Kiernan added that, "Pronto cements our industry leadership by essentially reconfiguring SBC into a broadband-services company, and creates a rock-solid platform from which we can launch new revenue-generating services while dramatically reducing our cost structure. Importantly, the network efficiencies and reduction in capital needs we expect to gain as a result of Project Pronto will mean that this project will pay for itself, while enabling SBC to compete even more effectively in the future and enhance long-term shareowner value. In fact, we expect it will create in excess of $10 billion in value."

SBC Communications Inc. (www.sbc.com) is a global communications leader. Through its trusted brands – Southwestern Bell, Ameritech, Pacific Bell, SBC Telecom, Nevada Bell, SNET and Cellular One – and world-class network, SBC provides local and long-distance phone service, wireless and data communications, paging, high-speed Internet access and messaging, cable and satellite television, security services and telecommunications equipment, as well as directory advertising and publishing. In the United States, the company currently has 59 million access lines, 10.1 million wireless customers and is undertaking a national expansion program that will bring SBC service to an additional 30 markets. Internationally, SBC has telecommunications investments in 22 countries. With more than 200,000 employees, SBC is the 14th largest employer in the U.S., with annual revenues that rank it among the largest Fortune 500 companies.

Information set forth in this news release contains financial estimates and other forward-looking statements that are subject to risks and uncertainties. A discussion of factors that may affect future results is contained in SBC's filings with the Securities and Exchange Commission. SBC disclaims any obligation to update or revise statements contained in this news release based on new information or otherwise.

# # #

Project Pronto

SBC Becomes America's Largest Single Broadband Provider With $6 Billion Initiative

In October 1999, SBC announced it would launch a $6 billion initiative that would transform the company over the next three years into the largest single provider of advanced broadband services in America, making super-fast, always-on Internet access available to nearly all of its customers and creating a platform to deliver next-generation, broadband-powered services.

Through the initiative-dubbed Project Pronto-SBC will:

- Provide an estimated 77 million Americans-about 80 percent of its Southwestern Bell, Ameritech, Pacific Bell, Nevada Bell, and SNET customers-with always-on, high-speed voice, data and video services via faster Digital Subscriber Line (DSL) services than it currently offers by the end of 2002. Ultimately, the company intends to make broadband services available to all of its customers.
- Rearchitect its network to push fiber deeper into the neighborhoods it serves and accelerate the convergence of its voice and data backbone systems into a next-generation, packet-switched, designed-for-the-Internet network.
- Dramatically reduce its network cost structure. Expense and capital savings alone are expected to offset the cost of the entire initiative.
- Create a platform to deliver next-generation services including, entertainment quality video, and expand development and marketing to more quickly bring customers emerging products such as Voice-over-ADSL, personal videoconferencing, interactive online games and home networking.

Migrating to Converged Voice, Data, Video Network
The Pronto initiative is an important step in the company's migration to a converged voice, data and video network, which will be predominantly packet-switched and utilize an Asynchronous Transfer Mode (ATM) distributed network system (ADNS) architecture. Converging voice, data and video into a single network dramatically increases the efficiency of the network and provides end-users with a powerful, single source for all of their communications needs. It will be possible to continuously upgrade this enhanced network to meet growing capacity needs and incorporate future technological advances as they happen.

Project Pronto Progress
SBC's Project Pronto is named as such for a reason: progress is rapid, and every month, DSL becomes available to a number of homes and businesses across the country. As of the end of the second quarter 2000:

SBC's Project Pronto is named as such for a reason: progress is rapid, and every month, DSL becomes available to a number of homes and businesses across the country.

As of the end of the second quarter 2000:

- Homes and businesses where DSL is available - 14.8 million
- Central offices upgraded with DSL - 981
- Total DSL lines in service - 399,000

For more information about Project Pronto, click on the documents below:

Get the free Acrobat Reader
The Adobe® Acrobat Reader lets you view and print PDF files on all major computer platforms

- **SBC Launches $6 Billion Initiative to Transform It Into America's Largest Single Broadband Provider**
  'Pronto' to Provide 'e-Tone' - Dialtone for the Internet - to 77 Million Americans, Accelerate Company's Move to Advanced Voice, Data, Video Converged Network
- **SBC To Provide Super-Fast DSL Internet Service To IBM Telecommuters**
  Agreement Establishes Largest High-Speed Remote-LAN Application Of Its Kind
- **SBC And E*Trade Partner To Provide Online Traders With High-Speed DSL Internet Access**
  DSL Delivers Stock Quotes, Market Trends to Traders at Speeds Up To 50 Times Faster Than Standard Dial-Up Modems

All maps are available in .pdf format.

Southwestern Bell

Ameritech

*If you are experiencing problems downloading the map PDFs, please go to our Maps Download Page.

