

Distance Learning

As today's learning and educational requirements are expanding, resources seem to be shrinking. The rapid progress of technology and the availability of advanced information tools are presenting unique challenges for today's educators. Striving to keep up with progress and yet still provide the highest quality education, schools are integrating advanced technology into the classroom to provide hands-on opportunities and instruction. The need to prepare students for the global marketplace, however, is paired with a push to provide equal education to all students and pressures to cut costs and trim budgets.

In the face of these demands, educational institutions are discovering that communications technology is the answer, enhancing the effectiveness of education both practically and affordably. Ameritech's distance learning solutions put students in touch with the resources you have—and connect them with resources that were previously out of reach.

Distance Learning— A Definition

Distance learning is the process of utilizing the latest technologies to bridge the separation between educator and student, freeing both from the constraints of location and time. Closing this gap with technology is opening access to a world of educational resources for both teachers and their students.

By linking schools through today's technology, students and instructors can interact as if they were all in the same classroom. Urban and rural schools, training facilities, community or technical colleges, and universities can be connected via an interactive video network to share specialized courses, continuing education curricula, or faculty in-service and professional development programs.

The Advantage of Ameritech Distance Learning

Ameritech has a team of specialists dedicated to transitioning cutting-edge technology into practical educational applications. Their innovative solutions integrate voice, video and data that will benefit your educational institution by:

- Expanding your curriculum through a range of multimedia resources
- Equalizing learning opportunities by allowing students to access resources and classrooms regardless of their geographic location
- Increasing the sharing of resources and specialty instruction, which helps overcome the constraints of low incidence enrollment and limited budgets
- Building professional knowledge and staff member skills through faculty networking, in-service and advanced training programs
- Offering community outreach through continuing education programs

- Positioning your school as a leader in educational technology and preparing you for new opportunities in the next century

Ameritech Brings Distance Learning Within Reach

Ameritech's video team customizes distance learning solutions to meet the unique needs of your educational institution. From a selection of unlimited possibilities, we can implement a plan that maximizes your current resources and fits within your budget. Following are a few distance learning applications that demonstrate the distinct benefits of Ameritech's video, voice and data technology.

Interactive Video. Ameritech's two-way interactive video technology can create an electronic classroom virtually anywhere. Each location is equipped with television monitors, microphones and cameras, while options such as computer terminals, electronic tablets, fax machines, and printers provide additional means of exchange during an educational session.

Education Technology Services: Plymouth-Canton Community Schools

Plymouth-Canton Community Schools believe that communications technology can play a big role in the school's objective to change to outcome-based education which is based on the belief that all students can learn and succeed, but not necessarily in the same way or at the same time. With the commitment to outcome-based education, the teacher is viewed as a facilitator rather than just a lecturer, and encouraged to bring involving and motivational multimedia into the curriculum that can enhance traditional teaching methods.

In order to accomplish its goal of integrating multimedia technology into the curriculum, Plymouth-Canton Community Schools needed a technology plan for its voice, data and video technology for its 21 school buildings that serve over 15,000 students.

The Plymouth Canton Community Schools called on Ameritech to be their technical architect and project manager to help them build and implement their technology plan. Ameritech recommended an integrated technology plan that included several components. First, Ameritech designed and implemented a new building infrastructure that called for fiber running to each classroom in the district, which would serve as the platform to transmit the various technologies at high speeds. Ameritech also recommended local area networks (LANs) in each school that would allow for file sharing of student records and other administrative computing needs. Once implemented, these LANs will connect to a metropolitan area network that is based on a digital Centrex ISDN platform to connect all administrative and classroom locations in the school district for effective communications between buildings. The network also consists of voice mail, homework announcements and an automated attendant for callers to reach a live voice should they not choose to leave a message on voice mail.

Ameritech also implemented an interactive distance learning network, along with a Dynacom integrated information system, that connects all school sites in the district with fiber optic links, allowing them to share resources and specialized instruction. The integrated information system allows teachers to access and share course software and audio visual aids from other school buildings within the district. Software and other multimedia tools such as CD ROMs, videos and laser discs are centralized into one media center. A teacher is then able to pre-schedule the use of any software or audio visual aid with the media center. At the touch of a button from a control panel in their classroom, the teacher calls up the multimedia tool to be used, and it is then transmitted over fiber links and displayed on the classroom monitor.

