UNEs are defined by the Telecommunications Act of 1996 as any "facility or equipment used in the provision of a telecommunications service," as well as "features, functions, and capabilities that are provided by means of such facility or equipment." For CLECs, access to the local loop via UNE connects the ILEC switches to the ILEC's present customers, which then allows the CLECs to connect their switches with the ILEC's switches, thus giving them access to ILEC customers.

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SURVEY

2003 U.S. WAN Manager Survey: Managed Network Services Adoption by Company Size

Melanie Posey   Ron Kaplan

IDC OPINION

This study analyzes the managed network services responses from IDC's 2003 *U.S. WAN Manager Survey*. Key survey findings by company size include the following:

☒ Third-party management of network services and operations is emerging as a viable alternative to the do-it-yourself approach for a growing number of medium-sized and large enterprises, but current use of managed network services skews significantly toward larger companies.

☒ IDC anticipates considerable service provider marketing and product development activity around offerings targeted at large enterprises during 2004, but we expect that service providers will continue to struggle with ways to make the case for managed network services to smaller companies.

☒ IP PBX/IP telephony emerged as a significant area of future managed network services usage among the smallest and largest companies surveyed (100–499 employees and 5,000 or more employees, respectively).

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Methodology

Sample Frame and Sampling Method

To complete this survey, IDC purchased from a trade publication a list of 9,000 subscribers with the title of data communication/telecom manager or network manager. IDC set loose quotas for company size.

Respondents

IDC engaged a third-party survey house to contact respondents via telephone. Respondents were eligible to participate if they met the following criteria:

☑ They were responsible for their organizations' wide area network (WAN) operations.

☑ The company had at least 100 employees.

IDC determined loose quotas by company size and geographic region to ensure an equal distribution. Respondents were offered a participation incentive.

Interviews and Survey Schedule

IDC conducted a total of 400 interviews during November 2003 using a computer-aided telephone interview (CATI) survey, which allows for various automatic data checks and skip patterns. Once respondents were determined to be qualified (based on the criteria mentioned above), the interviews took an average of 20 minutes to complete.

Data Analysis

All data analysis was done using SPSS.

Weighting

Results were weighted by company size within the four U.S. time zones and the presence of a WAN at these sites. IDC based its weighting on company size data available from U.S. Census and vertical market data from IDC's Vertical Markets group.

Results were segmented primarily by company size, U.S.-only versus multinational companies, and vertical market. Figures 1 and 2 show survey respondent segmentation by company size and vertical market.

Table 1 presents the respondents' company size segmentation by number of corporate sites, and Table 2 shows the same information by location of corporate sites (U.S.-only versus multinational operations).

In each table or figure, n represents the actual number of respondents interviewed. However, the data was weighted to reflect the actual distribution in the entire U.S. large and medium-sized business population by company size and vertical market. For most of the budgeting questions, half of the sample was included to shorten the survey length, to achieve a higher completion rate, and to add additional questions that otherwise could not be asked. The n for most budgeting questions is, therefore, less than 400.

Where multiple answers were allowed, a note stating so is located at the bottom of that figure or table.

Note: All numbers in this document may not be exact due to rounding.

FIGURE 1

Respondents by Company Size

Q. *What is the total number of people employed worldwide by your company?*
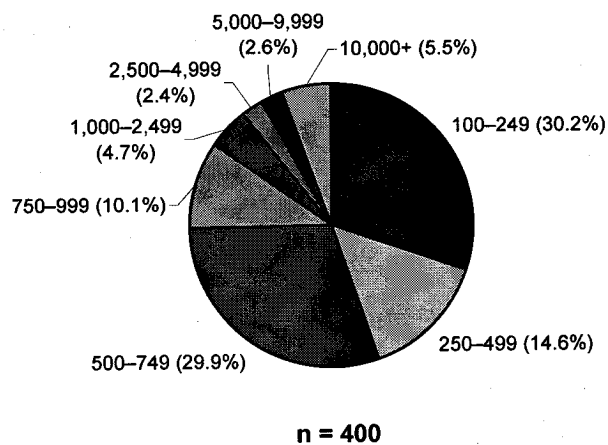
n = 400

Mean = 11,032 employees
Median = 500 employees
Note: Data is weighted by geography and company size.
Source: IDC's *U.S. WAN Manager Survey,* 2003

FIGURE 2

Respondents by Vertical Market

Q.   *What is your company's primary industry?*
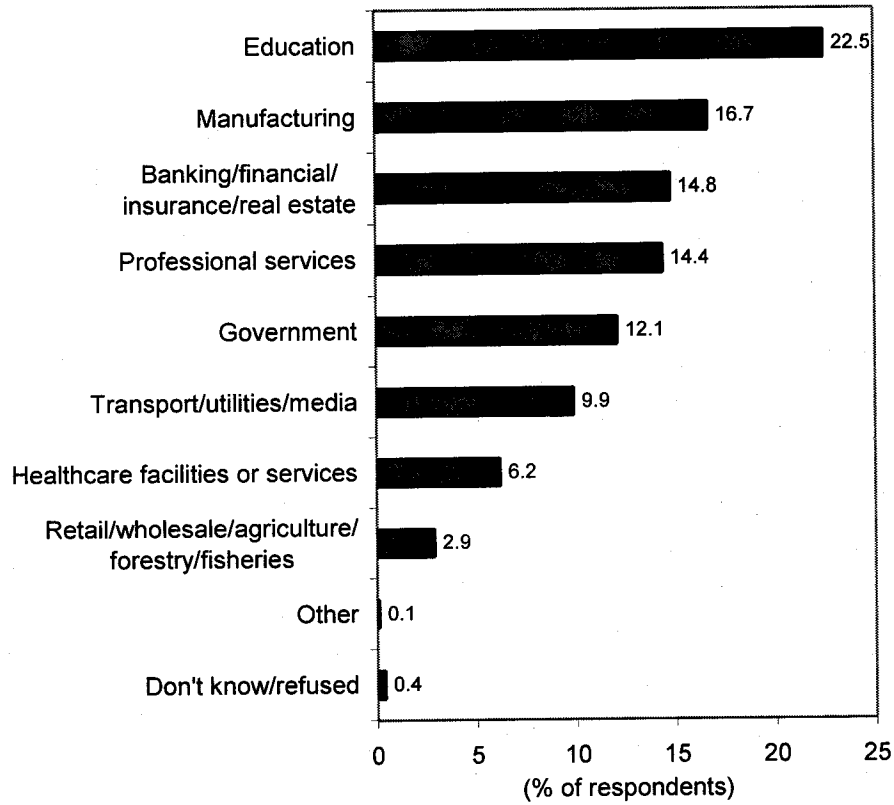
n = 400

Note: Data is weighted by geography and company size.

Source: IDC's *U.S. WAN Manager Survey*, 2003

TABLE 1

Number of Corporate Sites by Company Size (% of Respondents)

Q.   Based on your best estimate, how many separate business locations does your company have connected to your corporate WAN?

Number of Corporate Sites	Number of Employees			
	100–499	500–999	1,000–4,999	5,000+
2	18.6	4.6	–	–
3–4	24.1	16.7	7.0	3.4
5–9	32.8	28.6	28.6	4.1
10–14	6.2	21.5	9.4	5.7
15–19	2.7	8.7	8.4	1.5
20–24	6.1	5.4	5.9	8.2
25–50	4.5	7.2	16.1	23.8
51–99	1.8	4.1	8.6	8.2
100–499	2.0	3.3	6.1	32.2
500+	1.2	–	9.9	12.9
Mean =	22	21	188	206
Median =	5	9	16	66
n =	146	101	72	81

Source: IDC's U.S. WAN Manager Survey, 2003

TABLE 2

Location of Corporate Sites by Company Size (% of Respondents)

Q. How many of these locations are located outside of the United States?

	Number of Employees			
	100–499	500–999	1,000–4,999	5,000+
U.S. only	85.4	78.2	71.9	39.8
Multinational	13.8	21.8	26.7	56.8
Don't know	0.8	–	1.4	3.4
Mean number of sites located outside United States	1	1	10	54
n =	146	101	72	81

Note: Data is weighted by geography and company size.

Source: IDC's *U.S. WAN Manager Survey,* 2003

SITUATION OVERVIEW

Introduction

Managed network services is a general term that can encompass a variety of capabilities ranging from ongoing network monitoring, maintenance, and customer premises equipment (CPE) support to hosted solutions such as security and IP telephony. Generally, managed network services extend the WAN or "network cloud" deeper into the customer premise, complementing the connectivity/bandwidth value proposition with other elements, including professional services such as procurement, installation, configuration, and maintenance of onsite network devices, network management, and provisioning and monitoring of the entire network device/network connectivity bundle. IDC's survey results indicate that there is considerable scope to expand penetration of managed network services among large and medium-sized enterprises in the United States.

Survey Findings

An important step in evaluating enterprises' existing network infrastructures is to determine how business decisions are made. Are decisions related to IT and voice/data networking made by a centralized business unit, or do telecommunications and IT coexist in parallel universes within the enterprise? Table 3 shows the likelihood of having separate groups managing voice/data network services on the one hand and computing-centric IT services on the other to be directly proportional to company size. In other words, smaller companies were more likely to have combined telecom/IT departments than their larger counterparts.

Managed Network Services Adoption and Decision Factors

Table 4 reveals a directly proportional relationship between company size and current use of managed network services. Thirty-seven percent of survey respondents from companies with 5,000 or more employees reported that they currently purchase managed network services, compared with 16.8% of respondents from companies with 100–499 employees.

Table 5 presents the factors influencing respondents' decisions to manage their networks in-house. The same three factors emerged as the primary inhibitors to managed network service usage: the desire to maintain in-house control over the network, confidence in internal network management capabilities, and lack of cost savings. Respondents from companies with 100–499 employees were more likely to believe that service provider help was not needed or wanted, while the respondents from larger companies cited retaining control of their networks as a more significant inhibitor to managed network services usage. The lack of cost savings, although a significant inhibitor for respondents in most company size segments, trailed behind control and in-house capabilities as a primary inhibitor to managed network services adoption. The perception that status quo in-house network management is a desirable or at least a "good enough" arrangement for a substantial percentage of respondents indicates that service providers may need to place greater emphasis on the performance and availability benefits of managed network services.

Table 6 presents additional factors identified as inhibitors to managed network services usage.

IDC asked the survey participants who currently use or plan to use managed network services within the next 12 months about the most important reason for making this decision (see Table 7). For respondents in the smallest and largest company size segments, reduction in the total cost of network operations emerged as the primary reason for using or considering managed network services. Operational enhancement (i.e., improved network availability and performance) emerged as the top decision factor for respondents from companies with 500–999 employees, with cost reduction considerations following closely behind. Personnel augmentation (i.e., staff requirements) topped the list for respondents from companies with 1,000–4,999 employees.

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Scope of Managed Service Usage

Within all company size segments, the highest percentage of survey respondents indicated an interest in outsourcing only certain network-related functions, as opposed to using third-party provider services for their entire corporate networks. However, as shown in Table 8, the other managed network service usage options, including service provider management of wide area networking at all or some corporate sites, are also widely used or being considered.

Next, IDC queried survey participants about the network-related functions and device management tasks entrusted to third-party service providers. As shown in Table 9, CPE management emerged as the most common network-related function currently outsourced among respondents in all company size categories. Companies with 100–499 employees were somewhat more likely to use network design and integration services, while respondents from companies with 5,000+ employees registered the greatest usage of network monitoring functions. Table 10 presents the network-related functions that survey respondents would consider outsourcing.

IDC also looked at the outsourcing issue in terms of the network devices being managed by third-party service providers. Table 11 presents the network devices currently under management by respondents who currently use or plan to use managed network services. Management of WAN devices, traditional PBX systems, and Web sites emerged as the most common third party–provided services across the board. However, respondents in the largest company size category (5,000 or more employees) reported using third-party management services to a greater extent than their smaller counterparts for desktop/help desk, storage, and wireless LAN functions.

Table 12 looks at the network elements under consideration for future third-party management among respondents who currently use or plan to use some type of managed network service. IP PBX/IP telephony emerged as a significant area of future managed network services usage among the smallest and largest companies surveyed (100–499 employees and 5,000 or more employees, respectively). Respondents in the smallest company size grouping cited Web site hosting and wireless LAN as additional areas for third-party management, while respondents from companies with 500–999 employees highlighted WAN devices and network security as future outsourcing possibilities. Respondents from companies with 1,000–4,999 employees ranked network security as a top future managed network services option, while respondents from companies with 5,000 or more employees emphasized WAN device management, email, messaging, and wireless LAN, along with IP PBX/IP telephony.

Service Provider Selection and Satisfaction

Different types of service providers inhabit the managed services space, including IT-centric and telecom/networking-centric providers. Based on IDC's rather narrow definition of managed network services, our survey results indicated that telecom carriers (local, national, and global) are relatively well positioned across all company size segments (see Table 13). Among respondents from companies with 100–499 employees, local carriers were best positioned as primary managed network service providers, while global and/or long distance carriers had the most traction among the larger respondents. However, IT-centric service providers (both local/regional

systems integrators and national/global IT services companies) emerged as the primary managed network services provider for considerable percentages of respondents in the larger company size segments.

Overall, enterprises that purchase managed network services are satisfied with their current providers (see Table 14). Table 15 presents a breakout of managed network services customer satisfaction in specific areas. For the most part, current managed network services users in all company size categories gave their service providers high marks on network availability and performance, customer service and support, and service level guarantees. Survey respondents reported being least satisfied with their service providers' performance with regard to pricing.

Finally, IDC asked respondents who currently outsource network management responsibilities to third-party service providers whether they would consider outsourcing more of their networks. As shown in Table 16, respondents from companies with 5,000 or more employees are most amenable to additional network management outsourcing. Table 17 shows that the vast majority of respondents who planned for additional outsourcing intend to leverage their current providers for these services.

TABLE 3

Internal Management of Voice/Data Network and Computing-Centric IT Services by Company Size (% of Respondents)

Q. *Does your organization currently have separate internal groups managing voice/data network services and computing-centric IT services?*

	Number of Employees			
	100–499	500–999	1,000–4,999	5,000+
Yes	36.2	45.5	54.8	67.9
No	62.9	54.5	45.2	32.1
Don't know/refused	0.9	–	–	–
n =	146	101	72	81

Notes:

Data is weighted by geography and company size.

Use caution when interpreting results based on small sample sizes.

Source: IDC's *U.S. WAN Manager Survey*, 2003

TABLE 4

Purchase of Managed Network Services by Company Size (% of Respondents)

Q.   Which of the following best describes your company's purchase of managed network services?

	Number of Employees			
	100–499	500–999	1,000–4,999	5,000+
No plans to purchase managed network services	72.1	61.5	56.9	49.5
Currently purchase	16.8	19.0	28.5	37.0
Plan to purchase within next 12 months	6.8	16.1	12.3	8.2
Plan to purchase beyond 12 months	4.2	3.5	2.2	5.2
n =	146	101	72	81

Notes:

Data is weighted by time zone and company size.

Use caution when interpreting results based on small sample sizes.

Source: IDC's *U.S. WAN Manager Survey,* 2003

TABLE 5

Primary Reason for Not Purchasing Managed Network Services by Company Size (% of Respondents)

Q.   Which of the following is your primary reason for choosing not to use managed network services?

	Number of Employees			
	100–499	500–999	1,000–4,999	5,000+
Wish to maintain control over our corporate network	26.7	36.4	48.7	34.2
Service provider support or help not needed	39.1	31.7	21.0	17.9
Lack of cost savings	18.8	21.7	9.4	22.7
Flexibility to make moves, adds, and changes ourselves	3.8	3.2	8.3	6.9
Service provider offerings do not meet our needs	2.4	5.4	4.3	–
Difficult to switch providers or take operations back in-house	3.0	–	2.9	10.2
Other	3.7	1.6	2.5	–
Don't know/refused	2.4	–	2.9	8.1
n =	108	62	40	40

Base = companies that have no plans to purchase managed network services

Notes:

Data is weighted by time zone and company size.

Use caution when interpreting results based on small sample sizes.

Source: IDC's *U.S. WAN Manager Survey*, 2003

TABLE 6

Secondary Reasons for Not Purchasing Managed Network Services by Company Size (% of Respondents)

Q. *And which of the remaining are also important reasons for choosing not to use managed network services?*

	Number of Employees			
	100–499	500–999	1,000–4,999	5,000+
Wish to maintain control over our corporate network	30.0	28.9	27.4	35.5
Flexibility to make moves, adds, and changes ourselves	22.1	32.7	40.7	30.8
Service provider support or help not needed	25.8	32.7	38.6	51.3
Lack of cost savings	27.4	20.5	30.0	29.9
Difficult to switch providers or take operations back in-house	16.9	18.6	18.8	22.3
Service provider offerings do not meet our needs	16.0	12.3	10.8	34.8
None	2.6	2.2	5.4	2.9
Other	5.0	1.6	2.5	2.6
Don't know/refused	13.3	10.7	5.4	8.1
n =	108	62	40	40

Base = companies that have no plans to purchase managed network services

Notes:

Data is weighted by time zone and company size.

Multiple responses were allowed.

Use caution when interpreting results based on small sample sizes.

Source: IDC's *U.S. WAN Manager Survey,* 2003

TABLE 7

Primary Reason for Using/Considering Managed Network Services by Company Size (% of Respondents)

Q. What is your primary reason for using or considering managed network services?

	Number of Employees			
	100–499	500–999	1,000–4,999	5,000+
Reduce total cost of network operations	21.9	21.0	18.1	38.6
Improve network availability and performance	12.0	23.0	10.6	13.6
Staff requirements	10.3	15.5	26.2	7.5
Security	–	10.1	–	5.4
Facilitate technology/applications upgrades/migrations	8.9	5.0	3.8	2.9
Obtain knowledge/understanding of the network	11.2	–	12.8	5.4
Ease of use/single point of accountability	6.7	9.1	3.4	6.5
Facilitate major organizational change	3.3	3.5	–	–
Obtain network design and implementation assistance	3.0	–	9.0	–
Other	15.6	6.6	10.9	13.3
None	–	2.5	–	1.4
Don't know/refused	6.9	3.5	5.2	5.4
n =	38	39	32	41

Base = companies that currently purchase/have plans to purchase managed network services

Notes:

Data is weighted by time zone and company size.

Use caution when interpreting results based on small sample sizes.

Source: IDC's *U.S. WAN Manager Survey*, 2003

TABLE 8

Scope of Current Managed Network Service Usage by Company Size (% of Respondents)

Q. Which of the following statements best describes the scope of your current or planned use of managed network services? Our service provider monitors and manages ...