- SBC's Network Vision and Strategy
- SBC's Current Data Communications and Internet Offerings
- Emerging Broadband Applications
- What Others Are Saying About the Future of Broadband
- DSL vs. Cable Modems
- Glossary of Key Telecommunications Terms
- About SBC Communications Inc.

- The Broadband Office
- The Broadband Home
- SBC's New Broadband Neighborhood Network
- Making the Right Connection: What Speed Do You Need?

- Photo of two SBC employees at the company's TRI technology development lab in Austin using next-generation hand-held cordless Web device, enabling mobility in the home for Internet access
- Photo of Sacramento consumer trying DSL service at the company's mobile DSL van, which is helping to educate consumers on the benefits of super-fast, always-on Internet access

NEWS RELEASE

SBC Communications Inc.

Contact:
Shawn Dainas, 415/356-1004
Or Chris Talley, 210/351-3990 or 210/351-3991

SBC TO PROVIDE SUPER-FAST DSL INTERNET SERVICE TO IBM TELECOMMUTERS

Agreement Establishes Largest High-Speed Remote-LAN Application of Its Kind

SAN ANTONIO, October 18, 1999 – SBC Communications (NYSE:SBC) announced today it will provide as many as 15,000 IBM telecommuting employees remote access to IBM's corporate network via high-speed "always-on" DSL service in select areas. According to industry analysts, the agreement represents the largest high-speed remote network application of its kind anywhere.

SBC's DSL service will enable IBM employees to connect to the Internet and their corporate network at speeds of up to 1.5 Mbps, 50 times faster than their 28.8 Kbps dial-up modems, boosting their telecommuting productivity.

IBM plans to begin offering employees the option of signing on for personal subscriptions to SBC DSL service in cities throughout SBC's region, including Austin, Dallas, Houston, the San Francisco Bay Area, Los Angeles, San Diego and subsequently in Danbury, Conn. The plan calls for DSL service to be installed in the homes of IBM telecommuters, including corporate executives, customer support personnel and research and development team members, and will be packaged with Internet service from SBC Internet Services.

- more -

"Telecommuting only works if employees are as productive at home as they are at the office," said Mike Hill, vice president of technology deployment, IBM. "With high-speed DSL service in our major telecommuting markets, IBM's mobile work force will be even more efficient in delivering service to our customers by more quickly being able to access and leverage information on our corporate network."

This initiative underscores an earlier announcement today, in which company executives said that SBC will transform itself over the next three years into the largest single provider of advanced broadband services in America, making super-fast, always-on Internet access available to nearly all of its customers and creating a platform to deliver next-generation, broadband-powered services. To make this happen, SBC is pushing fiber deeper into its neighborhoods, installing or upgrading "neighborhood broadband gateways" and deploying DSL in additional central offices. For the majority of SBC's customers, distance to the central office will no longer be a barrier for customers wanting to order DSL.

"DSL broadband service will change the way America goes to work," said Dave Gallemore, executive vice president, Strategic Marketing and Planning, SBC Communications. "Companies are searching for high-speed telecommuting solutions for their employees, and we now are able to meet the broad needs of large enterprises such as IBM. With DSL, we are making it easy for IBM's employees to send e-mail, download software and videoconference – all at the lightning-fast speeds employees experience in the workplace – while working in the comfort of their homes."

SBC will equip IBM employees with a dedicated connection to SBC's network, resulting in consistent connection speeds – while employees will receive speeds of up to 1.5 Mbps, SBC guarantees a minimum connection speed of at least 384 Kbps. However, after SBC finishes its network build-out in 2002, all IBM employees with SBC's DSL service will receive guaranteed speeds of 1.5 Mbps, 50 times faster than standard 28.8 Kbps dial-up modems. And because DSL users receive a "dedicated bandwidth" connection, transmission speeds do not deteriorate as more users are added to the network.

Preliminary work-at-home research conducted by SBC indicates that the leading frustrations of telecommuters involve the desire for speedier and more reliable Internet connectivity and less time spent waiting for information transfer. DSL allows customers to quickly download data, graphics and audio, and significantly speeds up video streaming. For example, it takes 13 seconds to download 25 typical Web pages with SBC's DSL (at 1.5 Mbps), compared to 12 minutes with a standard 28.8 Kbps modem.

DSL also enables multi-tasking at home, allowing IBM employees to use their computer and phone or fax machine at the same time – over a single telephone line. And since DSL is always on, there is no waiting for dial tones or frustrations from disconnections.

SBC DSL

With today's earlier broadband announcement, SBC estimates that 77 million Americans – about 80 percent of its Ameritech, Nevada Bell, Pacific Bell, SNET and Southwestern Bell customers – will have access to the company's always-on, high-speed DSL service by the end of 2002. Ultimately, the company intends to make broadband services available to all of its customers.