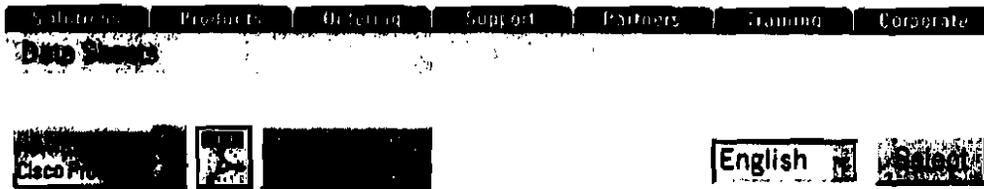
With this distance learning network and integrated information system, teachers from other school sites on the network can be guest speakers within a given classroom by the push of a button on the classroom control panel.

To round out the technology plan and implementation, Ameritech also provided Plymouth-Canton Schools with consulting services on the implementation of this project, along with staff development of the faculty, to train them on how to integrate this technology into the curriculum.

When speaking about their integrated information system from Ameritech, Dr. John Hoben, superintendent of the Plymouth-Canton Community Schools said, "We feel that this technology provides the instrument through which we can enhance instruction through the outcome based education used in our district."

With access to such a wide array of multimedia information, the expectation is that students will become more active participants in their own learning, which will ultimately increase their ability to solve problems and make decisions, and develop the skills they need to succeed in our information-intensive society.

The logo for Ameritech, featuring the word "Ameritech" in a serif font, with a stylized swoosh or underline that starts under the 'A' and ends under the 'h'.



SMARTnet and SMARTnet Onsite

Executive Summary

SMARTnet and SMARTnet Onsite provide enhancement and maintenance support resources during the operational lifetime of your Cisco networking device.

SMARTnet augments the resources of your operations staff; it provides them with access to a wealth of expertise, both on line and via telephone, the ability to refresh their system software at will, and a range of hardware advance replacement options. SMARTnet Onsite provides all SMARTnet services and complements the hardware advance replacement feature by adding the services of a field engineer (critical for those locations where staffing is insufficient or unavailable to perform parts replacement activities).

The value of any networking device can be reduced to two simple criteria: availability and performance. As networks have become the backbone of business, the importance of these two factors has increased dramatically. And you are now responsible not only for keeping that network up and running at a reasonable and predictable cost but also increasing productivity throughout the company, increasing the quality of services delivered to your customers.

SMARTnet and SMARTnet Onsite provide both remote support and onsite parts service, augmenting your staff's ability to maintain and operate your device, and ensuring that your device performs at its highest possible levels of performance and longevity. SMARTnet features include:

- Operating system software refresh on demand
- 24 x 7 x 365 access to Cisco Connection Online (CCO), the highest rated online support in the industry
- 24 x 7 x 365 access to highly skilled networking technology personnel; successful support of over 3 million devices worldwide
- Advance parts replacement in as little as four hours (depending upon the delivery option selected)
- Onsite field engineer in as little as four hours (SMARTnet Onsite only; depending upon the delivery option selected)

Devices covered by these programs:

- Operate at highest levels of availability and performance
- Grow in capabilities and performance at no extra software charge
- Experience extended device lifespans

"This probably sounds somewhat contrived, but I mean it in the most sincere terms. Cisco Technical Support is simply the BEST. I was impressed by the technical expertise of Cisco's technical support staff and the timeliness with which I received the correct answer to solve the issue I was having. But mostly I was impressed with the very nice support engineer, who: was very friendly and courteous

- a) knew the product I was speaking of as if she had designed it,
- b) laughed at my lame, one o'clock-in-the-morning joke,
- c) resolved my problem,
- d) all without making me feel like a complete idiot."

-Senior Network Design Engineer

Cisco's Support Philosophy

Cisco is your strategic partner. It offers its customers networking solutions, not just products. That means ensuring that products are up and running quickly, that they are available when you need them, and that they don't become obsolete as technology changes. As your strategic partner, Cisco strives to move beyond traditional business barriers to:

- Empower our customers by making all of the company's knowledge, information, services, and resources available to its customers on demand
- Prevent problems through aggressive initiatives to deploy networking best practices at customer sites and internally
- Create an environment where support is an integral part of the solution, not a remedy
- Significantly lower the cost of ownership while increasing the return on investment

Working closely with customers to support of more than three million networking devices, Cisco continually grows and refines the industry's top support organization to ensure that your network satisfies your business goals.

SMARTnet Components

SMARTnet and SMARTnet Onsite provide four key services, with three levels of hardware replacement entitlement depending upon the delivery option selected.