	Number of Employees			
	100–499	500–999	1,000–4,999	5,000+
Certain managed services only	28.5	35.1	37.5	33.4
Entire WAN (all corporate sites)	24.3	14.1	23.4	20.8
Some WAN sites	20.0	12.5	19.6	18.0
Entire WAN and LAN (all sites)	10.3	10.1	5.2	14.4
Entire corporate network (WAN, LAN, enterprise datacenter, and desktop)	3.3	14.5	–	5.1
Some WAN and LAN sites	13.6	–	3.4	5.8
Other	–	5.1	7.2	2.5
Don't know/refused	–	8.6	3.8	–
n =	38	39	32	41

Base = companies that currently purchase/have plans to purchase managed network services

Notes:

Data is weighted by time zone and company size.

Use caution when interpreting results based on small sample sizes.

Source: IDC's *U.S. WAN Manager Survey*, 2003

TABLE 9

Current Use of Third-Party Management for Network-Related Functions/Responsibilities by Company Size (% of Respondents)

Q. Which of the following do you currently outsource to a third-party service provider?

	Number of Employees			
	100–499	500–999	1,000–4,999	5,000+
Customer premise equipment (CPE) leasing and maintenance	23.3	30.5	20.9	35.6
Network design and integration	17.2	13.6	6.7	15.5
Network monitoring (fault detection and resolution)	13.6	16.5	13.7	19.8
Network configuration (i.e., moves/adds/changes)	10.7	7.0	5.5	13.6
Other	5.3	2.5	3.4	5.4
n =	38	39	32	41

Base = companies that currently purchase/have plans to purchase managed network services

Notes:

Data is weighted by time zone and company size.

This is a summary table that includes only the responses of those that currently outsource the above-mentioned network functions.

Use caution when interpreting results based on small sample sizes.

Source: IDC's *U.S. WAN Manager Survey*, 2003

TABLE 10

Network-Related Functions/Responsibilities Under Consideration for Outsourcing by Company Size (% of Respondents)

Q. Which of the following would you consider outsourcing to a third-party service provider?

	Number of Employees			
	100–499	500–999	1,000–4,999	5,000+
Network design and integration	10.7	16.6	9.4	7.6
Network monitoring (fault detection and resolution)	22.3	16.5	19.6	10.5
Customer premise equipment (CPE) leasing and maintenance	20.3	16.1	14.4	5.1
Network configuration (i.e., moves/adds/changes)	14	12	3.4	10.5
Other	3.3	3.5	3.4	7.9
n =	38	39	32	41

Base = companies that currently purchase/have plans to purchase managed network services

Notes:

Data is weighted by time zone and company size.

This is a summary table that includes only the responses of those that would consider outsourcing the above-mentioned network functions.

Use caution when interpreting results based on small sample sizes.

Source: IDC's *U.S. WAN Manager Survey*, 2003

TABLE 11

Current Use of Third-Party Management for Specific Network Elements by Company Size (% of Respondents)

Q. *Which of the following do you currently outsource to a third-party service provider?*

	Number of Employees			
	100–499	500–999	1,000–4,999	5,000+
Traditional PBX	25.7	33.7	35.8	34.5
WAN device management	36.3	23.6	34.3	37.8
Web site/intranet hosting	28.6	30.7	23.1	20.2
Network security	21.9	20.6	3.7	17.3
Application management	18.0	14.6	16.5	19.0
Desktop/help desk services	20.6	6.5	10.4	29.1
IP PBX/IP telephony	11.9	10.1	12.9	13.3
Storage	16.6	5.0	3.7	21.7
Email/messaging	15.2	8.0	8.5	10.7
LAN device management	11.7	7.0	3.4	11.1
Wireless LAN	6.3	1.5	3.8	8.3
Other	10.3	–	5.7	14.8
n =	38	39	32	41

Base = companies that currently purchase/have plans to purchase managed network services

Notes:

Data is weighted by time zone and company size.

This is a summary table that includes only the responses of those that currently outsource the above-mentioned network elements.

Multiple responses were allowed.

Use caution when interpreting results based on small sample sizes.

Source: IDC's *U.S. WAN Manager Survey,* 2003

TABLE 12

Network Elements Under Consideration for Third-Party Management by Company Size (% of Respondents)

Q.   Which of the following would you consider outsourcing to a third-party service provider?

	Number of Employees			
	100–499	500–999	1,000–4,999	5,000+
IP PBX/IP telephony	20.3	12.0	10.9	23.4
Web site/intranet hosting	16.6	9.5	9.0	5.1
Application management	13.0	5.0	10.5	10.8
Wireless LAN	12.6	1.5	5.7	13.0
Storage	10.3	3.5	1.8	10.8
Traditional PBX	9.7	8.0	1.8	2.5
Desktop/help desk services	9.7	4.5	3.8	10.1
LAN device management	9.3	9.6	3.7	10.5
Email/messaging	9.3	1.5	1.8	13.4
Network security	7.3	15.5	20.0	7.9
WAN device management	4.3	23.1	9.4	19.8
Other	1.0	7.5	–	11.6
n =	38	39	32	41

Base = companies that currently purchase/have plans to purchase managed network services

Notes:

Data is weighted by time zone and company size.

This is a summary table that includes only the responses of those that would consider outsourcing the above-mentioned network elements.

Multiple responses were allowed.

Use caution when interpreting results based on small sample sizes.

Source: IDC's *U.S. WAN Manager Survey*, 2003

TABLE 13

Primary Managed Network Service Provider by Company Size (% of Respondents)

Q. Which of the following network service providers you currently use or would consider using to be your primary managed network services provider?

	Number of Employees			
	100–499	500–999	1,000–4,999	5,000+
Local carrier/ILEC	48.2	31.7	30.0	17.6
Long distance carrier/IXC	7.3	27.0	14.7	24.8
Global carrier	20.6	5.1	13.7	28.4
Local regional systems integrator/ value-added reseller	3.0	15.1	14.8	6.8
National/global IT services company	6.7	9.0	12.4	11.5
State agency	4.0	3.5	–	–
In-house	3.3	–	–	5.4
Other	4.0	3.5	6.7	2.9
None	–	5.1	–	–
Don't know/refused	3.0	–	7.7	2.5
n =	38	39	32	41

Base = companies that currently purchase/have plans to purchase managed network services

Notes:

Data is weighted by time zone and company size.

Use caution when interpreting results based on small sample sizes.

Examples of local carriers/ILECs include SBC, Verizon, and Qwest.

Examples of long distance carriers/IXCs include AT&T, Sprint, and WorldCom.

Examples of global carriers include Equant, Infonet, and BT.

Examples of national/global IT services companies include IBM, EDS, CSC, HP, and Accenture.

Source: IDC's U.S. WAN Manager Survey, 2003

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TABLE 14

Satisfaction with Current Managed Network Service Provider by Company Size (% of Respondents)

Q. How satisfied are you with your current managed network service provider?

	Number of Employees			
	100–499	500–999	1,000–4,999	5,000+
5 — very satisfied	35.4	36.7	32.3	35.4
4	24.9	51.1	31.8	39.7
3	21.6	12.3	33.1	13.2
2	11.5	–	–	7.9
1 — not at all satisfied	–	–	–	–
Don't know/refused	6.6	–	2.8	3.8
Mean rating =	3.90	4.24	3.99	4.07
n =	23	20	21	30

Base = companies that currently purchase managed network services

Notes:

Data is weighted by time zone and company size.

Use caution when interpreting results based on small sample sizes.

Source: IDC's U.S. WAN Manager Survey, 2003

TABLE 15

Satisfaction with Current Service Provider's Managed Network Features by Company Size (Mean Rating)

Q. How would you rate your current managed network service provider on the following factors?

	Number of Employees			
	100–499	500–999	1,000–4,999	5,000+
Network availability and performance	4.18	4.34	4.38	4.36
Customer service and support	4.01	4.19	3.85	3.88
Service level guarantees	3.74	4.32	4.25	3.87
Billing	3.90	3.84	3.94	3.63
Flexibility	3.82	3.83	3.89	3.74
Network management/monitoring tools	3.62	3.85	4.10	3.73
Service innovation	3.45	3.82	3.75	3.64
Pricing	3.48	3.62	3.61	3.55
n =	23	20	21	30

Base = companies that currently purchase managed network services

Notes:

Satisfaction responses are based on a scale of 1–5, with 1 being not at all satisfied and 5 being very satisfied.

Data is weighted by time zone and company size.

Use caution when interpreting results based on small sample sizes.

Source: IDC's *U.S. WAN Manager Survey,* 2003

Willingness to Expand Current Service Provider's Network Management Responsibilities by Company Size (% of Respondents)

Q. *Would you consider expanding your service provider's current management responsibilities you currently outsource to include more of your network?*

	Number of Employees			
	100–499	500–999	1,000–4,999	5,000+
Yes	35.9	37.2	26.1	51.1
No	59.1	60.3	70.5	41.0
Don't know/refused	5.0	2.5	3.4	7.9
n =	38	39	32	41

Base = companies that currently purchase/have plans to purchase managed network services

Notes:

Data is weighted by time zone and company size.

Use caution when interpreting results based on small sample sizes.

Source: IDC's *U.S. WAN Manager Survey*, 2003

Willingness to Use Current Service Provider for Expanded Network Management Services by Company Size (% of Respondents)

Q. *Would you use your current service provider for this?*

	Number of Employees			
	100–499	500–999	1,000–4,999	5,000+
Yes	74.1	96.0	80.1	79.7
No	25.9	–	19.9	7.7
Don't know/refused	–	4.0	–	12.6
n =	12	16	9	21

Base = companies that would consider expanding their service provider's current management responsibilities

Notes:

Data is weighted by time zone and company size.

Use caution when interpreting results based on small sample sizes.

Source: IDC's *U.S. WAN Manager Survey*, 2003

FUTURE OUTLOOK

Third-party management of network services and operations is emerging as a viable alternative to the do-it-yourself approach for a growing number of medium-sized and large enterprises. However, current use of managed network services skews significantly toward large companies (e.g., those with 1,000 or more employees). Survey respondents from companies with 500–999 employees indicated some interest in future managed network service purchases (16% of these respondents reported plans to purchase services within the next 12 months), but the respondents from smaller companies (those with 100–499 employees) appeared particularly resistant to or uninterested in the managed network services value proposition. IDC anticipates considerable service provider marketing and product development activity around offerings targeted at large enterprises during 2004, but we expect that service providers will continue to struggle with ways to make the case for managed network services to smaller companies.

ESSENTIAL GUIDANCE

Service providers that seek to develop or extend their managed network services capabilities should consider the following developments taking place in this market:

☑ **The midmarket challenge.** IDC's survey results indicate that current use of managed network services is directly proportional to company size — 37% of companies with 1,000 or more employees currently use some form of managed network services, compared with 17% of companies with 100–499 employees. Service providers that seek to target smaller companies should be aware that survey respondents in this group were most likely to believe that they do not need service provider assistance and that their current in-house network management arrangements (or indeed, lack thereof) are desirable or at least good enough.

☑ **Sweet spot.** The high end of the medium-sized business market (companies with 500–999 employees) appears to be somewhat more receptive to the managed network services value proposition than companies with 100–499 employees. Nineteen percent of companies in the high-end midmarket segment currently use some form of managed network services, and an additional 16% plan to purchase services within next 12 months. The primary inhibitors are control and confidence in internal network management capabilities. Service providers can counter these inhibitors with portal-based network visibility tools and greater emphasis on the performance and availability benefits of managed network services.

☑ **Large enterprise requirements.** Service providers should keep in mind that companies in this segment are most interested in using managed services to reduce the total cost of network operations. Therefore, service providers would be wise to emphasize the performance-related benefits of managed network services with reference to their own cost-reduction measures, such as integrated network management, billing, and provisioning systems with proactively oriented monitoring capabilities. Providers must then pass the costs savings along to customers.

LEARN MORE

Related Research

- ☒ *2003 U.S. WAN Manager Survey: Managed Network Services Adoption* (IDC #31139, April 2004)

- ☒ *Worldwide and U.S. Network Consulting and Integration Services 2004–2008 Forecast and Analysis* (IDC #31037, April 2004)

- ☒ *U.S. WAN Manager Survey: WAN Services, 2003* (IDC #30969, March 2004)

- ☒ *2003 U.S. WAN Manager Survey: Managed Network Services Adoption Trends, U.S.-Only and Multinational Corporations* (IDC #30947, March 2004)

- ☒ *Worldwide and U.S. Network Product Support Services Forecast, 2002–2007* (IDC #29302, May 2003)

- ☒ *Managed Services: Evolution of the Telecommunications Carrier Value Proposition* (IDC #29216, April 2003)

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Managed Network Services Use Is Stable

by Maribel D. Lopez

TRENDS

FORRESTER Helping Business Thrive On Technology Change

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Managed Network Services Use Is Stable

But The Services Mix Continues To Change

by Maribel D. Lopez
with Stan Schatt and Benjamin Gray

EXECUTIVE SUMMARY

Telecom service providers have worked hard to improve the breadth and depth of managed network services offerings but have seen little traction. In interviewing 153 IT and telecom managers about their managed services use, Forrester discovered that the uptake for managed services overall has changed minimally since last year. Interest in security of all kinds remains very high for all firms. What has changed? Firms have increased use of business continuity services and have expressed greater interest in managed voice services.

NOTES & RESOURCES

Forrester surveyed 153 user companies.

Related Research Documents
"Managed Telecom Services: Selection Process"
June 17, 2004, Best Practices

"The State Of Technology Adoption: Business Technographics® North America"
May 5, 2004, Data Overview

"IT Trends 2004: Hosting Services"
December 10, 2003, IdeaByte

"Managed Services Growth Sputters"
June 6, 2003, Brief

"IP VPNs Gain Ground On Frame Relay"
May 29, 2003, Brief

MANAGED NETWORK SERVICES USE IS STABLE, BUT THE MIX IS SHIFTING

Telecom providers continue to invest in managed network services to offset the pressure of declining bandwidth prices. Today's managed services portfolios offer companies everything from managed VPNs to managed exchange messaging services and security services like intrusion detection.[1]

To gauge the demand for managed network services, Forrester conducted a telecom-specific survey with IT and telecom managers at 108 large firms and 45 small and medium-sized businesses (SMBs). SMBs are categorized as firms with between two and 999 employees, while large firms have 1,000 or more employees. Last year, we conducted a similar telecom-specific survey with 111 large enterprises.[2] Where possible, we compared this data. For both this year's and last year's surveys, Forrester defined managed network services as the monitoring and maintenance of a service by a third party. From this year's interviews, we learned that:

- **Frozen staffing levels make managed services more attractive.** Recent Forrester surveys indicate that overall IT staffing increases will be less than 1% in 2004.[3] With flat headcount, IT departments simply don't have the staff to handle increasing requirements and will look to managed services to fill the gaps. Of the 108 IT managers we interviewed for our recent telecom survey, 92% used at least one managed service, with Web hosting and business continuity topping the charts (see Figure 1-1). Many also plan to use at least one managed service during 2004, indicating at least single-digit growth in all areas, with companies most interested in adding managed MPLS VPNs (see Figure 1-2).

- **Security concerns drive managed services use.** In both SMB and large firms, managed network services adoption is being driven at least in part by security concerns. Because business continuity, firewalls, IPSec VPNs, and SSL VPNs are all security-related, nearly all of the firms we interviewed are using at least one service that incorporates security.

- **Small firms embrace managed hosting and voice services.** Of the 45 smaller firms we interviewed, almost half are currently using and planning to use managed Web hosting services in 2004, compared with 35% of large firms (see Figure 2). New network-based voice services like SBC PremierSERV IP Telephony Advantage are also resonating with SMBs, with 14% of the firms interviewed planning to use these services in 2004. Services that are more suited to large distributed enterprises, such as Frame Relay and MPLS VPNs, had low take rates in this market.

Figure 1 Comparing Large Firms' Managed Network Services Use In 2003 And 2004

1-1 **"The following is a list of services that could be managed by outside vendors or service providers. Please indicate if you currently use and outsource to a third party for the following:"**

Web hosting — 35% ▓ 2004
                31% ░ 2003*

Business continuity/disaster recovery — 34%
                26%

Frame Relay and/or ATM — 26%
                44%

Managed voice CPE like PBX† — 19%

Application hosting† — 19%

Intrusion detection — 17%
                15%

Firewalls — 16%
                15%

CPE-IPSec VPN† — 16%

Network-based voice services — 16%
                12%

SSL VPN† — 15%

MPLS VPN† — 15%
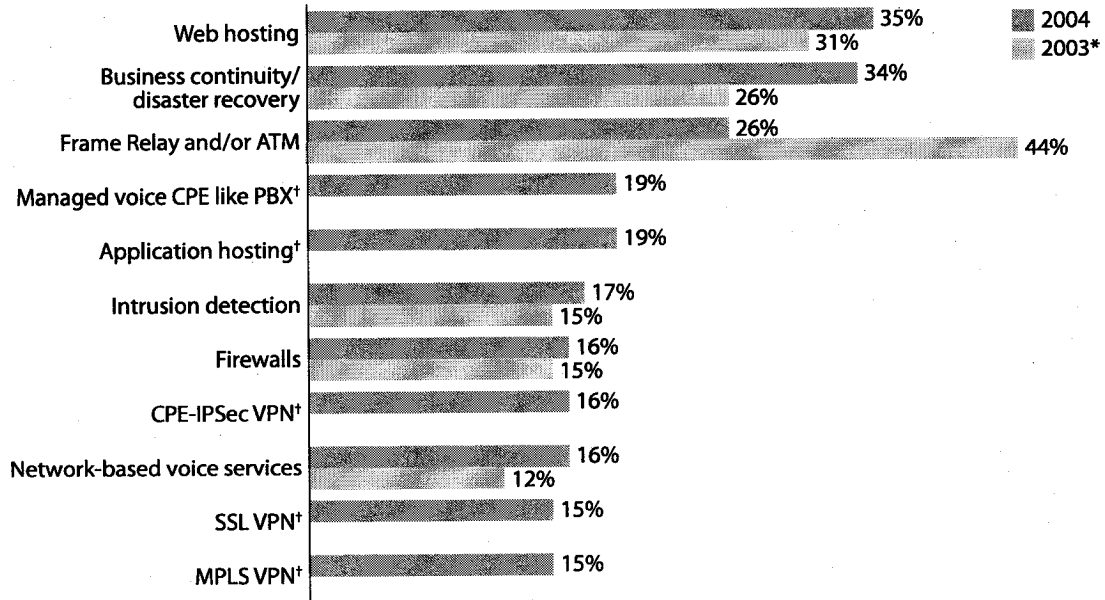
Base: 108 large North American companies
*Base: 111 large North American companies
(multiple responses accepted)

†Note: We did not ask these questions in our 2003 survey.