For more information on SBC or DSL service, visit the company's Web site at www.sbc.com or call 1-888-884-2DSL.

SBC Communications Inc. (www.sbc.com) is a global communications leader. Through its trusted brands - Southwestern Bell, Ameritech, Pacific Bell, SBC Telecom, Nevada Bell, SNET and Cellular One - and world-class network, SBC provides local and long-distance phone service, wireless and data communications, paging, high-speed Internet access and messaging, cable and satellite television, security services and telecommunications equipment, as well as directory advertising and publishing. In the United States, the company currently has 59 million access lines, 10.1 million wireless customers and is undertaking a national expansion program that will bring SBC service to an additional 30 markets. Internationally, SBC has telecommunications investments in 22 countries. With more than 200,000 employees, SBC is the 14th largest employer in the United States, with annual revenues that rank it among the largest Fortune 500 companies.

Project Pronto: SBC's Network Vision and Strategy
SBC Communications Inc.

With its just-announced more than **$6 billion initiative**, as well as its history of network investments and recent strategic alliances, SBC will create one of the nation's most flexible, reliable and powerful communications networks – a network that will allow it to meet all its customers' communications needs. The strength of SBC's network lies in its components and architecture, its flexibility and scalability, its historic reliability, and its "neighborhood-to-nationwide" scope.

By deploying fiber optics and electronic equipment deeper into its network and implementing leading-edge voice trunking over Asynchronous Transfer Mode (ATM) technology, SBC plans to provide more broadband services over a single network to more customers than any other provider in the communications industry, including the largest cable providers. The company will build a network second to none, while taking major steps toward its long-standing goals to be the nation's preeminent broadband provider and a truly global, full-service provider. With Project Pronto, SBC will transform itself into an advanced data company and become America's largest single broadband provider.

A Heritage of Quality and Reliability
For more than 100 years, SBC companies have developed, maintained and enhanced the circuit-switched **voice network that now reaches approximately 100 million Americans in 13 states**.

With the rapid emergence of the Internet and data communications in recent years, SBC has added powerful data transport capabilities to its portfolio of services to meet customers' evolving needs. This year, SBC's Pacific Bell, Nevada Bell, Southwestern Bell and SNET brands are wrapping up a five-year, $6.5 billion investment in its network that leaves it with a **powerful combination of data elements**, including:

- 3 million miles of fiber strands.
- More than 7,500 SONET rings.
- 800 frame relay nodes.
- 150 ATM switches.
- Hundreds of routers and remote access servers (part of SBC Internet Services).

In addition, even before the Project Pronto announcement, SBC this year was well on its way to completing the rollout of high-speed DSL service to areas serving **nearly 10 million homes and businesses** in the Pacific Bell, Nevada Bell and Southwestern Bell regions.

SBC already has one of the nation's largest DSL deployments. With Project Pronto, the current deployment is only the beginning.

Building the Network of the Future
Data transport now accounts for a growing percentage of the traffic on SBC's network. SBC has seen more than 30 percent annual growth in data traffic in recent years, compared with 7 percent growth in voice traffic.

To continue to keep pace with this demand, SBC has two primary goals: **to bring advanced broadband data services to nearly all customers**, and **to integrate its voice and data networks** to more efficiently and effectively transport that traffic. The more than $6 billion Project Pronto initiative should make these goals a reality. The strategy includes plans to:

- Deploy DSL equipment in additional central offices serving all metropolitan markets as well as many other areas.
- Install fiber optics deeper into neighborhood networks and install or upgrade approximately 25,000 neighborhood broadband gateways containing next-generation digital loop carriers. These neighborhood gateways will expand the reach of DSL service by taking the capabilities of the network closer than ever before to customers.
- Expand the company's ATM backbone network through implementation of an ATM distributed network system (ADNS) architecture, a platform that eventually will allow SBC to carry a full range of data, voice and video services through a single, converged, packet-based network.
- Field trial and large-scale implementation of voice trunking over ATM (VTOA), the industry's most advanced packet-switching technology. VTOA, which is only the first application to run over the ADNS backbone network, will allow the company to packetize and efficiently transport voice traffic over its ATM backbone network without degradation to call quality. It is a major step toward the convergence of the company's voice and data networks.

Following are just a few facts about SBC's new, integrated network:

- SBC, in conjunction with leading equipment manufacturers, has pioneered ADNS and VTOA. The company has worked closely with vendors for the past three years to make VTOA a reality, and is subjecting it to rigorous laboratory testing. SBC plans to conduct field trials beginning next year in Houston and Los Angeles, and upon successful completion of those trials, to complete deployment of VTOA throughout its major metropolitan markets by 2004.
- ADNS and VTOA should allow SBC to quickly and more efficiently meet growing demand for data and voice services, greatly reduce future investment in traditional tandem circuit-switched equipment and improve trunking efficiencies by 50 percent. All told, this architecture should allow the company to realize significant cost efficiencies.