What's the difference between SMARTnet and SMARTnet Onsite? SMARTnet addresses the

maintenance requirements of customers with strong internal maintenance support staff. On the other hand, Customers whose staff has insufficient availability, proximity, or skill to perform hardware maintenance should consider SMARTnet Onsite, which provides the services of a Field Engineer to perform installation of replacement parts.

Cisco IOS® Software Updates



Cisco responds quickly to changes in networking environments and provides immediate Cisco system software updates (such as IOS), thus enhancing and extending device life. In fact, Cisco spends more development dollars enhancing its system software than most of its competitors spend in total R and D. The upgrades consistently deliver enhanced:

- Security
- Performance
- Bandwidth management
- New protocol support
- Interoperability

SMARTnet provides automatic updates, on request, of all major releases, with sophisticated upgrade planning processes, as well as maintenance fixes. Through CCO, these updates are available 24 hours a day, seven days a week.

Cisco Connection Online

Cisco Connection Online (CCO) is the industry-leading online support and information service from Cisco, available 24 hours a day, seven days a week. CCO provides users with a wealth of up-to-date information with hundreds of new documents being added or updated each month. And your SMARTnet contract adds the most comprehensive collection of online technical tools in the industry.

Those tools include:

- Bug Toolkit for anticipating and addressing bugs
- Troubleshooting engine for diagnosing hardware problems using the same database used by our technical assistance center



- IP Calculator for assigning IP addresses

- Cisco IOS® Planner to ensure you use the right version for the job

Technical Assistance Center (TAC)

The Cisco TAC is available 24 hours a day, seven days a week and can be contacted via the telephone, electronic mail, or the CCO case submission tool. The TAC is staffed by more than 900 customer support engineers with over 5000 combined years of experience with the Cisco product line and all aspects of data communications networking technology. Support is available in more than 144 languages.

Advance Replacement of Hardware Parts

In the event of hardware failure, the SMARTnet Advance Replacement feature provides a hardware replacement unit delivered within 24 hours of receiving the request (please see the following section, SMARTnet and SMARTnet Onsite Entitlements, for details on additional response times).

Field Engineers

For SMARTnet Onsite customers, Cisco provides field engineers onsite to install Advance Replacement hardware parts. Over 11,000 field engineers are located throughout 110 countries to supply these services. Response times are based on the delivery option selected.

SMARTnet and SMARTnet Onsite Entitlements

- Major and maintenance releases of Cisco IOS software via CCO or media (upon request)
- Registered access to CCO 24 x 7 x 365
- 24 x 7 x 365 access to Cisco TAC for priority 1 and 2 telephone support with critical problem escalation (telephone callback within one hour by the TAC for all hardware, configuration, and software problems, from 9 a.m. to 5 p.m. local time, Monday through Friday, excluding Cisco-observed holidays)
- Advance replacement of hardware (three delivery options are available, depending on response time requirements---see below for details)

SMARTnet 8x5xNext Business

Guaranteed delivery of hardware replacement parts the next business day, provided that the request is received before 3 p.m. local time

SMARTnet 8x5x4

Guaranteed delivery of hardware replacement parts, from 9 a.m. to 5 p.m., Monday through Friday, within four-hour response time.¹

SMARTnet 24x7x4

Guaranteed delivery of hardware replacement parts, 24 hours a day, seven days per week, within four-hour response time.²

- Onsite field engineer (SMARTnet Onsite only), depending upon delivery options listed above.

SMARTnet and SMARTnet Onsite Increase Your Return on Investment

By providing ongoing, no-charge software upgrades, SMARTnet and SMARTnet Onsite ensure that the capabilities, security, and performance of your device will increase throughout its prolonged lifespan. The support tools and knowledge provide your staff with the ability to avoid problems, maximize utility, and expedite problem resolution. When they're stumped, our technical support team provides 24-hour-a-day global support, with an aggressive escalation policy to ensure that your problem gets the appropriate attention from those best suited to solve it. And in those rare cases when a part needs to be replaced, SMARTnet and SMARTnet Onsite can deliver parts to you within four hours, accompanied by a service technician in the case of SMARTnet Onsite.

Cisco SMARTnet and SMARTnet Onsite are the company's core maintenance support programs. Devices covered by these programs:

- Operate at the highest levels of availability and performance
- Grow in capabilities and performance at no extra charge
- Experience extended device lifespans

If it's worth buying the device, it's worth buying SMARTnet or SMARTnet Onsite.

¹Available in the U.S., Canada, European Union countries, Norway, Switzerland, and Australia.