1-2 **"The following is a list of services that could be managed by outside vendors or service providers. Please indicate if you plan to use and plan to outsource for the following:"**
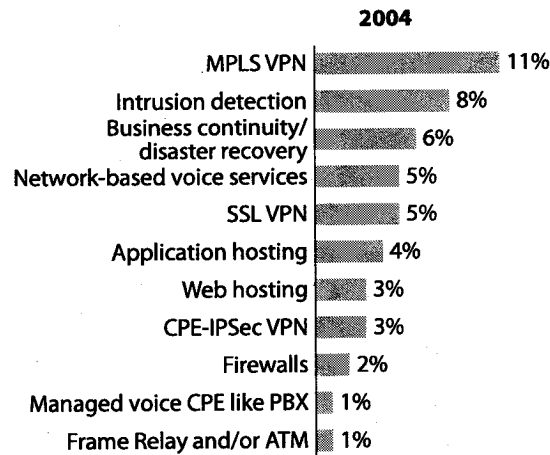
2004

MPLS VPN — 11%

Intrusion detection — 8%

Business continuity/disaster recovery — 6%

Network-based voice services — 5%

SSL VPN — 5%

Application hosting — 4%

Web hosting — 3%

CPE-IPSec VPN — 3%

Firewalls — 2%

Managed voice CPE like PBX — 1%

Frame Relay and/or ATM — 1%

Base: 108 large North American companies
(multiple responses accepted)

Source: Forrester Research, Inc.

Figure 2 A Sample Of SMB Managed Network Services Use In 2004

"The following is a list of services that could be managed by outside vendors or service providers. Please indicate your current and future plans for the following:"

░ Currently use and outsource to a third party   ▓ Plan to use and plan to outsource

Service	Currently use	Plan to use
Web hosting	31%	12%
Intrusion detection	17%	12%
Managed voice CPE like PBX	21%	5%
Business continuity/ disaster recovery	17%	10%
Application hosting	17%	10%
Network-based voice services	7%	14%
Firewalls	17%	5%
CPE-IPSec VPN	10%	5%
SSL VPN	10%	5%
Frame Relay and/or ATM	7%	2%
MPLS VPN	2%	5%

Base: 45 SMB North American companies
(multiple responses accepted)

Source: Forrester Research, Inc.

Business Continuity Is The Second Most Popular Managed Service

Sixty-two percent of $1B-plus firms Forrester interviewed last year planned to purchase disaster recovery products and services.[4] Vendors ranging from carriers to specialized managed services providers have risen to the challenge of developing new business continuity services. Given improved vendor offerings and business' overall interest, it is not surprising that:

• **Large firms have embraced managed business continuity.** Large firms are using business continuity services to meet the data recovery demands that new regulations, such as Sarbanes-Oxley, require. More than a third of the 108 large firms interviewed in our May 2004 survey already outsource business continuity, while another 6% plan to do so this year (see Figure 3-1). Overall, this mix of approximately 40% outsourced and 60% do-it-yourself business continuity is consistent with prior surveys.

Figure 3 SunGard Leads In Business Continuity Services

3-1 "How do you manage business continuity/ disaster recovery?"

Plan to use and expect to manage in-house — 8%
Plan to use and plan to outsource — 6%
Currently use and outsource to a third party — 35%

Currently use and manage in-house — 51%

Base: 108 large North American companies

3-2 "If you outsource business continuity/ disaster recovery, which services providers does your company use?"

SunGard 47%
IBM 26%
AT&T 9%
Other carriers 18%

Base: 34 large North American companies that outsource business continuity/disaster recovery

Source: Forrester Research, Inc.

• **SunGard is the large firms' provider of choice for BCS.** Almost a half of the large firms that Forrester interviewed that were outsourcing business continuity services (BCS) were using SunGard (see Figure 3-2). However, IBM and AT&T also made a decent showing, indicating that customers believe in linking continuity with Web hosting and application hosting services.

• **SMBs skimp on business continuity.** A full continuity service that replicates an SMB's environment can cost hundreds to thousands of dollars per month depending on the amount of equipment and data that needs to be replicated. These steep price tags have stalled uptake, with less than 17% of the 45 SMBs we interviewed using outsourced business continuity services today. However, SMBs' high use of managed Web hosting is providing several of the business continuity features SMBs need, such as distributed, mirrored Web sites.

Traditional Web Hosting Takes A Hit As Firms Move To Apps Hosting And BCS

After the dot-com boom and bust in the late 1990s, the Web hosting arena has stabilized. Although enterprise hosts like AT&T claim substantial growth in the hosting market, our survey data over the past three years suggests that the enterprise market has flattened and market share gains are the result of enterprises switching from less stable or defunct operators. Our survey results reveal that:

- **Web hosting adoption and growth flatten for large firms.** Thirty-one percent of the 111 large firms Forrester surveyed last year used third-party Web hosting services, and this year, the number saw only 4% growth — to 35% of the 108 interviewed. Going forward, firms projected growth at less than 3% (see Figure 4-1). Why? Web hosting's initial value proposition of time-to-market and on-demand capacity is not enough to drive continued growth. Future purchases will be driven by application hosting and business continuity because firms that don't need real-time eCommerce transactions see more value in services like data protection.[5]

- **Application hosting bolsters overall hosting use.** Carriers that offer Web hosting services, such as AT&T and MCI, expect application hosting services to augment disappointing growth in managed Web hosting — and they could be right. Nearly 20% of the firms we interviewed are currently using this service in addition to Web hosting for commerce and marketing sites. The challenge for carriers in this market is that many companies will choose to use IT outsourcers like EDS and systems integrators (SIs) like IBM instead of AT&T. To combat this, firms like AT&T are partnering with SIs like Accenture to build offerings like managed messaging apps.

- **IBM topped the list for Web hosting providers and apps hosting.** Almost a quarter of the firms we interviewed are using IBM for managed Web hosting, with MCI coming in second (see Figure 4-2). Our data suggests that in the overall Web hosting market, large firms are purchasing from a mixture of systems integrators, regional carriers, and Web hosts. With its robust portfolio of hardware, software, and integration services, it is not surprising that IBM leads application hosting for our interviewees.

- **SMBs use Web hosting more than any other managed service.** Web hosting is very important to SMBs, with 39% of the 829 SMBs interviewed in April using Web hosting. Our smaller telecom-specific survey of 45 IT managers reinforced that data, with almost a third of the SMBs interviewed using managed Web hosting today, and another 12% planning to add this service during 2004. It makes sense for SMBs to use managed hosting services because they don't have the staff to build and maintain Web sites nor the capital to build a robust data center environment.

Figure 4 The Web Hosting Landscape

| **4-1** "How do you manage Web hosting?" | **4-2** "If you outsource Web hosting, which services providers does your company use?" |
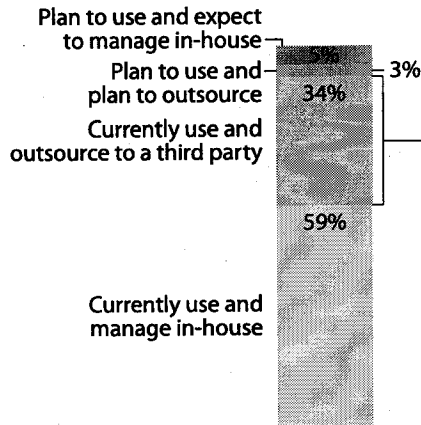
Base: 108 large North American companies
(percentages may not total 100 because of rounding)
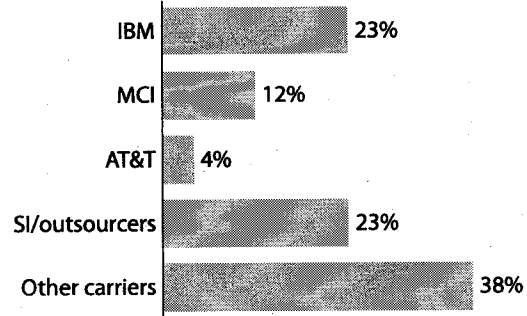
Base: 35 large North American companies
that outsource Web hosting

Source: Forrester Research, Inc.

FIRMS SHOW INTEREST IN IP VPNs BUT AREN'T READY TO GIVE UP FRAME RELAY

Eighty-two percent of the 495 large enterprises interviewed are currently using some type of VPN.[6] However, how this affects the use of existing Frame Relay and ATM services is still in question. To answer this question, this year's telecom-specific survey asked 108 large firms if they were continuing to use managed ATM and Frame Relay services and if they were planning to replace Frame Relay capacity with IP VPNs. The data shows that:

• **Managed Frame Relay and ATM services use falls . . .** Last year, Frame Relay and ATM topped the charts for managed services use at 44% of firms but has fallen to 26% this year. Forrester believes that customers simply aren't seeing the value in having a carrier manage an established service like ATM or Frame Relay. Users are also slowly moving to managed VPNs as carriers work out the kinks in MPLS-based VPN services and are slashing prices to a level that compels users to consider transitioning from Frame Relay. Why? Carriers want companies to move to an IP network because it will be less expensive for them to manage.

• **... but overall Frame Relay capacity shrinks only slightly.** Contrary to what carriers expected, migration from Frame Relay to IP VPNs will be a marathon, not a sprint. Last year, more than half of the 111 large firms interviewed planned to increase or keep Frame Relay capacity the same, and this year, it has only fallen slightly, to 45% (see Figure 5-1). User data from both this year and last year suggests that a rip-and-replace strategy is not in the cards. Only 13% of the large firms we interviewed expect to fully replace Frame Relay with an IP VPN in 2005, while 43% prefer a controlled migration that allows the business to augment or partially replace existing Frame Relay circuits with IP VPNs (see Figure 5-2). Forrester believes that firms are testing the waters with IP VPN technologies before they pull the trigger on a full migration.

• **Savings still drive interest in carrier-managed IP VPNs.** Despite carriers' recent marketing efforts touting IP VPNs' ease of management, quality of service (QoS), and any-to-any connectivity features, firms are still focused on VPNs' cost benefits. Thirty-nine percent of the firms we interviewed listed better economics — not simplicity or limited IT resources — as the main reason for using a carrier-managed IP VPN. Forrester believes that firms consider any-to-any connectivity as contributing to better economics but will begin to see the benefits of QoS features as they add services like VoIP.

Figure 5 Frame Relay Migration Is Happening Slowly

5-1	"If your company uses Frame Relay, how do you expect the use of Frame Relay to change in 2004?"

Fully replace Frame Relay with an IP VPN 5%
Don't know 8%
Increase Frame Relay capacity 23%
Partially replace existing Frame Relay circuits with an IP VPN 42%
Keep Frame Relay the same 22%
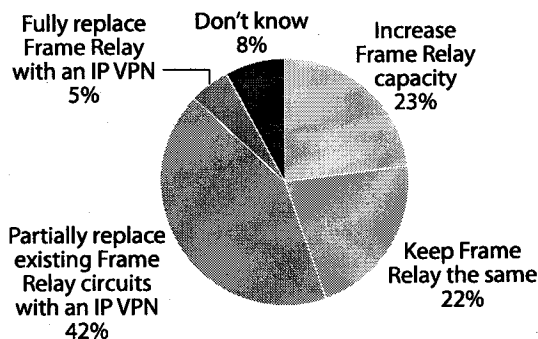
Base: 78 large North American companies

5-2	"If your company uses Frame Relay, how do you expect the use of Frame Relay to change in 2005?"

Increase Frame Relay capacity 17%
Don't know 12%
Fully replace Frame Relay with an IP VPN 13%
Keep Frame Relay the same 14%
Partially replace existing Frame Relay circuits with an IP VPN 43%
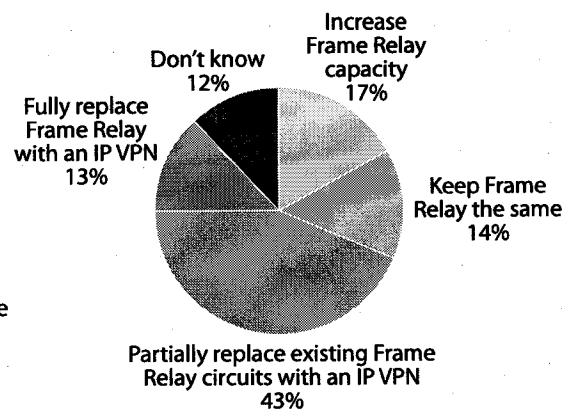
Base: 76 large North American companies
(percentages do not total 100 because of rounding)

Source: Forrester Research, Inc.

CARRIERS MUST STREAMLINE MANAGED SERVICES

- **Simplify the product offering.** Today, carriers complicate the sales process by forcing customers to select services based on the underlying network delivery technologies. Rather than pitch companies on the merits of an MPLS VPN versus Frame Relay, carriers should offer customers a virtual network service with options for specific levels of security. Carriers should also offer a voice network solution based on specific performance levels (e.g., 99.9% availability versus 99.999%).

- **Partner with systems integrators to build apps hosting.** Carriers should follow the lead of AT&T and build partnerships with SIs to deliver robust applications hosting. This is not only important for improving the hosting business but critical to delivering advanced continuity services that large enterprises will require. To ensure credibility within the space, carriers should let the customer know which parts of the solution they partner for but offer the customer a single point of contact for problem resolution.

- **Move continuity marketing beyond hosting.** Not every continuity service has to create a full replica of the company's IT environment. Firms can use services like next-generation IP voice to enable workers to take their office communications with them wherever they go. This portability of office services provides a basic yet critical element of continuity.

MANAGED NETWORK SERVICES MOVES BEYOND THE CARRIER DOMAIN

- **IT outsourcers take a bite out of carriers' managed network services business.** As vendors like IBM and Hewlett-Packard work with firms to roll out next-generation data center technologies, they have the ability to push overall network outsourcing. With established LAN and WAN practices underway, vendors like EDS and IBM will steal more hosting business from telcos like AT&T and Verio by helping their customers with data center conversion and by bolstering nascent practices in mobility and VoIP.

- **Managed service providers reemerge with SMB-focused offerings.** To date, the SMB market has received stripped enterprise offerings, but going forward, there is a myriad of firms that will offer SMB-specific services. Smaller providers like Vonage will continue to be a thorn in an RBOC's side by offering cheap services like basic unlimited VoIP service with six calling features for $49.99. Going forward, smaller providers like Eureka Networks will use technology from BroadSoft and others to build full-featured hosted voice solutions for SMBs, thereby intensifying the competition.

SUPPLEMENTAL MATERIAL

Methodology

To get data on executive perceptions of IT, Forrester fielded an online survey via email solicitation to members of Forrester's Research Panel at US and Canadian companies. Panel members are recruited when they participate in one of Forrester's phone-based Business Technographics® surveys, which call companies in the D&B company listing and Forrester's own contact database. We received 153 responses from IT and telecom managers at a mix of companies. We motivated respondents by offering them a summary of the survey results and a chance to win one of four $50 Amazon gift certificates.

Forrester screened all respondents for significant involvement in data and voice services purchasing (qualified respondents are involved in at least one of the following stages of the purchase process: setting budget, evaluating options, choosing vendors, or authorizing purchases). Respondents were also screened for seniority (CIO, CTO, SVP, VP, or director reporting directly into one of these titles).

ENDNOTES

1   AT&T just announced that it is partnering with Accenture to deliver managed Microsoft Exchange services. See the June 24, 2004, Quick Take "AT&T/Accenture Team For Managed Messaging."

2   Forester interviewed 111 firms about their managed services use and discovered that growth was slowing. See the June 6, 2003, Brief "Managed Services Growth Sputters."

3   Sixty-one percent of 818 large firms Forrester interviewed plan to make no changes to IT headcount in 2004, and overall staffing increases for the entire group will be less than 1% in 2004. See the December 1, 2003, Brief "IT Staffing Outlook 2004: Very Slight Growth."

4   Firms planned on buying disaster recovery but spending actually lagged plans. See the March 27, 2003, Brief "Who's Buying Disaster Recovery?"

5   Forrester discusses the move to application hosting as a driver for Web hosting overall. See the December 10, 2003, IdeaByte "IT Trends 2004: Hosting Services."

6   VPN deployments are growing, but the technologies firms use are shifting from IPSec to MPLS and SSL. See the May 5, 2004, Data Overview "The State Of Technology Adoption: Business Technographics® North America."

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MARKET ANALYSIS

U.S. Web Hosting Services 2004–2008 Forecast

Melanie Posey

IDC OPINION

The U.S. Web hosting services market has begun to recover from the multiple shocks of economic recession, Internet industry meltdown, and supply-side turmoil. Service providers will continue to find market opportunities within their existing customer bases, but the greater prize will be the "conversion" of in-house hosters. Market highlights include the following:

☑ IDC expects the market to increase at a five-year compound annual growth rate (CAGR) of 13.6%, increasing from $5.5 billion in 2003 to $10.4 billion in 2008.

☑ The retreat from outsourced Web hosting that began in 2001 has abated, as have enterprise concerns about the stability and viability of the sector overall.

☑ Factors fueling market growth include increased spending by existing outsourced Web hosting customers (primarily higher-end enterprise customers using complex managed services) and increased Web site adoption and outsourced service usage among small businesses.

☑ The shared/small business hosting market will remain a competitive arena, given the relatively low barriers to entry. The result will be a continued "arms race" emphasizing service features, pricing, and packaging/bundling.

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IN THIS STUDY

This IDC study is an update to the forecast presented in *U.S. Web Hosting Services 4Q03 Forecast Update, 2003–2007* (IDC #30632, December 2003). IDC predicts five-year compound annual market growth of 13.6% from 2003 to 2008.

Methodology

Through surveys and interviews with the major Web hosting service providers, IDC formulated its market share estimates. IDC also leveraged information from industry and financial analyst briefings, Security and Exchange Commission (SEC) filings, and ongoing discussions with the major market participants.

For the standalone Web hosting service providers, the revenue-gathering exercise was fairly straightforward. Because most such providers report their revenue, IDC simply subtracted from these totals the percentage of revenue derived from hosting-related services that fall outside of IDC's hosting definition, including:

☒ Professional services such as applications development, systems integration, and Web design and consulting

☒ Hardware and software sales

☒ Standalone managed services

For Web hosting service providers that do not break out their hosting revenue, IDC sought guidance regarding numbers of customers, customer segmentation (by size of business or type of server platform), average revenue per customer, number of servers or servers per customer, average revenue per server, and other incidental factors.

Note: All numbers in this document may not be exact due to rounding.

SITUATION OVERVIEW

The Supply Side

On the supply side, the Web hosting market continues to be fragmented, but 2003 witnessed the exit of two major players: Cable & Wireless and Sprint. Table 1 presents a summary of the major Web hosting service provider developments of 2003 and 1Q04.