- The enhanced network will be **continuously upgradeable** to meet growing capacity needs and incorporate future technological advances as they happen.
- SBC's ADNS architecture will maintain the reliability of SBC's existing voice services, while delivering the efficiency and scalability of the most advanced packet-based networks.
- SBC's ADNS architecture will have powerful network servers that provide next-generation communications services, bringing together the power of voice, data, video and wireless communications.
- Beginning next year, Project Pronto will enable SBC to offer advanced broadband-powered services such as Voice-over-ADSL, which initially will be able to provide up to four additional voice lines and in the future potentially can provide up to 16 voice lines, and symmetrical DSL or HDSL, which will provide 1.5 Mbps upstream *and* downstream connections for videoconferencing and telecommuting applications.

Covering All the Broadband Bases

All of these network enhancements are grounded in one simple but critical fact: SBC can carry voice, data and video traffic from our customers' doorsteps to wherever it needs to go, **across the street or across the country**. SBC's network enhancements and DSL deployment will make it the largest single broadband provider in the nation, with direct connections in areas where approximately 77 million Americans live and work.

SBC's local loops are integrated with its powerful backbone network, which allows it to carry voice, data and video traffic from homes and businesses though the metropolitan areas it serves. And SBC's backbone will connect nationwide through Williams Communications Inc. In February, SBC entered a long-term strategic agreement with Williams that gives SBC full access to Williams' state-of-the-art network for long-distance transport of data and voice communications.

The Bottom Line for Broadband: SBC

No other single provider – cable, long-distance or data – can reach as many Americans with such a powerful suite of broadband services. Nor can they offer the truly end-to-end service SBC will provide, or match SBC's more than 100 years of reliability and quality.

SBC's more than $6 billion network initiative will allow the company to take full advantage of its technological expertise and its existing infrastructure to become the preeminent provider of data and voice services. The improvements also lay a foundation that will allow the company to quickly and efficiently meet future broadband needs and applications as they develop.

The bottom line for customers is that SBC is committed to bringing them the services they want and need, and is evolving to meet that commitment today and in the future.

# # #

businesses that do not need extra management services, SBC offers packages with monthly prices starting at $129.

SBC Enterprise Virtual Private Network (EVPN) service
EVPN provides fully managed, cost-effective, Internet Protocol-based wide area networks that enable medium and large businesses to securely and reliably communicate between corporate offices and with business partners and customers. It also allows them to connect to the Internet and provide remote network access for their mobile sales force and telecommuters. The security and reliability of EVPNs allow companies to avoid investments in expensive private access connections and offer national and international geographic reach.

SBC Access Advantage Plus
Access Advantage Plus is a fully integrated solution to provide customized, scalable voice and data to business customers over a single T-1 connection. Customers can allocate the 24 channels of a T-1 line to provide the mix of data and voice that best meets their needs.

SBC Virtual Point of Presence-Dial Access Services (VPOP-DAS) and VPOP-Circuit Emulation Service (VPOP-CES)
VPOP-DAS and VPOP-CES offer ISPs and enterprise customers in key markets a range of cost-effective, reliable and flexible dial-up access options to meet their changing data needs. VPOP-DAS is a cost-effective solution to modem pooling, providing for the termination of calls and interconnection to the company's network. SBC companies own, maintain and monitor modems and associated equipment. For ISPs who prefer to manage their own networks, VPOP-CES provides a flexible, efficient and cost-effective way to merge all data traffic from both dial-up and DSL networks onto one platform. The solution employs an existing ATM transport to create a more efficient network for moving traffic.

SBC ISDN service
Integrated Services Digital Network (ISDN) continues to provide a flexible, universally available access solution. ISDN provides customers with two 64 Kbps digital channels that can be used for Internet and data, voice or fax. ISDN provides "any-to-any" connectivity, allowing users to connect to any phone, fax or data port, providing the ultimate in versatility. The channels can be combined to allow users to surf the Internet or access corporate networks at 128 Kbps.

For more information on SBC companies' data offerings in specific areas, visit the following Web sites: Southwestern Bell (www.swbell.com), Ameritech, (www.ameritech.com), Pacific Bell (www.pacbell.com), Nevada Bell (www.nvbell.com) or Southern New England Telecommunications (www.snet.com).

# # #

Project Pronto: Fact Sheet on Emerging Broadband Applications
SBC Communications Inc.

In the near future, mass availability of broadband service will spur demand by consumers for broadband-dependent applications, such as video messaging, home networking and in-home cordless web devices, and eventually make them more widely available and less expensive. It will become a catalyst for small businesses to become e-businesses by providing them with affordable technology. For schools and libraries, readily available broadband service will help bridge the "Digital Divide" and ensure youth of today are prepared for the Internet world of tomorrow. And, it will revolutionize the way Americans work by making telecommuting an even more attractive, productive and common work alternative.