²Service is available only if your distance from a parts depot or Cisco-authorized service location is within the following limits: in the U.S., within 75 driving miles; in Europe and Canada, within 120 driving kilometers; in Australia, within 75 driving kilometers. To determine if this service is available for your location, please see the Cisco Service Availability matrix at <http://www.cisco.com/smbiz/service/smartnet/index.html>.

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Cisco Gold Partner

Ameritech has both the experience and the ability to design, configure, install and maintain all proposed Cisco equipment at all of the District's locations. Ameritech is part of the SBC Communications family of companies – together we are the largest Cisco reseller in the United States. Through a significant investment in personnel, resources and a commitment to excellence, we have obtained Cisco Gold Partner status, the highest level of partner status available. In addition, we are the first reseller to have earned Cisco specializations in both Network Security and Voice Solutions.

Our Integrated Service Center (ISC) is a state of the art facility staffed by Cisco certified technicians. Cisco Certified personnel are on duty every hour of the day, every day of the year. Certification levels of ISC technicians include the highest obtainable – Cisco Certified Internetworking Expert (CCIE).

Our goal is to provide a superior level of customer satisfaction. As proof this ability, 94% of customer calls are answered within 30 seconds. Cisco certified personnel provide all levels of support. With this model, the first person you contact will be a highly skilled technician. Many service organizations place the lowest skill level at the front line to screen minor problems and qualify more difficult problems before escalating to more experienced technical staff.

As a Gold Partner, Ameritech has a demonstrated ability to support the East St. Louis School District in all phases of this project including design, implementation and ongoing maintenance and troubleshooting. Our state of the art Support Lab is available to assist you in designing and configuring your network. This Lab gives East St. Louis Public Schools the ability to integrate and test all models of Cisco equipment prior to placing this equipment on the network. The equipment supported in our Lab is the Cisco Router models 25xx, 36xx, 4000, and 7xxx and the Catalyst Switch models 3xxx, 5xxx, and 6xxx.

Ameritech has direct access to Cisco's local stock of replacement parts. For the East St. Louis School District this means that not only are your replacement parts from the most current supply, but the needed part is on site within four hours.

PROPRIETARY

Not for disclosure outside Ameritech Telephone Company except under written agreement



Gold Certified Partners must complete comprehensive training that ensures a consistently high level of product knowledge, technical expertise, and service capabilities. Ameritech has invested heavily in Cisco training and certification for our entire team. Our staff is continually trained on Cisco's entire product line, ensuring that support for emerging technologies is always available. Below are the current numbers of our Cisco certified personnel.

- 13 Cisco Certified Internetwork Experts (CCIE)
- 8 Cisco Certified Network Professionals (CCNP)
- 55 Cisco Certified Network Associates (CCNA)
- 5 Cisco Certified Design Professionals (CCDP)
- 99 Cisco Certified Design Associates (CCDA)

No other Cisco reseller or partner in the St. Louis metropolitan area can match our number of Cisco certified personnel. Many vendors can supply Cisco equipment, but Ameritech has the talent, resources and credentials to ensure a successful implementation, including design and ongoing support services.

PROPRIETARY

Not for disclosure outside Ameritech Telephone Company except under written agreement

SBC Corporate Overview

A Powerful Global Telecommunications Leader

Based in San Antonio, Texas, SBC Communications, Inc., (SBC) is the largest local telecommunications provider in the United States, and one of the worlds leading diversified telecommunications companies.

As a result of mergers with Pacific Telesis in 1997, Southern New England Telecommunications (SNET) in 1998, and Ameritech in 1999, SBC is embarking on a national expansion program that will encompass customers in all the top 50 U.S. population markets. With combined 1998 annual revenues of \$46 billion from SBC and Ameritech, the corporation would have placed 15th on the 1998 Fortune 500 list.

Widely regarded as a well-run company, SBC, for the third consecutive year, has been named the World's Most Admired Telecommunications Company by *Fortune* magazine. SBC companies have provided reliable and innovative telecommunications services for more than a century, and as a corporation is the first to serve both residential and business customers on a national basis, providing them a "one-stop shop" for local exchange, long distance, wireless, high-speed data and Internet services. This is an integral part of SBC's "national-local strategy," which will offer service nationwide to 180 million people—two-thirds of the U.S. population.

In the United States today, SBC:

- Serves about 59 million business and residential access lines.
- Has combined annual revenues of \$46 billion, earnings of \$6.7 billion, and a market value of \$173.7 billion.
- Serves 10.1 million wireless subscribers with a potential subscriber base of 131 million in 119 markets, including nine of the nation's top 10.
- Consists of more than 203,000 employees, which ranks it the 14th largest employer in the nation.