Many of the players in this market continue to recast their value propositions beyond Web hosting. Hosting providers that target smaller businesses with shared and basic dedicated hosting services are increasingly promoting "online enablement" bundles. These are packages that combine the hosting function with Web site builders, Web site design services, business email, and online marketing tools such as search engine optimization, paid/sponsored search, and email marketing services.

TABLE 1

Major Web Hosting Service Provider Events, 2003 and 2004

Provider	Date	Details
AboveNet/MFN	September 2003	MFN emerged from Chapter 11 bankruptcy protection and officially changed its name to AboveNet.
Cable & Wireless	June 2003	Cable & Wireless PLC announced plans to withdraw from the U.S. market.
Cable & Wireless/ SAVVIS	March 2004	SAVVIS emerged as the top bidder in the bankruptcy auction and acquired Cable & Wireless America (C&W's U.S. IP and hosting business unit) in a $167 million cash and debt transaction.
Equinix/Sprint	October 2003	Equinix assumed the lease on Sprint's Santa Clara E-Solutions Internet datacenter and acquired the associated customers and equipment.
Globix	November 2003	Globix acquired Aptegrity, a managed Web applications provider.
Interland	June 2003	Interland completed the acquisition of SMB Web hosting service provider Hostcentric in a cash ($3 million) and stock transaction.
MCI	April 2004	MCI emerged from Chapter 11 bankruptcy protection.
	November 2003	MCI completed the acquisition of Digex, now a wholly owned subsidiary.
NaviSite	May 2003	NaviSite acquired Interliant's corporate email, messaging, and collaboration businesses in a $7 million bankruptcy auction transaction.
	April 2003	NaviSite acquired the commercial business of WAM!NET, a content management and delivery service provider in a transaction valued at more than $3 million.
	April 2003	NaviSite acquired Conxion, a managed hosting provider, in $2 million cash transaction.
	February 2003	NaviSite acquired Avasta, a managed application service provider, in a stock transaction.
SAVVIS	August 2003	SAVVIS acquired the commercial business of WAM!NET, a content management and delivery service provider, in a transaction valued at more than $3 million.
	3Q03	SAVVIS completed the transition of Intel Online Services' managed hosting customers.
VeriCenter/Sprint	January 2004	VeriCenter acquired Sprint's Boston, Atlanta, Denver, and Dallas E-Solutions Internet datacenter facilities, customers, and employees. VeriCenter also acquired Sprint's SMB hosting business, formerly known as DellHost.
XO Communications	January 2003	XO emerged from Chapter 11 bankruptcy protection.

Source: IDC, 2004

Service providers in the small business space are also positioning shared hosting as a component of larger telecommunications or Internet access packages. Hosting providers in the high-end enterprise segment of the market continue to reposition hosting as an element of larger solutions, such as enterprise networking, business continuity/disaster recovery, application delivery, and utility computing.

The industry remains characterized by a diverse range of provider types, including the following:

☒ **Network service providers (NSPs).** Companies such as AT&T, Qwest, MCI, and SAVVIS are increasingly positioning their hosting offerings and Internet datacenter facilities alongside security, storage, wide area network (WAN), and other capabilities, such as messaging and solutions consulting, as broad "managed network services" portfolios.

☒ **Traditional IT services firms.** Providers such as IBM and EDS take a bottom-up view, subsuming the Web hosting function into their overall enterprise IT outsourcing/systems management value propositions.

☒ **Specialized managed Web hosting or managed services providers (MSPs).** This group includes NaviSite as well as non–facilities-based providers such as SevenSpace and Totality.

☒ **Mass-market and small and medium-sized business (SMB)–focused providers.** Companies in this category provide shared and/or basic dedicated hosting services primarily to SMBs. The business model revolves around volume-based, "mass customizable" offerings that can be sold direct (typically online or through telesales) or through indirect reseller channels. Providers in this group include "pure-plays" such as Interland, Hostway, and Affinity, as well as Internet service providers (ISPs) such as EarthLink and online destinations such as Yahoo!

The Demand Side: End-User Survey Data

IDC interviewed 164 large and medium-sized U.S. businesses in June and July of 2003 to assess current and planned usage of third-party Web hosting services and the factors influencing the decision to outsource or keep the hosting function in-house. As shown in Figure 1, nearly 44% of respondents outsourced the hosting of their Web sites or used combinations of third-party provider services and their own in-house resources.

FIGURE 1

Use of Outsourced Web Hosting Services Currently and Within 12 Months

Q. *Is your Web site currently hosted in-house, is it outsourced, or is it a combination of both?*
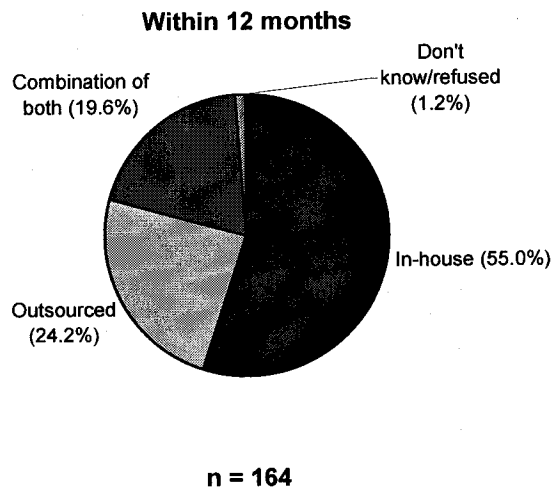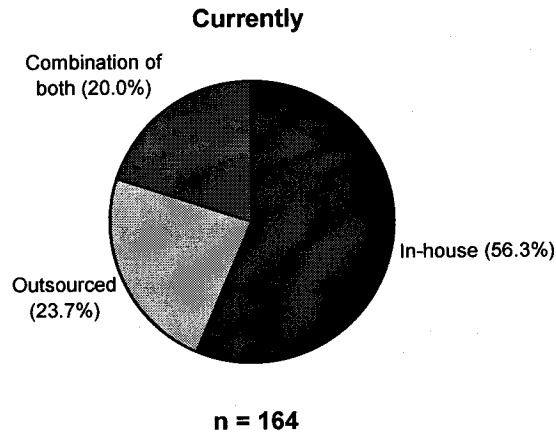
Currently

Combination of
both (20.0%)

Outsourced
(23.7%)

In-house (56.3%)

n = 164

Within 12 months

Don't
know/refused
(1.2%)

Combination of
both (19.6%)

Outsourced
(24.2%)

In-house (55.0%)

n = 164

Note: Results are weighted to reflect actual U.S. company size and vertical market distribution.

Source: IDC's *Web Hosting Services Survey,* June/July 2003

Overall, these results revealed a slight increase in outsourced hosting compared with data from IDC's 2002 survey. In addition, IDC's 2003 survey results showed a dramatic increase in the "combination" option — 20% of 2003 respondents, compared with 7.4% of those that participated in the 2002 survey.

The 2003 survey data showed that a significantly higher percentage of respondents intended to continue using third-party Web hosting services over the next 12 months, compared with the considerable decline in the planned use of third-party Web hosting services reported by the enterprises surveyed in 2002. These findings are significant as an indication that the retreat from outsourced Web hosting that began in 2001 has abated, as have enterprise concerns about the stability and viability of the sector overall. Figure 2 presents data on respondents' use of outsourced Web hosting services by company size, revealing the use of outsourced Web hosting services to be inversely proportional to the size of the company. Compared with 2002, the 2003 data showed slightly higher levels of total or partial use of external service providers among enterprises with 100–499 and 500–999 employees, while respondents in the 1,000+ employees segment posted a somewhat lower level of external service provider use in 2003.

FIGURE 2

Current Use of Outsourced Web Hosting Services by Company Size

Q. *Is your Web site currently hosted in-house, is it outsourced, or is it a combination of both?*

- ■ In-house
- ▨ Outsourced
- ■ Combination
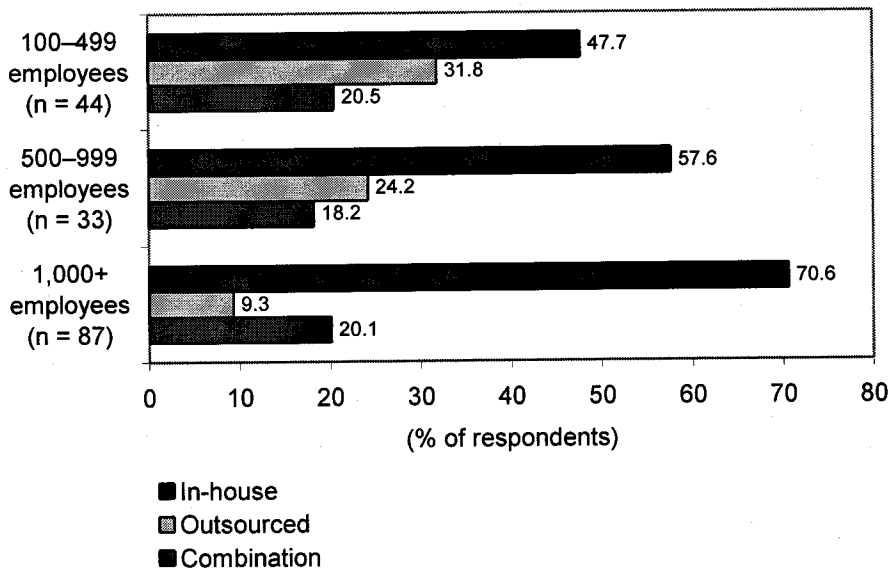
Note: Results are weighted to reflect actual U.S. company size and vertical market distribution.

Source: IDC's *Web Hosting Services Survey*, June/July 2003

Figure 3 shows planned outsourced Web hosting services usage by company size. Respondents with 100–499 and 1,000+ employees reported plans to maintain more or less the same levels of outsourced Web hosting operations through 2004. Enterprises in the 500–999 employees segment indicated a somewhat greater propensity toward in-house solutions during 2004.

FIGURE 3

Planned Use of Outsourced Web Hosting Services Within 12
Months by Company Size

Q. Is your Web site currently hosted in-house, is it outsourced, or is it a combination of both?

100–499
employees
(n = 44)

43.2
34.1
20.5
2.3

500–999
employees
(n = 33)

63.6
18.2
18.2
0.0

1,000+
employees
(n = 87)

71.2
10.0
18.8
0.0

0   10   20   30   40   50   60   70   80

(% of respondents)

■ In-house
▢ Outsourced
■ Combination
▩ Don't know
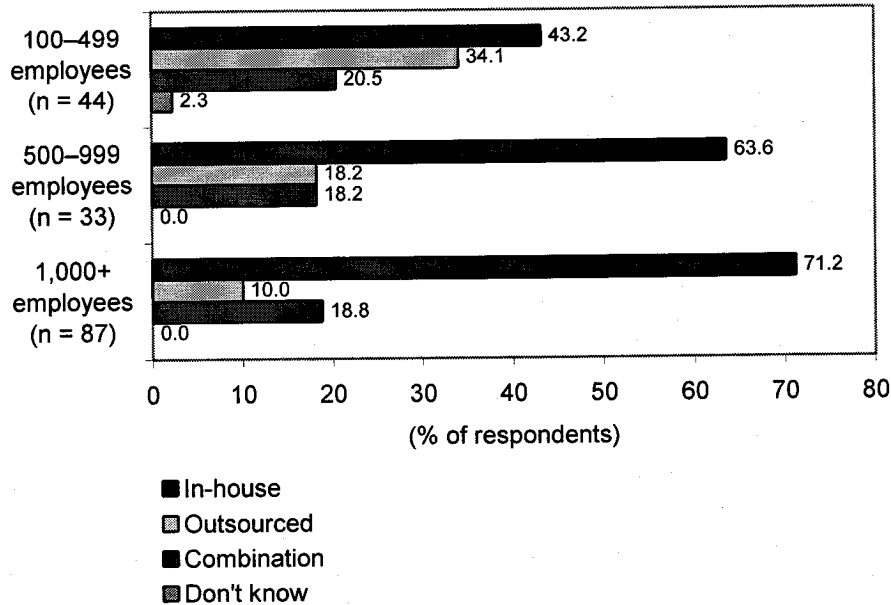
Note: Results are weighted to reflect actual U.S. company size and vertical market distribution.

Source: IDC's Web Hosting Services Survey, June/July 2003

IDC asked survey participants who currently outsource the hosting of all or part of
their Web site infrastructures to identify the most important reasons for using
third-party hosting service providers. Figure 4 shows that nearly 35% of respondents
cited cost savings as the primary decision factor for outsourced hosting (roughly the
same percentage as in 2002), followed by lack of in-house expertise (15.6%), and
improved site performance and scalability (10.8%).

Table 2 shows the primary decision factors influencing the decision to outsource the
Web hosting function. Different issues emerged as the primary factors across the
company size categories. Respondents with 100–499 employees overwhelmingly
cited cost savings as the primary decision factor, while the lack of in-house expertise
emerged as the primary factor for enterprises with 500–999 employees. The majority
of respondents with 1,000+ employees either did not know or refused to discuss the
factors influencing their decisions to use third-party Web hosting providers. Among
those that did cite specific factors, greater access to new technologies and improved
site security emerged as the major reasons for outsourcing.

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FIGURE 4

Decision Factors for Outsourced Web Hosting

Q. *What is the primary reason you chose to use a third-party service provider for all or part of your Web site operations instead of maintaining your site(s) internally?*

(% of respondents)

■ Primary factor (n = 65)
▢ Other factors (n = 53)
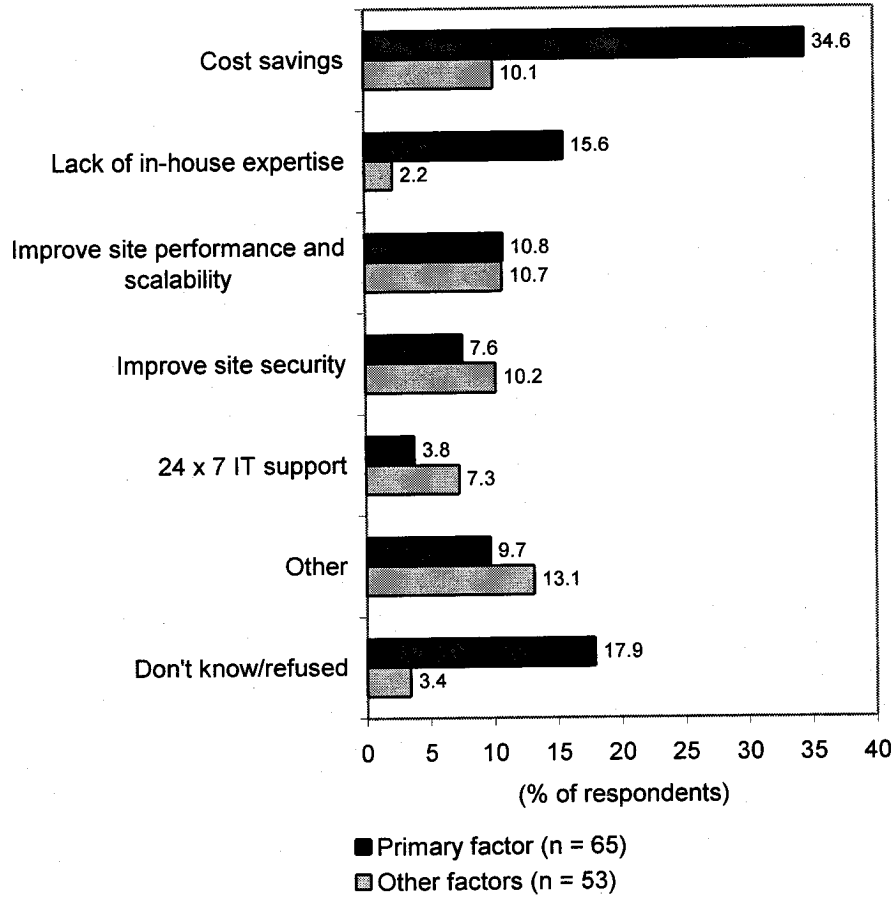
Base = respondents that use outsourced Web hosting services or a combination of outsourced services and in-house resources

Notes:

About 49% of respondents said that only one factor influenced their decision.

Results are weighted to reflect actual U.S. company size and vertical market distribution.

Multiple responses were allowed for "other" factors.

Source: IDC's *Web Hosting Services Survey*, June/July 2003

TABLE 2

Primary Decision Factors for Outsourced Web Hosting by Company Size

Q. *What is the primary reason you chose to use a third-party service provider for all or part of your Web site operations instead of maintaining your site(s) internally?*

	100–499 Employees	500–999 Employees	1,000+ Employees
Cost	43.5	28.6	11.1
Lack of in-house expertise	13.0	42.9	3.7
Improve site performance and scalability	13.0	7.1	6.2
Improve site security	8.7	–	9.9
24 x 7 IT support	–	14.3	8.1
Greater access to new technologies	–	–	12.5
Other	8.6	–	7.5
Don't know/refused	13.0	7.1	41.1
n =	23	14	28

Base = respondents that use outsourced Web hosting services or a combination of outsourced and in-house

Notes:

Results are weighted to reflect actual U.S. company size and vertical market distribution.

Use caution when interpreting results based on small sample sizes.

Source: IDC's *Web Hosting Services Survey,* June/July 2003

FUTURE OUTLOOK

Forecast and Assumptions

The following forecast supersedes the forecast published in *U.S. Web Hosting Services 4Q03 Forecast Update, 2003–2007* (IDC #30632, December 2003).

IDC maintains its prediction of low double-digit compound annual growth rate (CAGR) for the U.S. Web hosting services market based on primary research indicators that point to a continuing increase in net movement from in-house to third-party provider Web hosting services. Following the dot-com downturn that began in early 2001, IDC surveys showed a consistent trend away from outsourced Web hosting that continued throughout 2002. By mid-2003, however, penetration rates stabilized and began to move slightly upward. This trend was most evident in the medium-sized business segment (organizations with 100–999 employees).

Other factors fueling market growth include increased spending by existing outsourced Web hosting customers (primarily higher-end enterprise customers using complex managed services) and increased Web site adoption and outsourced service usage among small businesses. However, the latter market driver is offset somewhat by price competition in the small business shared and basic dedicated hosting markets.

Table 3 presents the primary assumptions built into the five-year forecast.