Today, SBC's DSL broadband service features Internet connectivity speeds that are up to 200 times faster than traditional access, allowing for near instantaneous downloads of files and graphics, and effectively ending the "World Wide Wait." It also provides "always-on" connectivity that eliminates frustrating and time-consuming dial-up connections to Internet Service Providers (ISPs) or corporate Local Area Networks (LANs) and makes the computer a true, real-time information appliance.

Next year SBC will add advanced broadband services like Voice-over-ADSL, which initially will provide four additional voice channels and in the future can provide up to 16 voice lines, in addition to a primary voice line and a DSL line. The company also will add Switched Virtual Circuit, which will allow telecommuters to switch between their ISP and their corporate LAN, and HDSL service, which will feature minimum 1.5 Mbps upstream *and* downstream connections.

Following are just a few examples of the broadband applications already available or just over the horizon:

- **Internet Content.** Broadband is changing what you see (and hear) on the Internet. As more and more Americans hook up with high-speed access, content providers are adding streaming video and audio and more complex graphics to enliven the Internet experience.

- **Music.** Broadband access will make compiling an online music collection easier and more practical. MP3, a file format that allows convenient transfer of near CD-quality music over the Internet, is quickly changing the way we listen to our favorite songs. In a recent survey conducted for ZDNet, 54 percent of respondents planning to sign up for broadband connections said they would use the fast access for audio downloads.

- **E-Commerce.** Broadband will revolutionize the online shopping experience, allowing consumers to experience virtual product demonstrations and multimedia advertising, virtual tours through shopping malls and stores, and interact with salespeople through

videoconferences. It also will provide constant connections between companies and their suppliers, making business transactions faster and more efficient.

- **Games.** Slow connections are the enemy of anyone who plays interactive multi-player games on the Internet. Broadband connections allow players to quickly and easily connect with opponents across the world for real-time competition. And fast connections also allow game program downloads at lightning speed.

- **Videoconferencing.** To date, quality videoconferencing has been restricted to the corporate boardroom. Broadband brings it to the living room, allowing families to keep in touch like never before and enabling distance learning and a host of business applications. High-speed connections will allow people worldwide to use videoconferencing at a quality approaching that of VHS video.

- **Home Networking.** Broadband means that multiple computers and other machines in a household can be connected, allowing users to share Internet connections, e-mail and printers. Eventually, devices in networked homes will be able to be controlled remotely; homeowners could start the VCR or warm up the oven with a command from the office.

- **Telecommuting.** Broadband connections allow those working at home to access corporate networks, e-mail and the Internet at in-office speeds and with always-on connections, making work-at-home professionals more productive than ever before.

- **Real-Time Information Updates.** Always-on connections allow users to share or access information at any time, without making time-consuming dial-up connections. Users can check weather, television schedules, stock prices and family schedules in seconds.

- **Unified messaging.** Fast, always-on connections will eventually allow users to retrieve voice messages, e-mail and pages through the same PC, dramatically simplifying information management at work or home.

- **Videos/software on demand.** Software downloads, already commonplace, are much more practical with broadband. Larger programs will easily be distributed over the Internet. In the future, movies and other video information will be available on demand as well.

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Project Pronto: What Others Are Saying About Broadband Service
SBC Communications Inc.

Demand for faster Internet connections is growing as quickly as the number of users who log on to the World Wide Web every day. SBC is meeting this need for speed with Project Pronto, a $6 billion initiative designed to transform the company over the next three years into the largest single provider of advanced broadband services in America. Project Pronto will make super-fast, always-on Internet access available to nearly all of its customers and create a platform to deliver next-generation, broadband-powered services. Already, computer makers are beginning to make their machines DSL-ready, including IBM, which is equipping some Aptiva models with DSL capability. PeopleSoft, Inc., is making telecommuting easier for its employees by providing them with DSL connections. Here's what others are saying about broadband service and its potential.

"As bandwidth grows, people's consumption grows. It always grows to fill, if you will, the available bandwidth. I absolutely know people's consumption will continue to grow. . . Consumers are pretty impatient animals, myself included. You know when you want something. . .And speed, along with bandwidth, just helps that whole experience."
Timothy Koogle, Chairman and CEO, Yahoo!

"Right now, the new drive for us is to create the next level of E-Trade product that's based on broadband access that allows us to bring in more content, more video feeds, more real-time information that's a lot more exciting and dynamic to the customer so they can see right on the screen and can interact immediately."
Debra Chrapaty, President and COO, E-TRADE

"Broadband is very important to IBM and its population of telecommuters because our company is so highly dependent on communications. Six hundred thousand times a day, we have employees sign on to our network through dial-up connections. If we can make those connections faster and communicate with richer media, we can improve the productivity of our employees. It's as simple as that."
Mike Braun, General Manager, Consumer Division, IBM

"There's pent-up demand for high-speed Internet access, particularly among early adopters."
Tim McElgunn, Dataquest
Houston Chronicle, 1/13/99 ("SW Bell's faster Net Access Due Soon")

"...ADSL is considered one of the more attractive and promising of several high-speed Internet access technologies that is now available and is expected to grow rapidly during the next few years."
Charles Carr, Dataquest
Santa Rosa Press Democrat, 1/13/99 ("Superfast Net Access Coming")

"Once a customer selects one high-speed service and buys modems and pays for installation, it will be very difficult to switch them away unless they are unhappy with the service or there is a big price difference."
Jeff Kagan, Kagan Telecom Associates
San Diego Union Tribune, 1/13/99 ("Pac Bell to offer fast Net service")

"Consumers tend to prefer an [Internet service provider] or a local phone company for their high-speed access. People associate the Internet with ISPs and with the telephone, and they tend to hate their cable companies."
Dave Eiswert, The Strategies Group
Telephony, 1/18/99 ("To the Neighborhoods")

"Being first to offer ADSL service is an advantage as it is more difficult to switch data access service than long-distance service, especially for business customers. It's definitely a market where the first one is able to skim the cream of easy, low cost-of-acquisition sales."
Paula Reinman, Telechoice
Reuters, 1/12/99 ("SBC Seeks to dominate high-speed Web Access")

"Over the next two years, we think a high-speed connection is going to be as essential to a business as phone service is today."
Kenneth A. Harrington, Worknet
St. Louis Post-Dispatch, August 29 "New Technology Allows For Faster Internet Access"

"These new-age, high-bandwidth companies are getting a closer look. I don't think they can ever be high fliers again without getting local assets... The market has realized that long distance assets without local assets – or some very smart capabilities that are not easily replicated – are not as attractive as they once were."
Rex Mitchell, Bank of America Securities
CNET, September 3, 1999 "Telcos' future valuations uncertain"

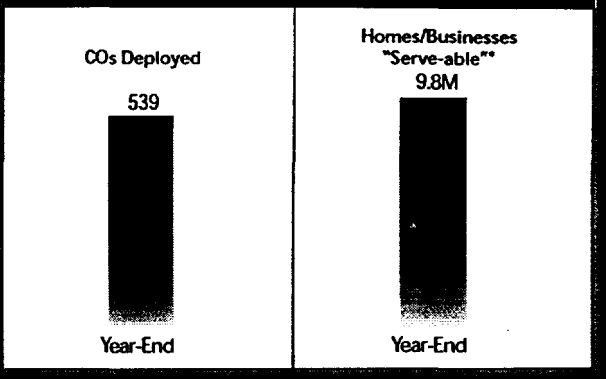
DSL vs. Cable Modems

To take full advantage of multimedia Internet applications, more and more consumers and businesses are turning to technologies offering lightning-fast speed, such as Asymmetrical Digital Subscriber Line (DSL) and cable modems. On the surface, cable modems and DSL appear to have comparable capabilities. However, a closer look reveals that DSL is the more viable "big" bandwidth solution because it provides residential and business customers with a dedicated, more reliable high-speed connection to the Internet or office LANs.

AVAILABILITY

SBC provides DSL available to nearly 10 million households and 8 million businesses by year-end 1999. Throughout the first half of the year, SBC focused on deploying DSL equipment, and certifying the network elements needed. Back office capabilities to provide [illegible] SBC is also [illegible] elements.

SBC'S CURRENT DSL AVAILABILITY



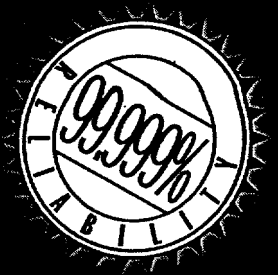
[illegible]

[illegible] SBC is also working with carriers that want to provide their employees with high-speed LAN and [illegible] SBC is also working with carriers that want to provide their employees with high-speed LAN and [illegible] DSL and cable modems, which DSL [illegible] solution.

RELIABILITY

[illegible] the loss of a single line (subscriber or signal amplifier) [illegible] cable [illegible] cable companies are now providing "business-class" services.

[illegible] telephone lines enjoy one of the most reliability track records of any network. Even in the unlikely event that a phone line is compromised, network architecture limits outages and reroutes the network by instantly rerouting traffic. Telephone companies understand the critical nature of telecommunications and have the support, service and billing infrastructure needed to meet this need.



PERFORMANCE

CABLE MODEMS

[illegible]

[illegible]

DSL

DSL customers suffer no performance degradation based on traffic or the number of users accessing the network. Each DSL subscriber receives a dedicated connection to SBC's data network at guaranteed connection speeds. Subscribers enjoy downstream connection speeds of up to 6 Mbps – up to 200 times faster than today's conventional modems and capable of carrying the highest quality of video over Web – and upstream connection speeds up to 384 Kbps.