TABLE 3

Key Forecast Assumptions for the U.S. Web Hosting Services Market, 2004–2008

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Macroeconomics				
U.S. economic conditions	Economic recovery is continuing. IDC anticipates U.S. GDP growth of 4.4%, for 2004.	**High.** The market will benefit directly from higher levels of economic growth, resulting in increased levels of investment in business operations, including ebusiness and online initiatives.	↑	★★★★☆
Corporate profits	Profit growth continues to be mixed by industry, but pretax corporate profits continue to improve in 2004.	**High.** Overall IT spending will begin to increase as individual company profits improve, but companies will continue to cut costs. In-house hosters looking to cut costs may be swayed by the medium-term savings obtainable through third-party service provision. Nevertheless, companies currently hosting in-house may continue to do so because of the perceived cost savings.	↑	★★★★☆
Business confidence	IDC anticipates continued improvement in business confidence and expectations for the economy in general.	**High.** Increased levels of optimism will lead result in expansions and/or upgrades of existing ebusiness projects and infrastructure in the medium term.	↑	★★★★☆

TABLE 3

Key Forecast Assumptions for the U.S. Web Hosting Services Market, 2004–2008

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Technology/ service developments				
Automation and service virtualization technologies	Service providers in all Web hosting market segments will continue to implement automation technologies and processes to drive operating cost efficiencies.	**Moderate.** This will have a positive impact to the extent that operating cost efficiencies improve service providers' profitability and/or viability prospects, but these measures will not move the market in and of themselves, absent significant increases in functionality and/or cost reductions that get passed along to end users.	↑	★★★☆☆
Web services	Web services–based applications have the potential to become hosted, "retail" services.	**Low.** The short-term effect of Web services on hosting service providers and the hosting industry in general will be minimal. Longer term, both enterprise and SMB hosters may benefit, providing the infrastructure and network platforms for Web services applications and/or serving as front-end distribution channels.	↔	★★★☆☆
Labor supply				
In-house skills and expertise	Enterprises will experience no shortage in the availability of personnel qualified to manage corporate Web site/application infrastructure.	**Moderate.** A significant percentage of enterprises that currently host Web operations in-house point to the availability of internal skills as an inhibitor to outsourcing. For larger enterprises, the ability to leverage in-house expertise is closely tied to the desire to maintain control of the infrastructure and guarantee security. These were other major inhibitors to outsourced Web hosting.	↔	★★★★☆

#31203

TABLE 3

Key Forecast Assumptions for the U.S. Web Hosting Services Market, 2004–2008

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Market characteristics				
Degree of supplier concentration (enterprise market)	The number of suppliers for high-end complex managed hosting will decrease as service provider consolidations continue (e.g., SAVVIS/Cable & Wireless and Sprint/VeriCenter) and as some providers take the partnership approach to complex solutions provisioning (e.g., Qwest).	**High.** Larger enterprises' lukewarm reception of hosting providers and outsourced hosting will diminish as a core group of stable, committed market players with broader value propositions increasingly dominates the market.	↑	★★★☆☆
Degree of supplier concentration (SMB market)	Relatively low barriers to entry and expansion of the reseller model will encourage new players to enter the market.	**Moderate.** Supply-side fragmentation will result in continued price competition, but nontraditional hosting providers such as Yahoo! may spur the arrival of the long anticipated "mass market" hosting phenomenon, resulting in expanded penetration of third-party Web hosting in the SMB segment and market growth (albeit at a lower price level).	↑	★★★☆☆
Vendor viability and/or commitment to the market	Recent restructuring and consolidation activity may result in greater supply-side stability.	**Moderate.** The market will benefit from the existence of a smaller number of more stable providers (particularly at the high end of the market), somewhat mitigating customer concerns about vendor viability. However, other factors also contribute to the in-house hosting bias, including cost and control issues.	↔	★★★★☆

TABLE 3

Key Forecast Assumptions for the U.S. Web Hosting Services Market, 2004–2008

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Market ecosystem				
The return of the ASP	There will be growing market acceptance of the "software as a service" market for Web-native applications.	**Moderate.** Significant market opportunity will exist to the extent that hosting service providers can develop scalable turnkey-type infrastructure solutions and successfully forge partnerships with systems integrators, consultants, and ISVs (both packaged software and Web-native applications).	↑	★★★★☆
Partnerships and alliances	Hosting service providers will pursue partnerships and alliances rather than mergers and acquisitions or in-house development to expand their capabilities, service offerings, and distribution channels.	**Moderate.** The partnership/alliance approach will enable a larger number of service providers to offer differentiated value propositions, thus potentially expanding the addressable market. Examples include the SBC-Yahoo cobranded suite of online services for small businesses.	↑	★★★☆☆
Dependence on the development of other markets	This includes development of applications and business models for mass-market, fee-based services consumed via the Internet.	**Moderate.** The growth of broadband-specific content and applications has begun to catch up with the expansion of consumer broadband Internet access. Expansion of bandwidth- and server-intensive services/applications such as music downloads and massively multiplayer online games may provide (at the very least) additional colocation and connectivity business for hosting service providers. Other opportunities include backup/business continuity, monitoring, and security.	↑	★★★☆☆

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TABLE 3

Key Forecast Assumptions for the U.S. Web Hosting Services Market, 2004–2008

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Consumption				
In-house versus third-party hosting	During 2001–2002, IDC surveys showed a consistent trend away from outsourced Web hosting. By mid-2003 penetration rates stabilized and began to move slightly upward.	**High.** This is a positive market development, indicating increased interest (or at least diminished resistance) to outsourced Web hosting on the part of large and medium-sized businesses.	↑	★★★★☆
Customer acquisition costs	Continued churn in the SMB space will reflect quality-of-service concerns and price arbitrage behavior.	**High.** Shared/SMB hosting providers are just beginning to focus on service quality and customer service/support as competitive differentiators. The short-term market impact is minimal, but in the medium to long term, attention to these issues will reduce churn and contribute to a more positive industry perception among current in-house hosters.	↔	★★★☆☆

Legend: ★☆☆☆☆ very low, ★★☆☆☆ low, ★★★☆☆ moderate, ★★★★☆ high, ★★★★★ very high

Source: IDC, 2004

The U.S. Web hosting services market stood at $5.5 billion in 2003. IDC predicts market growth of 10.6% for 2004, resulting in a $6.1 billion market this year (see Figure 5). IDC expects industry revenue to increase to $10.4 billion in 2008, representing a five-year CAGR of 13.6%.

FIGURE 5

U.S. Web Hosting Services Revenue, 2003–2008
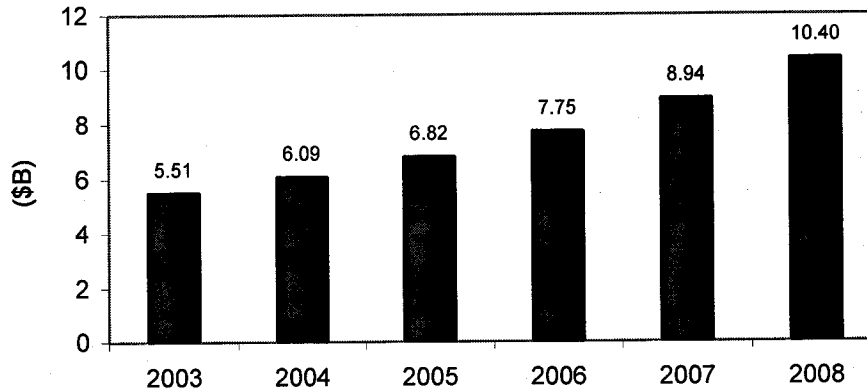
Note: The 2003–2008 revenue CAGR will be 13.6%.

Source: IDC, 2004

Forecast Segmentation by Service Type

The different types of Web hosting services are defined as follows:

☒ **Shared Web hosting.** Multiple customers' sites are hosted on a single server. Customers share a physical server, its processor(s), storage/disk space, CPU, memory, and connection to the datacenter network. Generally, this service costs less that $100 per month.

☒ **Basic dedicated Web hosting.** This segment encompasses relatively simple managed server implementations generally limited to single-tier (i.e., Web server) configurations.

☒ **Complex managed Web hosting.** This type of Web hosting typically involves multiple servers of various types (e.g., Web, database, and application) as well as additional services such as advanced monitoring, load balancing, security storage, stress testing, and content delivery. This segment can be distinguished from basic dedicated hosting by the focus on comprehensive Internet infrastructure and services and systems-level (as opposed to server-level) administration in support of large-scale Web sites and applications.

☒ **Colocation.** This segment encompasses datacenter infrastructure (i.e., the "environmentals" that transform a building into a datacenter), rack/cage space in the datacenter, and bandwidth within the datacenter and from the datacenter to the Internet. The service provider supplies datacenter space, power, and bandwidth; customers maintain and manage their own implementations. IDC's definition of colocation hosting excludes the carrier hotel or network colocation business that provides housing for telco switches, ISP modem banks, and other service-enabling hardware.

Table 4 and Figure 6 present IDC's forecast segmented by service type for 2003 and 2008. Complex managed Web hosting represents the largest market segment currently and throughout the forecast period, given the broad size, scope, and price tag of these implementations. Shared and colocation hosting will account for diminishing percentages of the total market and will grow only modestly in absolute terms because of continued pricing pressure.

Basic dedicated Web hosting will account for an increasing share of the market during the forecast period. Growth factors include expanded levels of third-party Web hosting among SMBs, increased automation and virtualization (which improve ease of use), and, to a lesser extent, migration from shared Web hosting.

TABLE 4

U.S. Web Hosting Services Revenue by Service Type, 2003–2008 ($M)

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Shared	1,007	1,064	1,117	1,161	1,194	1,213	3.8
Basic dedicated	396	516	681	920	1,259	1,750	34.6
Complex managed	2,931	3,332	3,829	4,462	5,263	6,203	16.2
Colocation	1,173	1,182	1,194	1,209	1,225	1,238	1.1
Total	5,508	6,093	6,820	7,753	8,941	10,404	13.6

Note: See Table 3 for key forecast assumptions.

Source: IDC, 2004

FIGURE 6

U.S. Web Hosting Services Revenue Share by Service Type,
2003 and 2008

2003

Basic dedicated
(7.2%)

Shared (18.3%)

Complex managed
(53.2%)

Colocation
(21.3%)

Total = $5.51B

2008

Basic dedicated
(16.8%)

Shared (11.7%)

Complex
managed (59.6%)

Colocation
(11.9%)

Total = $10.40B

Source: IDC, 2004

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Shared Web Hosting

Shared Web hosting offers entry-level Web hosting solutions for content-only or basic ecommerce sites. IDC's forecast covers paid services only and excludes revenue from domain name registration and email hosting services that often bundle in some level of free shared hosting service. Monthly fees for paid services can start as low as $7.95 per month for limited discount or budget plans, but "business class" entry-level shared hosting plans typically start at $19.95 per month. Shared hosting providers also offer "professional" plans that generally include larger disk space and bandwidth allocations, traffic reporting tools, and ecommerce, database, and scripting languages support.

The U.S. shared Web hosting market will increase from approximately $1 billion in 2003 to more than $1.2 billion in 2008 (see Figure 7). During the forecast period, IDC predicts that Web site penetration among small businesses will increase from about 46% in 2003 to nearly 66% in 2008. In 2003, approximately 65% of small businesses with Web sites used third-party hosting service providers. By 2008, IDC predicts that use of third-party Web hosting services will extend to nearly 80% of small businesses with Web sites.

FIGURE 7

U.S. Shared Web Hosting Services Revenue, 2003–2008
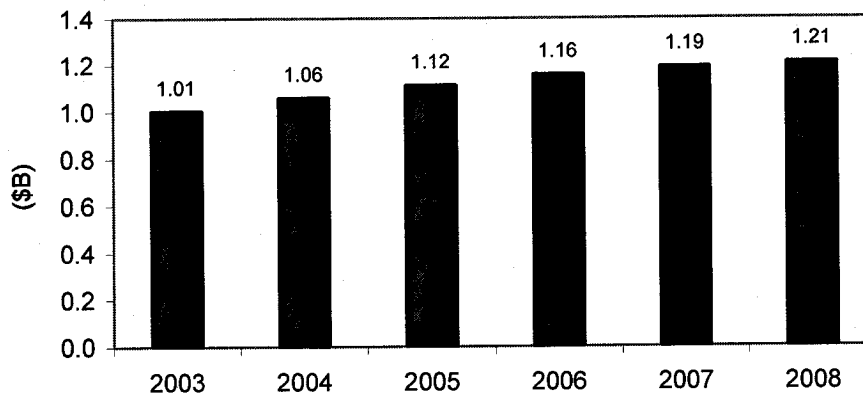
Note: The 2003–2008 revenue CAGR will be 3.8%.

Source: IDC, 2004

Shared Web hosting will remain a viable segment during the forecast period, given the number of small businesses that have yet to establish Web presences. However, the shared hosting market is extremely fragmented, with a diverse array of suppliers that include national ISPs, standalone mass market hosters, local/regional ISPs, pure resellers and value-added resellers and integrators. Leading providers in the shared hosting market include Yahoo! Small Business, NTT-Verio, Interland, Affinity Internet, Hostway, and EarthLink.

In early 2003, a number of service providers began focusing on shared hosting opportunities in the "mass market," which encompasses small businesses, home offices, and home-based businesses. The mass market approach to shared hosting emphasizes convenience and ease of use, primarily through the development and promotion of Web site builder tools that enable small businesses to create and publish Web sites without having to learn HTML or graphic design. Major players such as Yahoo! and Hinterland are also bundling shared hosting with other small business products and services, such as online marketing and promotion, search engine submission and optimization, and hosted business applications such as email and calendaring functions.

Managed/Dedicated Web Hosting

The U.S. managed/dedicated Web hosting market amounted to $3.3 billion in 2003 and will grow 15.6% to reach more than $3.8 billion in 2003 (see Figure 8). IDC predicts a five-year CAGR of 19.0% during the forecast period 2003–2008. In 2008, the market will amount to $7.9 billion.

FIGURE 8

U.S. Managed/Dedicated Web Hosting Services Revenue, 2003–2008
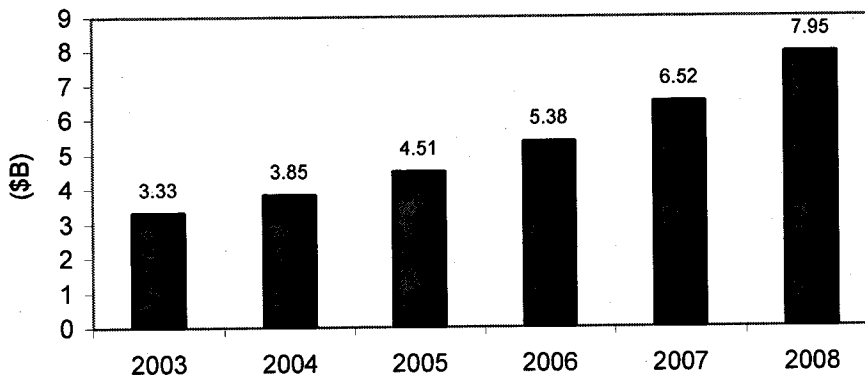
Note: The 2003–2008 revenue CAGR will be 19.0%.

Source: IDC, 2004

Table 5 and Figure 9 present IDC's managed/dedicated Web hosting forecast by service type. Basic dedicated hosting represents the low end of the managed Web hosting market and typically involves single-tier Web hosting implementations featuring preloaded operating system, Web server, and other software, as well as a basic level of server monitoring, maintenance, and security. The basic dedicated market segment amounted to $396 million in 2003 and will exceed $1.7 billion in 2008, increasing at a five-year CAGR of 34.6%. Growth factors fueling this market

include increased Web site penetration among SMBs, particularly greenfield implementations, increased levels of project-based hosting (i.e., distributed applications or development tasks), and an expanded range of service offerings and functionality offered at all levels of the basic dedicated hosting market.

The complex managed Web hosting segment reached $2.9 billion in 2003 and will exceed $6.2 billion in 2008, expanding at a CAGR of 16.2% during the forecast period. Growth factors in this market segment include infrastructure upgrades and additional value-added services adoption on the part of larger companies (i.e., those with more than 500 employees) and increased use of third-party hosting services to support public Web site and internal business applications. An additional driver is new customer growth now that the dust appears to have settled on the supply-side consolidation front and the market is settling around a smaller number of committed, viable service providers.

TABLE 5

U.S. Managed/Dedicated Web Hosting Services Revenue by Service Type, 2003–2008 ($M)

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Basic dedicated	396	516	681	920	1,259	1,750	34.6
Complex managed	2,931	3,332	3,829	4,462	5,263	6,203	16.2
Total	3,327	3,847	4,510	5,383	6,522	7,953	19.0

Note: See Table 3 for key forecast assumptions.

Source: IDC, 2004

FIGURE 9

U.S. Managed/Dedicated Web Hosting Services Revenue Share
by Service Type, 2003 and 2008

2003

Basic dedicated
(11.9%)

Complex managed
(88.1%)

Total = $3.33B

2008

Basic dedicated
(22.0%)

Complex
managed (78.0%)

Total = $7.95B
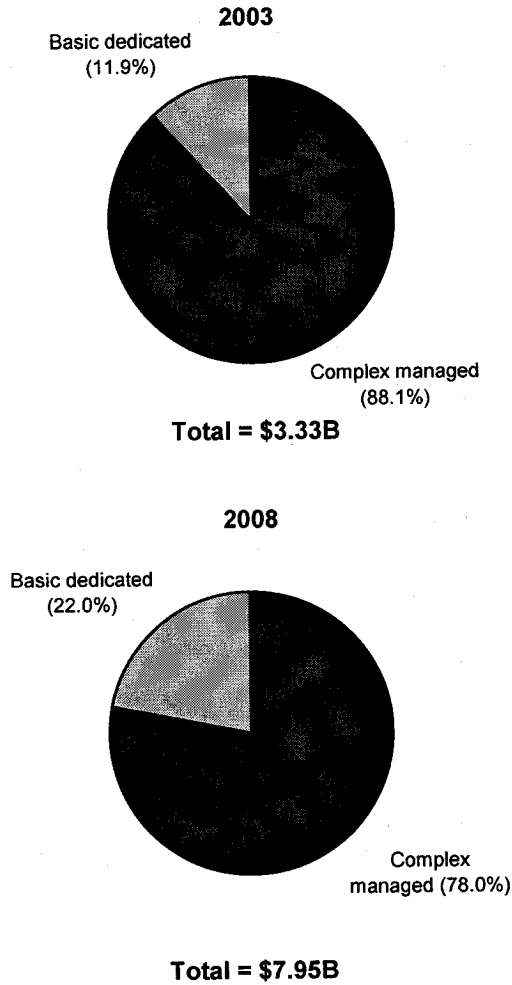
Colocation Hosting

The colocation market has taken a pounding over the past few years but remains a
viable market segment. Total Internet datacenter space continued to decline in 2003
(although at a slower pace than during 2001–2002), as service providers sold or
auctioned off "surplus" datacenter space to enterprises or real estate management
companies.