In a recent study by Keynote Systems, an Internet [illegible] firm, Pacific Bell's DSL service outperformed cable modems during peak usage periods.

San Francisco Chronicle

Monday, May 24, 1999
Business, Page B1

DSL Beats Cable in Net Speed

Services tested during rush hour

By Deborah Solomon
CHRONICLE STAFF WRITER

When a company is growing in the information technology, the phrase "company time" may [illegible] more than the time company [illegible] on the Internet. Pacific Bell's digital subscriber line [illegible] provided a slightly faster response to the Internet than cable connection from Adelphia Corp.

Keynote Systems in San Mateo tested the two high-speed Internet services and found that during peak traffic hours, DSL users were able to access the Internet faster than those with cable modems. Cable modems were faster during the day, but that's when fewer people are trying to access the Internet, so these results have less significance for home users.

DSL allows users to connect to the Internet via Keynote.

Using a DSL line in the evenings, Shiler said Keynote was able to download Web pages in an average of 3.55 seconds. With a cable modem, the average was 3.91 seconds.

The study found that cable modem service did [illegible] more quickly than DSL during business [illegible] in the evening [illegible]

[illegible] cable modem service got a [illegible] shaky start.

One reason for the slowdown is that cable modems share access instead of a dedicated line per user, so access the Internet using the same line or node – [illegible] goes. The number of people watching cable TV [illegible] the node, the slower the service [illegible] affect the speed.

One reason cable was faster during the day is that cable modem service is used primarily by residential customers, not businesses. Many businesses don't get cable and don't have cable modems. The cable pipe largely is unused during the daytime when people are at work. In the evenings, when most people log on, it slows down.

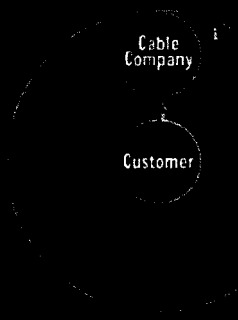
Cable companies are working on ways to upgrade their systems so that shared access is not as much of a problem.

Although DSL outperformed cable in this test, industry watchers said it should not signal the demise of cable [illegible]

[illegible] to be an

CHOICE

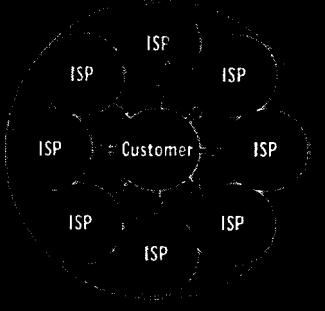
Cable Modem Customer Choices for Internet Service



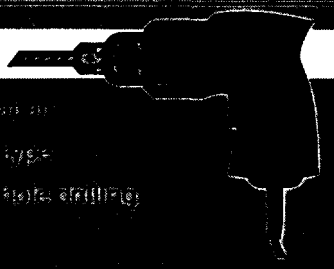
[illegible] utility for pay at steep [illegible] cable modem installation [illegible] service [illegible] company.

DSL subscribers can choose from a variety of ISPs. Nearly 100 ISPs including AOL have connected to SBC's ADM [illegible] and resulting SBC's DSL service.

DSL Subscriber Choices for Internet Service



CONVENIENCE



[illegible] Unless [illegible] existing CATV line can be easily re-purposed to serve a cable modem for a PC, as the type of cable [illegible] different. So, cable modems often require a "re-installation" – with hole drilling, [illegible] and splicing of cable.

DSL splits a single telephone line into separate voice and data channels, enabling customers to simultaneously access the Internet and make a phone call or send a fax – on telephone lines that possess one of the strongest reliability track records of any network. Customers enjoy "always on" Internet access [illegible] day. No dial-ups, no busy signals. Furthermore, the DSL modem can be installed wherever the computer is located – in the home or business.

SERVICE

Quality of customer service for cable modem customers will vary from provider to provider and location to location. According to Forrester Research, 1998 INP survey, 4 out of 5 users prefer to receive high-speed Internet access from a telephone company.

DSL customers benefit from SBC's heritage of superior customer service. For more than a century, SBC's goal has been to provide a full range of reliable, affordable services to meet customers' communications needs. The deployment of DSL is an important part of that ongoing effort.

AMERITECH RELEASE: Sep 13, 2000

Ameritech Announces DSL Service Now Available to Nearly 200,000 Dayton Homes, Businesses

Say Hello to Super Fast Internet: Fueled by Project Pronto, Company Brings DSL Broadband Service to Dayton

With the progress of the ambitious Project Pronto initiative, high-speed Internet service is now available to 200,000 Dayton area homes and businesses, Ameritech announced today. The announcement heralds the widespread rollout of Ameritech DSL in Ohio, with more than 1.2 million Ohioans now in communities where high-speed digital subscriber line (DSL) Internet service is available.