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Service providers that participate in this market still sell basic colocation services — power, pipes, and ping — but continue to pursue the "managed colocation" business model. In managed colocation, the customer retains control of the infrastructure, operating system, and other software but purchases additional infrastructure-related managed services, such as storage, load balancing, security, and infrastructure/application performance advanced monitoring, to support the customer-managed Web site or application.

Service providers typically provide managed services using a mix of homegrown capabilities and the resold services of partners, such as Seven Space. To differentiate themselves from telecom carrier/ISP-oriented colocation/hosting providers, vendors such as Inflow and Equinix highlight their carrier-neutral status, emphasizing both the cost savings and redundancy benefits.

Figure 10 shows that the U.S. colocation hosting market stood at nearly $1.2 billion in 2003, representing relatively flat year-over-year growth from 2002. This forecast covers basic colocation hosting (i.e., power, pipes, and ping) and does not include managed offerings provided alongside the basic colocation function; that revenue is included in the complex managed hosting services forecast. IDC predicts that the market will expand only slightly during the forecast period, but enterprises will continue to view colocation hosting as an alternative to in-house Web site management and fully managed Web hosting services. Despite the gradual removal of excess datacenter capacity from the market, IDC expects continued pricing pressure and supply-side competition to constrain overall revenue growth.

FIGURE 10

U.S. Colocation Hosting Revenue, 2003–2008
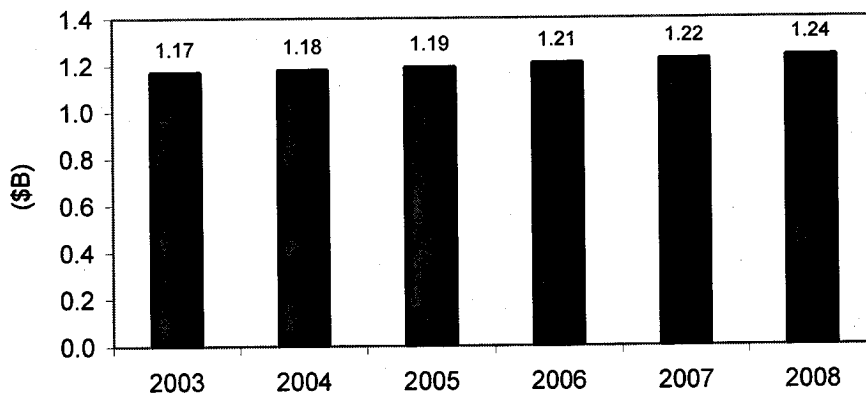
Note: The 2003–2008 revenue CAGR will be 1.1%.

Source: IDC, 2004

Forecast Segmentation by Company Size

Table 6 presents Web hosting services revenue segmented by company size. Figure 11 shows the percentage of total revenue attributable to each business size category.

Small businesses account for a large portion of the U.S. Web hosting market, representing 45% of the total market in 2003. The small business market will increase at a CAGR of 12.5% during the forecast period, fueled primarily by expanded Web site adoption in this segment and near universal levels of third-party service provision. The medium-sized and large business markets will post CAGRs of 14.4% and 14.6%, respectively, during the forecast period.

TABLE 6

U.S. Web Hosting Services Revenue by Company Size, 2003–2008 ($M)

	2003	2004	2005	2006	2007	2008	2003–2008 CAGR (%)
Large (1,000+ employees)	559	634	724	835	959	1,107	14.6
Medium sized (100–999 employees)	2,469	2,720	3,066	3,509	4,074	4,838	14.4
Small (<100 employees)	2,480	2,739	3,031	3,409	3,908	4,459	12.5
Total	5,508	6,093	6,820	7,753	8,941	10,404	13.6

Note: See Table 3 for key forecast assumptions.

Source: IDC, 2004

FIGURE 11

U.S. Web Hosting Services Revenue Share by Company Size, 2003 and 2008

2003

Large (1,000+
employees)
(10.2%)

Small (<100
employees)
(45.0%)

Medium sized
(100–999
employees)
(44.8%)

Total = $5.51B

2008

Large (1,000+
employees)
(10.6%)

Small (<100
employees)
(42.9%)

Medium sized
(100–999
employees)
(46.5%)
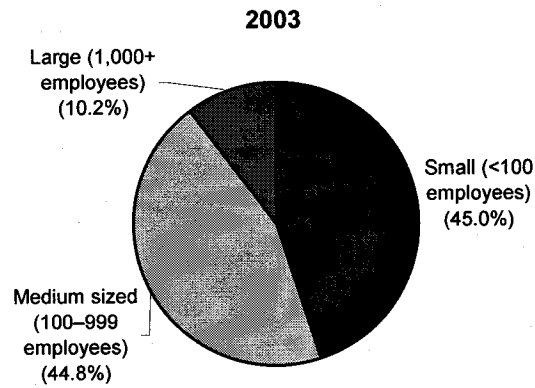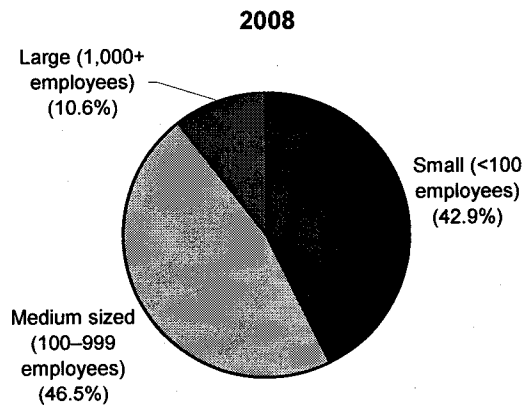
Total = $10.40B

Source: IDC, 2004

ESSENTIAL GUIDANCE

The U.S. Web hosting services market has begun to recover from the multiple shocks of economic recession, Internet industry meltdown, and supply-side turmoil. Service providers will continue to find market opportunity within their existing customer bases, but the greater prize is the "conversion" of in-house hosters — the primary competitor identified by most enterprise hosting service providers. Going forward, Web hosting service providers should consider the following:

☑ IDC's 2003 *Web Hosting Services Survey* found a strong, directly proportional relationship between Web site/Web application mission-criticality and in-house management of the supporting Internet infrastructure. Among the in-house hosters, control, lack of cost savings, and the availability of in-house expertise were cited as inhibitors to outsourced Web hosting. Hosting service providers must establish a clearer link between Web site mission-criticality and the benefits of outsourced hosting. From this perspective, the virtues of using a third-party hosting provider are more about improved scalability, performance, reliability, and business continuity than cost savings *per se*.

☑ The desire to maintain control of the Internet infrastructure emerged among the top 3 factors inhibiting the use of outsourced Web hosting services among medium-sized and large enterprises. Service providers should develop remote or "shared control" monitoring and management capabilities and continue to implement "confidence building" tools and policies, such as Web-based account/service-level management portals to assuage in-house hosters' control concerns.

☑ The perception that internal solutions are more flexible remains an important inhibitor to outsourced Web hosting. To combat this perception, service providers should highlight on-demand or usage-based offerings and leverage automation and virtualization technologies for both operations and portfolio development.

☑ There are opportunities for service providers on the value-added services front, but providers must do a better job at marketing the benefits of these offerings in terms of overall Web site/application performance and reliability improvements. Alternatively, service providers should consider positioning such elements as backup and recovery and security as integral components of the service offering rather than as premium-priced add-ons to basic Web hosting functions.

☑ The shared/small business hosting market will remain a competitive arena, given the relatively low barriers to entry. The result will be a continued "arms race," emphasizing service features, pricing, and packaging/bundling. IDC believes that providers such as SBC/Yahoo! may be well positioned to lead the charge on the "mass marketization" of Web hosting for small businesses, given their ability to provide one-stop shopping by bundling such elements as telecommunications services, high-speed Internet access, and online business tools (e.g., marketing services, search engine optimization, and paid search).

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LEARN MORE

Related Research

☑ *U.S. Web Hosting 2004 Service Provider Analysis (forthcoming)*

☑ *U.S. Web Hosting 2004 Service Provider Shares (forthcoming)*

☑ *U.S. Web Hosting Services 4Q03 Forecast Update, 2003–2007* (IDC #30632, December 2003)

☑ *U.S. Web Hosting Services: A Demand-Side View by Industry, 2003* (IDC #30369, November 2003)

☑ *Web Hosting Services: A Demand-Side View by Company Size, 2003* (IDC #30193, October 2003)

☑ *Web Hosting Services: A Demand-Side View, 2003* (IDC #30077, September 2003)

Definitions

Web hosting encompasses services related to the development, management, and maintenance of the infrastructure that supports businesses' Web sites and Web presences. These services run the gamut from shared hosting (multiple customer sites hosted on a single server), colocation hosting (rack/cage space in the datacenter and bandwidth within the datacenter and from the datacenter to the Internet), and managed Web hosting (basic dedicated Web services and more complex three-tiered Web, database, and application server Web site implementations).

The definition includes support for associated application infrastructure platforms (e.g., ecommerce packages, databases, and application servers), comprehensive Internet infrastructure management, and systems-level (as opposed to server-level) administration in support of large-scale Web sites and applications. Also included in the definition are value-added services offered as add-ons to managed and colocation hosting services, such as managed storage and security, but only to the extent that these services are provided as integral parts of larger Web hosting services. These services are also covered as discrete market segments in other IDC research programs.

The definition encompasses:

☑ Public, Internet-facing Web sites and Web site functions

☑ Nonpublic corporate intranets

☑ Supply chain–oriented business-to-business extranets

The definition excludes remote access to the datacenter, professional services billed on a time-and-materials basis, and the resale of hardware or software. It also excludes the business process–type services sold under the "software as a service" market model.

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Metro Area	20,000+	15,000-19,999	10,000-14,999	5,000-9,999	2,500-4,999	1,000-2,499	500-999	250-499	100-249	50-99	25-49	10-24	5-9	2-4	1	Total/Avg	
LA-Long Beach - Orange Co - Riverside - San Bernardino, CA	0	0	1	21	43	239	476	1455	6,338	11,993	22,243	58,145	78,270	288,697	179,353	647,275	176,989
New York - Nassau-Suffolk, NY	0	1	1	17	70	207	409	1070	4,496	7,976	15,047	42,473	57,097	211,131	118,987	458,981	127,089
Chicago, IL	2	1	1	12	27	174	347	1,035	4,046	7,309	12,732	32,096	40,057	122,747	75,976	296,562	96,240
San Francisco - Oakland - San Jose, CA	4	1	1	5	26	120	245	617	2715	5,156	9,583	24,233	32,190	109,198	80,598	264,688	73,877
Washington, DC-MD-VA-WV	0	1	0	20	47	161	265	667	2,736	5,129	8,824	23,475	29,985	92,037	69,870	233,222	70,149
Miami - Ft. Lauderdale - Boca, FL	0	0	1	4	11	80	146	479	2277	3541	7,357	21,697	32,606	120,866	69,296	258,360	67,478
Dallas - Ft. Worth, TX	0	1	0	12	28	122	224	609	2419	4,494	8,057	21,217	29,484	107,182	76,917	250,766	65,671
Philadelphia, PA-NJ	1	0	0	4	28	109	162	520	2,269	4,008	7,446	20,000	25,710	80,485	52,467	193,208	59,433
Atlanta, GA	0	0	0	10	22	84	177	521	2,222	3,628	6,955	18,716	25,347	91,102	63,761	212,546	56,868
Detroit, MI	0	0	1	11	32	93	140	461	1,978	3,614	6,586	17,097	22,009	67,581	51,253	170,856	51,284
Houston, TX	0	0	1	5	13	104	190	475	1,967	3,245	5,910	16,673	23,315	85,674	57,611	195,182	51,110
Newark - Bergen - Jersey City, NJ	1	0	1	4	23	72	154	399	1824	3151	6,374	16,209	22,110	75,086	49,368	169,898	49,424
Boston, MA	0	0	0	4	25	83	186	449	2,010	3,414	6,130	15,873	20,365	68,335	44,735	166,486	48,036
Minneapolis-St Paul, MN-WI	2	2	1	4	20	64	159	424	1,669	3,063	5,083	13,119	15,281	47,906	40,351	127,146	38,215
Phoenix-Mesa, AZ	0	0	0	5	9	63	119	372	1,424	2,571	4,751	12,344	15,315	51,933	34,279	123,186	36,405
San Diego, CA	0	1	0	2	11	47	98	266	1,233	2,213	4,038	11,097	14,436	55,750	38,679	127,873	33,017
Seattle-Bellevue-Everett, WA	0	0	0	2	12	55	97	244	1,102	2,266	3,904	10,634	14,306	47,736	45,945	126,303	32,212
St Louis, MO-IL	0	0	1	2	19	53	115	291	1,269	2,369	4,370	10,541	13,329	40,152	26,079	98,589	31,878
Baltimore, MD	0	1	1	1	15	62	81	262	1,156	2,243	3,778	10,112	13,275	41,157	28,115	100,259	30,564
Tampa-St Petersburg-Clearwater, FL	0	1	0	1	12	56	79	239	1,186	1,871	3,514	9,790	13,512	47,684	31,853	109,798	29,873
Pittsburgh, PA	0	0	0	3	6	52	105	251	1,068	1,959	3,630	9,471	12,767	37,520	24,880	91,712	28,895
Denver, CO	0	0	0	3	13	45	103	251	1,043	2,034	3,542	9,388	12,244	44,782	24,878	108,326	28,251
Cleveland-Lorain-Elyria, OH	0	0	0	3	13	37	77	235	1,145	1,981	3,665	9,194	12,175	35,726	24,025	88,275	28,160
Portland-Vancouver, OR-WA	0	0	1	2	8	31	79	207	864	1,706	3,250	8,031	10,863	36,300	30,366	91,708	24,714
Kansas City, MO-KS	1	1	0	2	7	46	88	223	932	1,770	3,117	7,727	9,567	29,274	19,729	72,482	23,113 Top 25 1,358,945
Orlando, FL	0	0	0	2	2	46	81	207	933	1,608	2,923	7,594	10,181	37,769	27,816	88,992	23,068
Indianapolis, IN	0	0	1	2	12	27	79	208	901	1,596	2,845	7,104	8,944	25,350	17,683	64,763	21,402
Cincinnati, OH-KY-IN	0	0	0	3	2	45	82	177	819	1,422	2,710	6,900	8,973	25,502	17,655	64,462	20,998
Charlotte-Gastonia-Rock Hill, NC-SC	0	0	1	5	5	38	61	157	761	1,522	2,540	6,751	9,203	29,678	20,095	70,714	20,677
Columbus, OH	0	1	0	1	8	35	94	199	737	1,332	2,719	6,590	8,414	26,276	18,975	65,576	19,982
Sacramento, CA	0	0	1	0	5	33	42	176	674	1,470	2,414	6,239	8,216	27,872	22,032	69,038	18,875
Milwaukee-Waukesha, WI	0	0	0	3	6	39	90	184	877	1,254	2,605	6,424	7,466	20,876	14,261	54,292	18,842
Norfolk-Virginia Beach-Newport News, VA-	0	0	1	1	8	39	49	154	682	1,220	2,245	5,792	7,341	21,265	14,695	53,528	17,314
Nashville, TN	0	0	0	0	4	36	57	148	696	1,150	2,279	5,639	7,413	23,240	15,583	56,315	17,247
Las Vegas, NV-AZ	1	0	0	5	14	37	66	169	601	1,128	2,018	5,527	7,404	25,260	17,201	59,452	16,700
Raleigh-Durham-Chapel Hill, NC	0	1	1	3	5	15	68	133	642	1,123	2,002	5,533	7,387	24,915	18,433	60,266	16,692
New Orleans, LA	0	0	0	0	6	27	49	147	511	959	1,998	5,346	7,643	24,291	13,839	54,980	16,621
Salt Lake City-Ogden, UT	0	0	0	2	5	29	62	175	591	1,182	2,031	5,467	7,248	23,378	16,245	56,415	16,519
Austin-San Marcos, TX	0	0	0	1	5	39	52	165	590	1,151	1,986	5,315	7,418	27,173	21,427	65,322	16,460
San Antonio, TX	0	0	0	3	6	29	48	149	568	1,131	1,885	5,108	7,356	24,774	17,578	58,641	16,048
Greensboro-Winston-Salem-High Point, NC	0	0	0	0	5	21	45	155	611	1,127	1,934	4,966	7,161	24,011	17,173	57,218	15,799
Hartford, CT	0	0	0	3	5	22	54	136	598	1,089	1,907	5,026	6,714	22,045	16,894	54,496	15,334
Middlesex-Somerset-Hunterdon, NJ	0	0	0	1	5	27	57	132	626	1,013	1,923	4,908	6,382	20,215	13,682	48,958	14,852
Jacksonville, FL	0	0	0	1	5	15	44	110	551	959	1,779	4,530	6,428	20,580	12,998	49,507	14,247
Providence-Fall River-Warwick, RI-MA	0	0	1	2	4	27	38	95	537	987	1,849	4,691	6,077	19,267	14,991	46,571	14,141
Grand Rapids-Muskegon-Holland, MI	0	0	0	1	5	16	51	119	519	1,001	1,955	4,664	5,729	19,051	14,991	46,671	13,868
Oklahoma City, OK	0	0	0	1	5	24	48	105	483	1,009	1,824	4,478	5,995	17,077	11,307	44,330	13,789
Memphis, TN-AR-MS	1	1	1	0	7	24	45	136	574	913	1,855	4,522	5,826	16,630	10,293	41,273	13,690
Louisville, KY-IN	0	0	0	1	5	25	38	118	548	1,018	1,793	4,420	5,926	16,421	11,545	42,067	13,705 Top 50 1,779,211
Buffalo-Niagara Falls, NY	0	0	0	0	10	20	44	116	552	1,010	1,806	4,418	5,610	20,991	12,543	42,550	13,396
Monmouth-Ocean, NJ	0	0	0	2	0	9	19	73	382	742	1,464	4,388	6,309	16,214	14,502	48,880	13,285
Richmond-Petersburg, VA	0	0	2	0	5	26	51	127	535	954	1,760	4,379	5,500	16,280	10,944	40,497	13,128
Rochester, NY	0	0	0	0	1	14	54	109	476	958	1,609	4,058	5,420	16,120	14,197	43,177	12,521
Birmingham, AL	0	0	0	0	0	21	45	106	431	893	1,605	3,827	5,365	16,889	10,376	39,043	12,375
Greenville-Spartanburg-Anderson, SC	0	0	0	0	4	12	32	128	429	858	1,404	3,827	5,526	15,977	10,442	39,551	12,044
Dayton-Springfield, OH	0	0	0	1	4	22	35	110	444	862	1,498	3,769	4,929	14,577	10,368	36,619	11,502

Metro Area	20,000+	15,000 - 19,999	10,000 - 14,999	5,000 - 9,999	2,500 - 4,999	1,000 - 2,499	500 - 999	250 - 499	100 - 249	50 - 99	25 - 49	10 - 24	5 - 9	2 - 4	1	Total/Avg
Albany-Schenectady-Troy, NY	0	0	0	1	6	34	63	114	417	805	1,447	3,412	4,526	13,501	10,952	35,278
Tulsa, OK	0	0	0	2	4	14	47	97	381	653	1,392	3,422	4,664	14,226	8,515	33,417
Knoxville, TN	0	0	0	0	3	14	35	84	352	659	1,225	3,229	4,299	12,736	8,088	30,724
Honolulu, HI	0	0	0	1	2	16	28	97	405	769	1,303	3,083	4,184	12,283	8,388	30,559
Ventura, CA	0	0	2	1	2	14	19	74	281	640	1,143	3,029	4,207	14,661	10,434	34,504
Omaha, NE-IA	0	0	0	1	3	29	44	81	394	717	1,313	3,020	3,815	11,934	8,619	29,972
Tucson, AZ	0	0	0	1	2	8	40	74	349	579	1,128	3,007	3,871	11,844	7,630	28,533
Akron, OH	0	0	0	0	2	9	30	62	346	586	1,156	2,865	3,935	10,923	7,682	27,597
Fresno, CA	0	1	0	3	2	11	23	57	265	619	1,185	2,995	3,813	12,861	8,971	30,792
Albuquerque, NM	0	0	0	1	2	10	24	81	302	607	1,114	2,997	3,771	12,010	9,828	30,750
Allentown-Bethlehem-Easton, PA	0	0	0	0	3	14	40	65	329	545	1,095	2,849	3,985	11,769	8,860	29,555
Syracuse, NY	0	0	0	0	5	18	37	94	338	647	1,131	2,781	3,686	11,284	9,768	29,789
Sarasota-Bradenton, FL	0	0	0	1	2	6	12	47	286	496	951	2,678	4,014	14,500	10,506	33,498
Harrisburg-Lebanon-Carlisle, PA	0	0	0	1	3	26	56	91	353	617	1,116	2,708	3,544	10,748	8,119	27,381
New Haven-Meriden, CT	0	0	0	0	3	3	20	41	275	456	884	2,350	3,091	10,898	7,808	25,830
Ann Arbor, MI	0	0	0	0	0	13	20	77	218	517	897	2,378	2,981	10,032	9,269	26,403
Tacoma, WA	0	0	0	2	1	10	20	36	210	463	823	2,213	3,049	10,692	10,540	28,057
Fort Myers-Cape Coral, FL	0	0	0	1	0	4	14	28	210	381	742	2,196	3,063	11,802	9,073	27,513
Little Rock-North Little Rock, AR	0	0	1	0	6	14	36	78	291	565	1,006	2,576	3,485	10,644	6,993	25,697
Stamford-Norwalk, CT	0	0	0	2	4	9	20	67	217	390	793	2,207	3,241	10,608	8,136	25,692
Daytona Beach, FL	0	0	0	3	3	3	12	47	212	330	662	1,803	2,718	10,769	8,648	25,207
Baton Rouge, LA	0	0	0	1	2	11	38	67	293	587	1,016	2,563	3,573	10,555	6,183	24,888
Scranton-Wilkes-Barre-Hazleton, PA	0	0	0	2	2	13	34	74	280	470	899	2,275	3,256	10,242	6,967	24,512
Colorado Springs, CO	0	0	0	0	0	11	14	49	192	412	698	1,911	2,774	10,005	8,255	24,321
Melbourne-Titusville-Palm Bay, FL	0	0	0	0	1	5	22	34	193	344	625	1,829	2,712	9,820	8,289	23,874
Charleston-North Charleston, SC	0	0	1	1	0	11	22	46	221	442	842	2,371	3,248	10,114	6,530	23,847
Wilmington-Newark, DE-MD	0	0	0	0	7	21	29	76	312	531	948	2,492	3,031	9,814	6,409	23,671
Springfield, MA	0	0	0	1	1	9	17	63	254	476	955	2,297	3,071	9,729	6,789	23,662
Boise City, ID	0	0	0	2	1	3	16	52	222	388	752	2,168	2,853	9,355	7,799	23,610
Toledo, OH	0	0	0	1	9	9	22	61	307	614	1,078	2,576	3,340	9,439	6,148	23,605
Columbia, SC	0	0	0	3	1	11	23	66	280	503	845	2,318	3,321	10,061	6,141	23,573
Santa Rosa, CA	0	0	0	0	0	6	4	29	151	362	710	2,002	2,907	9,862	7,400	23,433
Mobile, AL	0	0	0	4	3	11	13	34	206	421	878	2,258	3,188	9,663	5,787	22,462
Des Moines, IA	0	0	0	0	2	12	23	77	260	501	969	2,206	2,708	8,760	6,503	22,023
Lexington, KY	0	0	0	1	4	7	25	61	239	485	793	2,337	2,921	8,946	6,031	21,849
Bakersfield, CA	0	0	0	0	0	7	29	45	195	386	770	1,983	2,610	9,073	6,658	21,758
Bridgeport, CT	0	0	0	1	2	4	17	53	205	343	663	1,804	2,588	8,517	7,036	21,230
Gary, IN	0	0	0	0	0	14	23	43	232	462	900	2,300	2,920	8,798	5,474	21,168
Wichita, KS	0	0	0	1	1	6	18	49	243	481	904	2,253	2,872	8,589	5,743	21,162
Youngstown-Warren, OH	0	0	0	0	4	2	16	44	193	435	888	2,090	3,191	8,654	5,629	21,147
Fort Wayne, IN	0	0	0	3	4	7	20	81	243	475	874	2,131	2,888	8,479	5,878	21,080
Worcester, MA-CT	0	0	0	1	4	9	21	48	250	421	833	1,884	2,701	8,613	6,132	20,917
Lansing-East Lansing, MI	0	0	0	1	2	14	18	60	226	388	812	1,884	2,459	7,633	7,021	20,520
Vallejo-Fairfield-Napa, CA	0	0	0	0	2	8	11	33	166	358	657	1,737	2,435	8,408	6,546	20,361
Lancaster, PA	0	0	0	0	1	9	18	54	228	412	766	1,855	2,602	7,827	6,468	20,240
Boulder-Longmont, CO	0	0	0	1	1	8	17	33	158	346	575	1,596	2,240	8,120	7,025	20,120
Lakeland-Winter Haven, FL	0	0	0	0	2	6	22	49	186	349	580	1,607	2,382	8,492	6,243	19,917
Madison, WI	0	0	0	2	1	15	31	70	265	518	911	2,289	2,440	7,421	5,930	19,893
Spokane, WA	0	0	0	1	4	6	19	32	189	345	650	1,719	2,373	7,302	6,951	19,587
Chattanooga, TN-GA	0	0	0	0	0	5	22	41	231	403	766	1,901	2,623	8,015	5,161	19,172
Kalamazoo-Battle Creek, MI	0	0	0	0	1	8	17	55	183	374	741	1,957	2,428	7,262	6,135	19,160
Santa Barbara-Santa Maria-Lompoc, CA	0	0	0	0	2	6	14	41	162	317	695	1,744	2,452	7,800	5,893	19,125
El Paso, TX	0	0	0	2	0	19	31	67	224	381	678	1,899	2,580	7,975	4,804	18,660
Pensacola, FL	0	0	0	0	0	13	11	34	153	256	559	1,561	2,211	7,473	6,235	18,506
Stockton-Lodi, CA	0	0	0	0	0	6	15	46	216	387	735	1,760	2,416	7,784	5,139	18,504
Jackson, MS	0	0	0	1	2	7	25	65	222	459	816	1,839	2,617	7,834	4,613	18,500

Top 75

2,018,201

10,607 · 10,512 · 9,764 · 9,744 · 9,300 · 9,259 · 8,934 · 8,888 · 8,867 · 8,791 · 8,803 · 8,583 · 8,425 · 8,338 · 7,056 · 6,991 · 6,758 · 6,592 · 7,923

Metro Area	Total/Avg	1	2-4	5-9	10-24	25-49	50-99	100-249	250-499	500-999	1,000-2,499	2,500-4,999	5,000-9,999	10,000-14,999	15,000-19,999	20,000+
Augusta-Aiken, GA-SC	18,008	5,291	7,629	2,335	1,584	616	320	162	38	19	7	6	1	0	0	0
Fort Pierce-Port St. Lucie, FL	17,892	6,210	7,628	1,958	1,261	439	228	138	19	8	3	0	0	0	0	0
Johnson City-Kingsport-Bristol, TN-VA	17,146	4,682	7,145	2,370	1,611	698	384	189	43	13	9	1	1	0	0	0
Flint, MI	16,912	5,709	6,600	2,113	1,492	553	275	117	35	7	5	4	0	0	0	0
Lafayette, LA	16,865	4,248	7,381	1,966	1,601	701	343	128	27	12	6	0	0	0	0	0
Modesto, CA	16,727	5,333	6,868	2,045	1,601	566	343	130	27	9	3	1	0	0	0	0
Newburgh, NY-PA	16,696	5,170	7,179	2,278	1,481	482	258	128	31	14	5	1	1	0	0	0
Saginaw-Bay City-Midland, MI	16,590	5,195	6,410	1,830	1,383	642	290	173	39	9	9	1	0	0	0	0
Naples, FL	16,246	5,242	7,131	1,966	1,544	440	196	128	19	6	2	0	0	0	0	0
Eugene-Springfield, OR	16,180	5,471	6,402	2,199	1,252	499	277	133	20	6	6	2	1	0	0	0
Canton-Massillon, OH	16,164	4,775	6,452	1,943	1,397	676	348	166	40	22	4	1	0	0	0	0
Lawrence, MA-NH	16,046	5,072	6,472	2,156	1,481	573	304	180	32	15	7	2	0	0	0	0
Atlantic-Cape May, NJ	16,044	4,236	6,908	2,143	1,446	571	258	147	31	3	15	5	1	0	0	0
Portland, ME	15,927	4,661	6,209	1,989	1,711	671	320	170	33	11	7	1	3	0	0	0
Flagstaff, AZ-UT	15,822	4,870	6,688	2,278	1,701	499	240	104	17	13	3	1	1	0	0	0
Shreveport-Bossier City, LA	15,713	3,999	6,853	2,041	1,400	560	326	132	32	17	9	1	0	0	0	0
Reno, NV	15,702	4,348	6,474	1,987	1,509	655	317	177	32	7	7	2	2	0	0	0
Beaumont-Port Arthur, TX	15,655	4,669	6,628	1,836	1,632	510	308	141	45	8	8	2	0	0	0	0
Mcallen-Edinburg-Mission, TX	15,637	3,720	7,304	2,104	1,350	548	339	182	31	5	5	0	0	0	0	0
Corpus Christi, TX	15,420	4,248	6,739	2,023	1,395	507	295	117	31	18	11	2	1	0	0	0
Salinas, CA	15,332	4,608	6,413	1,934	1,428	534	283	121	36	12	5	2	0	0	0	0
Trenton, NJ	15,303	3,881	6,149	2,168	1,386	709	377	260	62	35	23	5	1	0	0	1
Salem, OR	15,213	5,038	6,049	1,851	1,633	520	271	126	35	13	9	0	0	0	0	0
Fort Collins-Loveland, CO	15,142	5,408	6,065	1,719	1,301	709	213	124	15	9	1	2	0	0	0	0
Huntsville, AL	15,137	4,288	6,283	1,994	1,180	406	310	158	52	24	4	3	0	1	0	1
Rockford, IL	15,110	4,572	6,073	1,890	1,446	573	318	184	37	16	4	3	0	0	0	0
Appleton-Oshkosh-Neenah, WI	14,896	4,194	5,768	1,977	1,441	572	350	211	45	22	4	2	0	0	0	0
Barnstable-Yarmouth, MA	14,832	4,824	6,260	1,836	1,649	674	181	81	16	6	1	3	0	0	0	0
Davenport-Moline-Rock Island, IA-IL	14,756	4,214	5,913	1,899	1,215	411	342	177	46	11	8	2	1	0	0	0
Provo-Orem, UT	14,644	4,395	6,187	1,824	1,531	613	270	135	32	14	5	0	0	0	0	0
Springfield, MO	14,426	3,921	5,977	1,964	1,334	448	296	141	33	23	8	2	0	0	0	0
San Juan-Bayamon, PR	14,322	1,304	4,778	3,238	1,482	578	595	348	148	55	24	5	1	0	0	0
York, PA	14,191	4,568	5,390	1,803	2,681	1,145	326	178	42	15	5	5	2	0	0	0
Fayetteville-Springdale-Rogers, AR	14,154	4,035	6,102	1,846	1,305	549	258	142	41	22	10	0	0	0	0	0
Reading, PA	14,045	4,348	5,433	1,714	1,251	489	291	157	41	19	4	2	2	0	0	0
Santa Cruz-Watsonville, CA	13,665	4,908	5,455	1,604	1,381	523	203	76	13	7	3	3	0	0	0	0
Hickory-Morganton, NC	13,634	3,660	5,913	1,840	1,040	355	203	175	46	11	4	4	0	0	0	0
Wilmington, NC	13,630	3,859	5,830	1,889	1,203	490	292	94	21	3	2	2	1	0	0	0
Biloxi-Gulfport-Pascagoula, MS	13,460	3,477	6,099	1,776	1,195	437	205	118	35	14	9	3	3	0	0	0
Peoria-Pekin, IL	13,391	3,738	5,318	1,738	1,378	476	257	151	30	10	8	2	0	0	0	0
San Luis Obispo-Atascadero-Paso Robles,	13,346	4,280	5,530	1,985	1,123	582	298	68	18	6	4	2	0	0	0	0
Montgomery, AL	13,297	3,258	5,543	1,714	1,399	424	154	168	48	17	3	0	0	0	0	0
Portsmouth-Rochester, NH-ME	13,059	4,176	5,110	1,231	1,231	581	292	114	22	14	1	2	0	0	0	0
Danbury, CT	13,038	4,742	5,230	1,080	1,008	449	227	86	24	3	3	1	0	1	0	0
Tallahassee, FL	12,950	3,810	5,151	1,660	1,293	353	175	147	34	12	7	2	1	0	0	0
Anchorage, AK	12,874	3,702	5,006	1,818	1,345	554	279	132	38	11	7	1	0	0	0	0
Savannah, GA	12,866	3,434	5,563	1,686	1,278	552	261	123	27	10	4	3	3	0	0	0
New London-Norwich, CT-RI	12,586	3,950	5,162	1,615	1,102	495	243	99	28	5	5	0	0	0	1	0
Macon, GA	12,493	3,362	5,326	1,697	1,184	380	236	132	22	20	2	2	0	0	0	0
Ocala, FL	12,441	4,464	5,061	1,373	914	479	267	96	22	7	2	0	0	0	0	0
Galveston-Texas City, TX	12,008	3,935	5,349	1,283	833	335	167	87	22	8	5	0	0	0	1	0
Lubbock, TX	11,760	3,432	4,965	1,540	1,080	316	169	102	17	7	7	1	0	0	0	0
Visalia-Tulare-Porterville, CA	11,664	3,372	4,840	1,561	1,120	397	211	97	17	8	6	0	0	0	0	0
Myrtle Beach, SC	11,549	2,930	5,230	1,552	1,079	412	231	108	22	9	2	1	0	0	0	0
Lowell, MA-NH	11,522	3,621	4,579	1,450	1,045	406	211	148	33	11	6	0	0	0	0	0
Asheville, NC	11,490	3,343	4,886	1,525	1,046	408	371	178	102	28	7	2	1	0	0	0