From Middletown to Springfield, many Dayton area residents now have DSL service available to them. SBC Communications, Inc., Ameritech's parent company, is committed to bringing DSL service to customers throughout Ohio, and the list of areas where service is available will continue to grow. Many customers in the Dayton area can now subscribe to SpeedPath, Ameritech.net's high-speed DSL Internet service.

"Ameritech understands the importance of bringing reliable, high-speed Internet access to Ohio residents and businesses," said Cathy Coughlin, president of Ameritech Consumer Markets. "Through Project Pronto, we're making a concerted effort to make DSL services available as fast as possible on a wide-spread basis. Many city and suburban customers now have access to DSL service, and we expect to make service available to many more residential and business customers this year."

DSL today enables customers to access the Internet or corporate networks at speeds up to 50 times faster than traditional 28.8 kilobits per seconds (Kbps) analog modems. DSL is also a dedicated connection that eliminates the need for dial-ups.

The DSL deployment is part of Project Pronto, a $6 billion initiative designed make SBC's DSL service available to approximately 77 million people by 2002.

"Wide-spread DSL availability in the Dayton area is the most visible benefit of Project Pronto," said Coughlin. "Pronto also is an important long-term investment in the states we serve. The initiative will improve the quality and reliability of our network, and ensure that members of our communities have access to advanced services."

To receive service today, the phone line running from a customer's home or business to a DSL-equipped central office must be no longer than 12,000 feet, or 2.2 miles, and must meet certain transmission criteria. As Project Pronto moves forward, Ameritech will deploy fiber deeper into neighborhoods and install neighborhood broadband gateways to bring capabilities now housed in central offices closer to customers to virtually eliminate the distance limitation in neighborhoods where the gateways are deployed.

Currently, Ameritech.net's SpeedPath 768 service provides downstream connection speeds up to 768 kilobits per second – 25 times faster than traditional 28.8 Kbps analog modems – and an upstream connection speed up 128 Kbps. Through a special promotion by Ameritech.net, customers can receive SpeedPath 768 with Prodigy and a DSL-ready Compaq Presario PC for $59.95 per month for 28-months[2].

For even higher speed, Ameritech offers additional SpeedPath options with downstream connection speeds up to 1.5 megabits per second – 50 times faster than a 28.8 Kbps modem – and upstream connections speeds up to 256 Kbps[3]. Downstream throughput speeds vary, depending on a customer's distance from the central office and other factors[4].

Residential consumers in Dayton can call 1-800-910-4369 for more information. Business customers can call 1-800-TEAM-DATA (832-6328) for more information. Residential and business customers are also encouraged to visit www.ameritech.net for more information. Web site visitors can enter their area code and prefix to determine if a DSL-equipped central office serves them.

[1] SpeedPath service is provided by Ameritech Corp.'s ISP subsidiary, Ameritech Interactive Media Services.

[2] The promotion requires a 28-month term commitment, and substantial early termination charges apply. Shipping and handling charges of $89 are additional. To qualify for this offer, customers must have a good payment history. Global Service Provider charges are included in package price but due separately beginning with first month of service.

[3] Customers may consult Ameritech.net sales representatives for details of service levels.

[4] Actual data transfer or throughput may be lower than connection speed due to Internet congestion, server or router speeds, protocol overheads, and other factors that cannot be controlled by Ameritech.

Ameritech is the premier provider of communications services in the Upper Midwest, with nearly 20 million business and residential customers – more than 22 million access lines – across Illinois, Indiana, Michigan, Ohio and Wisconsin. It is a company of ***SBC Communications Inc.*** *(www.sbc.com), a global communications leader. Through its subsidiaries' trusted brands -* ***Southwestern Bell*** *,* ***Ameritech*** *,* ***Pacific Bell*** *,* ***SBC Telecom*** *,* ***Nevada Bell*** *,* ***SNET*** *and* ***Cellular One*** *- and world-class network, SBC's subsidiaries provide local and long-distance phone service, wireless and data communications, paging, high-speed Internet access and messaging, cable and satellite television, security services and telecommunications equipment, as well as directory advertising and publishing. In the United States, the company currently has 61.2 million access lines, 12.2 million wireless customers and is undertaking a national expansion program that will bring SBC service to an additional 30 markets. Internationally, SBC has telecommunications investments in more than 20 countries. With approximately 219,000 employees, SBC is the 13th-largest employer in the U.S., with annual revenues that rank it among the largest Fortune 500 companies.*

I, Stanley M. Bryant, do hereby certify that on this 14th day of November, 2000, that I have served a copy of the foregoing document via * messenger and U.S. Mail, postage pre-paid, to the following:

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