Metro Area	Total/Avg	1	2 - 4	5 - 9	10 - 24	25 - 49	50 - 99	100 - 249	250 - 499	500 - 999	1,000 - 2,499	2,500 - 4,999	5,000 - 9,999	10,000 - 14,999	15,000 - 19,999	20,000+
Dutchess County, NY	11,374	3,412	4,919	1,404	974	368	168	95	24	7	3	0	0	0	0	0
Hamilton-Middletown, OH	11,340	3,391	4,510	1,494	1,100	418	247	135	29	8	6	1	1	0	0	0
Evansville-Henderson, IN-KY	11,283	2,862	4,391	1,718	1,330	494	297	136	34	10	9	2	0	0	0	0
Odessa-Midland, TX	11,170	3,052	4,843	1,500	1,067	399	206	85	13	3	2	1	0	0	0	0
Duluth-Superior, MN-WI	10,989	3,081	4,322	1,603	1,175	403	236	119	25	18	6	1	1	0	0	0
Bremerton, WA	10,852	4,519	4,095	1,078	709	250	118	60	13	8	0	0	0	0	0	0
Utica-Rome, NY	10,846	3,424	4,301	1,352	1,020	369	218	104	41	12	4	1	0	0	0	0
Burlington, VT	10,677	3,130	4,181	1,457	1,102	437	236	108	18	6	0	1	1	0	0	0
Olympia, WA	10,619	4,306	3,826	1,121	780	284	181	87	22	7	5	0	0	0	0	0
Huntington-Ashland, WV-KY-OH	10,579	2,684	4,316	1,544	1,187	465	234	98	34	8	9	1	1	0	0	0
Lincoln, NE	10,568	2,988	3,955	1,465	1,176	481	284	156	41	14	7	0	0	0	0	0
Erie, PA	10,557	2,808	4,201	1,535	1,074	505	247	139	32	10	5	1	0	0	0	0
Roanoke, VA	10,501	2,729	4,199	1,508	1,168	459	253	129	35	15	6	0	0	0	0	0
Killeen-Temple, TX	10,473	3,509	4,365	1,212	777	316	177	83	15	13	2	2	0	0	0	0
Bellingham, WA	10,436	4,005	3,885	1,198	807	311	155	57	13	3	2	0	0	0	0	0
South Bend, IN	10,409	2,682	4,230	1,481	1,175	438	223	135	34	7	2	2	0	0	0	0
Longview-Marshall, TX	10,400	3,105	4,471	1,344	883	317	168	82	20	10	0	0	0	0	0	0
Amarillo, TX	10,367	3,163	4,434	1,310	879	324	153	72	16	9	7	0	0	0	0	0
Medford-Ashland, OR	10,265	3,671	4,098	1,178	787	318	132	66	12	2	1	0	0	0	0	0
Green Bay, WI	10,176	2,948	3,872	1,336	1,112	465	252	134	34	13	7	3	0	0	0	0
Manchester, NH	10,080	3,101	3,904	1,262	1,013	442	213	113	21	10	1	0	0	0	0	0
Charleston, WV	9,900	2,298	3,972	1,519	1,131	530	256	139	29	13	11	2	0	0	0	0
Brockton, MA	9,824	2,929	4,102	1,219	879	362	175	114	30	11	3	0	0	0	0	0
Chico-Paradise, CA	9,769	3,337	3,961	1,175	796	283	134	62	16	3	2	0	0	0	0	0
Brownsville-Harlingen-San Benito, TX	9,718	2,222	4,591	1,291	909	361	187	128	20	4	5	0	0	0	0	0
Waterbury, CT	9,634	3,050	4,011	1,125	849	315	167	95	16	2	2	0	0	0	0	0
Brazoria, TX	9,536	3,181	4,147	1,056	704	227	130	63	23	5	0	3	0	0	0	0
Gainesville, FL	9,490	2,586	3,967	1,214	970	378	209	132	21	4	6	0	0	0	0	0
Fort Walton Beach, FL	9,417	2,994	3,922	1,183	773	274	159	88	15	4	2	1	1	0	0	0
Fayetteville, NC	9,347	2,507	4,074	1,263	869	312	218	74	20	6	3	0	0	0	0	0
St Cloud, MN	9,347	3,065	3,731	1,077	859	326	153	97	24	11	4	0	0	0	0	0
Waco, TX	9,292	2,868	3,865	1,126	753	354	190	103	21	7	5	0	0	0	0	0
Yakima, WA	9,277	3,263	3,543	1,055	803	316	185	92	14	5	1	0	0	0	0	0
Tyler, TX	9,230	2,820	3,929	1,131	787	297	163	67	17	6	11	2	0	0	0	0
Binghamton, NY	9,179	2,888	3,486	1,140	909	391	209	111	19	16	8	1	0	0	0	0
Columbus, GA-AL	9,116	2,417	3,851	1,248	894	354	205	95	24	18	9	0	1	0	0	0
Nashua, NH	9,053	3,013	3,400	1,105	890	344	175	93	19	8	5	1	0	0	0	0
Redding, CA	9,020	2,707	3,578	1,114	899	378	200	106	25	7	5	1	0	0	0	0
Cedar Rapids, IA	8,926	2,674	3,498	1,096	963	334	212	116	20	10	2	1	0	0	0	0
Fargo-Moorhead, ND-MN	8,887	2,631	3,475	1,194	884	365	194	99	29	9	3	3	1	0	0	0
Sioux Falls, SD	8,869	2,802	3,671	1,075	783	284	149	81	15	4	4	0	1	0	0	0
Santa Fe, NM	8,802	3,049	3,644	979	654	257	145	57	13	0	3	1	0	0	0	0
Greeley, CO	8,756	2,606	3,462	1,278	829	287	167	97	21	8	1	0	0	0	0	0
Johnstown, PA	8,746	2,441	3,496	1,180	875	376	216	116	28	11	5	2	0	0	0	0
Springfield, IL	8,635	2,812	3,510	1,064	721	289	148	69	13	3	6	0	1	0	0	0
Benton Harbor, MI	8,436	2,868	3,324	1,032	749	249	132	59	12	9	2	0	0	0	0	0
Lynchburg, VA	8,230	2,272	3,364	1,141	824	337	155	87	29	12	8	1	0	0	0	0
Richland-Kennewick-Pasco, WA	8,157	2,674	3,084	1,055	719	293	154	71	15	3	1	0	0	0	0	0
Elkhart-Goshen, IN	8,058	2,051	3,129	1,176	866	387	238	157	31	11	10	2	0	0	0	0
Fort Smith, AR-OK	7,997	2,027	3,371	1,107	879	357	137	91	15	6	6	1	0	0	0	0
Billings, MT	7,776	2,298	3,243	1,006	764	249	142	57	11	5	2	0	0	0	0	0
Houma, LA	7,663	1,956	3,331	1,125	706	286	159	52	6	10	4	1	0	0	0	0
Panama City, FL	7,641	2,096	3,298	992	722	284	142	64	22	8	3	1	0	0	0	0
Champaign-Urbana, IL	7,554	2,288	2,917	992	717	328	178	84	12	8	6	1	0	0	0	0
Charlottesville, VA	7,526	2,144	2,979	1,080	769	304	158	90	30	8	3	0	1	0	0	0
Mansfield, OH	7,378	2,213	2,984	974	687	292	121	74	17	13	2	1	0	0	0	0

Metro Area	20,000+	15,000-19,999	10,000-14,999	5,000-9,999	2,500-4,999	1,000-2,499	500-999	250-499	100-249	50-99	25-49	10-24	5-9	2-4	1	Total/Avg
Lake Charles, LA	0	0	0	0	0	0	6	19	66	154	264	710	1,074	3,199	1,853	7,361
Joplin, MO	0	0	0	0	0	0	12	21	67	139	270	687	953	3,072	2,088	7,308
Punta Gorda, FL	0	0	0	0	0	0	5	3	44	72	180	482	780	3,102	2,627	7,296
Laredo, TX	0	0	0	0	0	1	3	11	71	121	221	659	1,038	3,419	1,580	7,127
Topeka, KS	0	0	0	0	0	0	15	9	115	156	316	838	984	2,805	1,864	7,106
Grand Junction, CO	0	0	0	0	0	1	2	6	43	105	201	530	837	3,031	2,329	7,085
Pittsfield, MA	0	0	0	0	0	0	6	10	64	121	244	695	980	2,885	2,013	7,020
Lima, OH	0	0	0	0	0	0	3	20	74	166	283	684	951	2,705	2,041	6,929
Eau Claire, WI	0	0	0	0	0	1	10	15	85	134	272	648	934	2,585	2,203	6,892
New Bedford, MA	0	0	0	0	0	0	4	19	57	118	244	615	839	2,892	2,012	6,802
Athens, GA	0	0	0	0	0	0	5	24	65	129	250	599	870	2,861	1,913	6,720
Racine, WI	0	0	0	0	0	1	9	19	82	162	276	648	919	2,576	2,013	6,708
Bangor, ME	0	0	0	0	0	0	6	14	72	158	294	746	980	2,447	1,889	6,607
Lafayette, IN	0	0	0	0	0	0	11	14	78	154	284	655	911	2,677	1,777	6,569
Monroe, LA	0	0	0	0	0	2	5	13	59	140	249	663	980	2,857	1,599	6,567
Yolo, CA	0	0	0	0	0	0	5	29	94	141	272	666	833	2,533	1,986	6,563
Bryan-College Station, TX	0	0	0	0	0	0	9	23	84	130	241	611	804	2,637	1,862	6,408
Clarksville-Hopkinsville, TN-KY	0	0	0	0	0	1	6	14	71	132	209	611	939	2,617	1,683	6,286
Wichita Falls, TX	0	0	0	0	0	0	6	14	52	104	193	539	780	2,676	1,908	6,276
Bloomington-Normal, IL	0	0	0	0	0	0	7	14	86	122	278	617	762	2,406	1,936	6,234
Tuscaloosa, AL	0	0	0	0	0	2	7	14	63	134	279	702	872	2,582	1,567	6,225
Jackson, MI	0	0	0	0	0	0	6	13	58	117	232	607	790	2,413	1,956	6,193
Columbia, MO	0	0	0	0	0	1	3	22	88	161	230	688	844	2,438	1,673	6,150
Janesville-Beloit, WI	0	0	0	0	0	0	6	18	58	120	240	558	757	2,341	1,827	5,928
Merced, CA	0	0	0	0	0	0	9	7	50	126	213	574	770	2,468	1,702	5,920
Wausau, WI	0	0	0	0	0	1	8	12	70	119	226	550	701	2,398	1,803	5,893
Jamestown, NY	0	0	0	0	0	0	9	14	58	108	198	554	730	2,336	1,867	5,875
La Crosse, WI-MN	0	0	0	0	0	0	3	21	68	128	241	607	748	2,246	1,809	5,874
Parkersburg-Marietta, WV-OH	0	0	0	0	0	2	6	21	72	133	246	645	910	2,345	1,459	5,838
Dothan, AL	0	0	0	0	0	0	7	12	58	115	249	596	854	2,511	1,405	5,813
Terre Haute, IN	0	0	0	0	0	2	5	12	71	136	222	624	809	2,319	1,590	5,792
Missoula, MT	0	0	0	0	0	0	4	9	38	109	210	564	776	2,350	1,684	5,749
Pueblo, CO	0	0	0	0	0	0	1	8	51	91	187	512	745	2,436	1,639	5,673
Abilene, TX	0	0	0	0	0	1	4	19	52	106	177	521	827	2,353	1,606	5,668
Rochester, MN	0	0	0	0	0	0	3	16	66	118	237	519	630	2,092	1,949	5,631
Sioux City, IA-NE	0	0	0	0	0	0	2	14	71	116	226	591	698	2,223	1,664	5,607
Alexandria, LA	0	0	0	0	0	0	4	12	68	105	237	549	871	2,320	1,423	5,593
Bismarck, ND	0	0	0	0	0	0	3	14	65	107	246	519	773	2,190	1,654	5,575
Decatur, AL	0	0	0	0	0	1	8	9	57	129	209	501	808	2,395	1,427	5,546
Florence, SC	0	0	0	0	0	0	9	8	50	102	178	529	794	2,402	1,467	5,544
Wheeling, WV-OH	0	0	0	0	0	0	5	14	75	106	263	575	843	2,290	1,306	5,537
Fitchburg-Leominster, MA	0	0	0	0	0	1	5	15	67	125	185	631	724	2,279	1,657	5,517
Greenville, NC	0	0	0	0	0	1	6	11	44	127	199	459	738	2,272	1,544	5,473
Las Cruces, NM	0	0	0	0	0	0	8	18	55	132	211	531	747	2,264	1,437	5,452
Glens Falls, NY	0	0	0	0	0	0	3	14	49	78	191	579	691	2,232	1,672	5,444
Texarkana, TX-Texarkana, AR	0	0	0	0	0	1	3	9	54	95	179	508	789	2,237	1,518	5,419
Waterloo-Cedar Falls, IA	0	0	0	0	0	1	3	14	56	114	235	529	700	2,053	1,609	5,371
Florence, AL	0	0	0	0	0	0	3	15	54	116	207	575	791	2,360	1,269	5,322
Sherman-Denison, TX	0	0	0	0	0	0	2	11	32	78	149	401	676	2,308	1,653	5,313
Hagerstown, MD	0	0	0	0	0	1	7	15	60	102	238	524	735	2,171	1,453	5,306
Albany, GA	0	0	0	0	0	0	7	13	48	124	183	483	754	2,270	1,372	5,254
State College, PA	0	0	0	1	0	0	1	19	55	115	233	539	739	1,971	1,560	5,238
Rocky Mount, NC	0	0	0	0	0	0	8	19	66	105	185	465	713	2,190	1,476	5,228
Sharon, PA	0	0	0	0	0	1	7	15	55	93	179	465	704	2,026	1,416	4,960
Rapid City, SD	0	0	0	0	0	0	0	10	50	106	204	584	686	1,944	1,315	4,901
Hattiesburg, MS	0	0	0	0	0	3	8	11	54	90	229	511	659	2,159	1,146	4,870

Metro Area	20,000+	15,000 - 19,999	10,000 - 14,999	5,000 - 9,999	2,500 - 4,999	1,000 - 2,499	500 - 999	250 - 499	100 - 249	50 - 99	25 - 49	10 - 24	5 - 9	2 - 4	1	Total/Avg
Bloomington, IN	0	0	0	0	0	2	2	9	69	103	219	533	693	1,959	1,240	4,829
Yuba City, CA	0	0	0	0	0	2	4	14	31	88	136	458	563	2,050	1,484	4,829
Dover, DE	0	0	0	0	0	0	11	11	64	108	186	503	654	1,875	1,413	4,825
Altoona, PA	0	0	0	0	0	0	6	22	64	122	181	538	721	1,920	1,241	4,819
Grand Forks, ND-MN	0	0	0	0	0	2	8	6	57	106	211	470	617	1,832	1,519	4,815
Iowa City, IA	0	0	0	0	0	1	8	8	51	104	185	418	620	1,874	1,421	4,747
Dubuque, IA	0	0	0	0	0	6	5	16	56	105	168	543	592	1,931	1,433	4,725
Vineland-Millville-Bridgeton, NJ	0	0	0	0	0	1	4	14	71	91	215	442	634	1,886	1,173	4,632
Williamsport, PA	0	0	0	0	0	1	5	20	56	98	174	445	640	1,777	1,371	4,586
Anniston, AL	0	0	0	0	0	3	6	16	45	75	156	412	660	1,917	1,172	4,492
Jacksonville, NC	0	0	0	0	0	0	6	4	36	91	144	442	606	1,825	1,348	4,475
Sheboygan, WI	0	0	0	0	0	3	9	11	59	100	196	483	599	1,687	1,344	4,449
Decatur, IL	0	0	0	0	0	1	7	13	59	80	197	495	565	1,755	1,192	4,356
Kenosha, WI	0	0	0	0	0	4	6	17	60	105	173	435	564	1,750	1,164	4,336
Steubenville-Weirton, OH-WV	0	0	0	0	0	2	6	8	32	90	164	396	678	1,837	1,062	4,317
San Angelo, TX	0	0	0	0	0	3	5	9	36	71	151	490	561	1,831	1,240	4,304
Muncie, IN	0	0	0	0	0	2	2	12	46	100	178	347	614	1,670	1,163	4,279
Goldsboro, NC	0	0	0	0	0	3	5	3	45	81	139	401	571	1,817	1,240	4,249
Kankakee, IL	0	0	0	0	0	2	3	13	47	87	167	464	546	1,745	1,234	4,246
Lewiston-Auburn, ME	0	0	0	0	0	2	3	10	48	81	202	441	596	1,621	1,194	4,220
Lawrence, KS	0	0	0	0	0	3	4	11	47	84	172	450	557	1,658	1,239	4,214
St. Joseph, MO	0	0	0	0	0	1	6	16	51	85	170	399	573	1,661	1,177	4,192
Cheyenne, WY	0	0	0	0	0	1	5	10	52	99	160	411	575	1,719	1,137	4,157
Auburn-Opelika, AL	0	0	0	0	0	0	0	9	53	89	163	359	545	1,676	1,201	4,149
Victoria, TX	0	0	0	0	0	2	4	6	41	59	122	494	538	1,753	1,242	4,122
Yuma, AZ	0	0	0	0	0	1	2	13	53	82	165	380	572	1,778	960	4,121
Great Falls, MT	0	0	0	0	0	0	3	7	29	66	145	454	547	1,749	1,120	4,046
Casper, WY	0	0	0	0	0	1	9	6	48	51	155	447	598	1,665	1,064	4,045
Jackson, TN	0	0	0	0	0	1	1	15	64	98	195	393	604	1,688	905	4,028
Gadsden, AL	0	0	0	0	0	2	1	7	32	78	173	350	560	1,611	1,018	3,875
Danville, VA	0	0	0	0	0	2	3	9	41	69	145	444	509	1,563	1,141	3,831
Owensboro, KY	0	0	0	0	0	2	3	9	51	70	164	367	560	1,534	984	3,820
Kokomo, IN	0	0	0	0	0	1	5	7	36	79	136	388	549	1,481	1,105	3,769
Jonesboro, AR	0	0	0	0	0	2	4	8	32	70	160	371	510	1,609	953	3,737
Lawton, OK	0	0	0	0	0	2	3	11	29	84	139	367	542	1,520	904	3,604
Cumberland, MD-WV	0	0	0	0	0	3	3	6	39	70	126	277	541	1,383	907	3,447
Corvallis, OR	0	0	0	0	0	3	3	3	30	66	119	344	414	1,312	1,116	3,341
Pocatello, ID	0	0	0	0	0	0	4	3	26	63	107	298	489	1,347	912	3,296
Sumter, SC	0	0	0	0	0	1	4	11	42	72	96	350	490	1,402	827	3,247
Elmira, NY	0	0	0	0	0	1	4	14	38	77	139	290	503	1,181	921	3,229
Pine Bluff, AR	0	0	0	0	0	3	4	9	37	61	102	248	426	1,305	846	3,080
Enid, OK	0	0	0	0	0	3	4	3	21	55	101	359	377	1,171	728	2,708
Caguas, PR	0	0	0	0	0	0	4	16	52	94	151	326	424	653	173	1,939
Ponce, PR	0	0	0	0	0	7	2	8	36	59	132	259	370	593	161	1,697
Mayaguez, PR	0	0	0	0	0	5	3	18	41	52	85	231	313	688	174	1,643
Virgin Islands, VI	0	0	0	0	0	3	4	12	20	53	105	149	294	622	216	1,557
Arecibo, PR	0	0	0	0	0	0	1	8	13	32	72	103	177	315	67	834
Aguadilla, PR	0	0	0	0	0	3	3	9	19	19	40	79	144	325	79	733
Total Avg	16	19	23	284	983	4,527	9,088	24,183	103,397	191,149	352,438	918,750	1,232,312	4,038,807	2,803,992	9,679,968
Orange County, CA	0	0	0	3	9	60	106	343	1,402	2,819	5,235	13,652	17,861	62,477	41,897	145,864
Riverside-San Bernardino, CA	0	0	0	5	5	27	81	219	1,099	2,137	3,919	9,755	13,514	48,366	33,548	112,675
Nassau-Suffolk, NY	0	0	0	2	13	43	79	258	1,158	2,147	4,092	12,130	16,511	59,279	38,284	133,996
Fort Lauderdale, FL	0	0	0	2	1	22	55	155	709	1,107	2,426	7,291	10,332	39,327	23,952	85,379
Oakland, CA	0	0	0	1	8	27	80	213	1,023	1,966	3,559	9,005	11,812	40,738	30,193	98,625
San Jose, CA	0	1	1	3	11	37	92	195	839	1,537	2,810	6,573	8,513	29,090	21,463	71,164

Metro Area	20,000+	15,000 - 19,999	10,000 - 14,999	5,000 - 9,999	2,500 - 4,999	1,000 - 2,499	500 - 999	250 - 499	100 - 249	50 - 99	25 - 49	10 - 24	5 - 9	2 - 4	1	Total/Avg
West Palm Beach-Boca Raton, FL	0	0	0	0	2	15	29	100	591	869	1,847	5,218	7,976	30,275	20,953	67,875
Bergen-Passaic, NJ	0	0	0	0	9	26	57	126	649	1,159	2,490	6,469	8,786	29,709	17,455	66,935
Jersey City, NJ	0	0	0	0	0	8	33	68	222	347	639	1,646	2,192	9,125	4,375	18,655
Fort Worth-Arlington, TX	0	0	0	4	7	26	43	149	651	1,315	2,270	6,239	8,903	33,066	23,547	76,220