But our growth isn't about size. It's about offering choices, and having the resources to provide the range of services customers want at reasonable prices, and all from a single-source provider. SBC companies have provided reliable and innovative telecommunications services for more than 120 years. The range of innovative services our subsidiaries now provide include:

- Local and long-distance
- Data and voice communications
- Wireless communications
- Paging
- Internet access
- Messaging
- Cable and satellite television
- Telecommunications equipment
- Directory advertising and publishing

Internationally, SBC is the largest non-European telecommunications investor in Europe, giving it access to a \$175 billion telecommunications market. Overall, SBC's strategic international investments are worth an estimated \$22 billion in 22 countries throughout Asia, Africa, Europe, the Middle East and North America.

With such a massive footprint not only in the United States but also around the world, the SBC family of companies is in a position to follow our business customers wherever they go, delivering a complete package of local, long-distance and high-speed data service.

America's Broadband Resource

SBC has invested heavily to build powerful communications networks. In fact, we build and continue to grow one of the most sophisticated and advanced telecommunications networks in the country that today includes:

- Three 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

In October 1999, SBC announced "Project Pronto" a \$6 billion initiative, that will transform the company into the largest single provider of advanced broadband services in America, making super-fast, always-on Internet access available to nearly all its customers and creating a platform to deliver next-generation, broadband-powered services. Specifically, SBC will:

- Provide an estimated 77 million Americans—about 80 percent of its customers—voice, data and video services via faster Digital Subscriber Line (DSL) services by the end of 2002. DSL is about 200 times faster than conventional analog modems.
- Restructure its network to push fiber deeper into the neighborhoods it serves and install or upgrade "neighborhood broadband gateways" to eliminate distance constraints that have always been a barrier to service reach.
- Together with the advanced, long-haul network of Williams Communications, Inc., with which SBC has a strategic alliance, SBC will provide end-to-end advanced voice, data and video services on one of the most sophisticated, efficient, flexible and scalable networks in the industry.

Project Pronto is an important step in the company's migration to a network that will be predominantly packet-switched, and use an Asynchronous Transfer Mode (ATM) distribution network system (ADNS) architecture. As part of ADNS, the company plans to deploy the most advanced voice switching technology today—voice switching over ATM (VTOA)—which will allow the company to transport voice as well as data via packets without degradation in call quality or reliability. SBC plans to complete its VTOA deployment in its largest markets by 2004.

SBC's goal is to quadruple its DSL deployment, equipping about 1,400 central offices with DSL technology, laying more than 12,000 miles of fiber sheath, installing or upgrading 25,000 neighborhood broadband gateways, and reach an estimated 77 million Americans in nearly 35 million customer locations in 13 states.



Network Equipment & Services
December 27, 1999

A Leader in Applied Research

Southwestern Bell Technology Resources (TRI) is the applied research subsidiary of SBC. With headquarters in Austin, Texas, and locations in San Ramon and Pleasanton, California, TRI's mission is to identify and assess emerging technology in strategic technology areas:

- Broadband delivery systems
- Information technology
- Video/multimedia systems
- Voice technology
- Wireless Systems

TRI offers all the support tools and modern facilities needed for ongoing innovation and creative research. With more than 300 employees, TRI has the advantage of being a small company, as well as being part of one of the world's largest communications companies. TRI's technical staff of engineers, computer scientists, applied psychologists, and communications experts, forms one of the finest teams in the industry.

Located in two of the leading high technology centers of the country, Austin, Texas and the Silicon Valley in California, gives TRI the added advantage of being in close proximity to other high tech industry leaders. This proximity stimulates collaboration on the advancement of technology issues. TRI also collaborates with some of the leading universities around the country to further broaden its research initiatives.

Giving Back to the Community

The SBC family of companies has a heritage of service to our communities and the needy that spans more than a century. We are committed to continuing that commitment through an independent, legally separate SBC foundation.

The 14-year-old SBC foundation was established to make a long-term difference by improving the welfare of society. SBC Foundation embodies a desire to be a leader in exploring new approaches to major public agenda issues. As such, it indicates the willingness of one of the most successful companies in the telecommunications industry to address tough community concerns proactively and with an innovative spirit.

Since the Foundation's inception, and combined with Ameritech, we have distributed more than \$670 million dollars to a variety of non-profit organizations. The total includes all grants, United Way commitments, and employee programs such as Cultural and Educational Matching Gifts.

We see our efforts as investments in progress, particularly in towns and cities served by SBC and its subsidiaries. Our continuing goal is to be a partnership builder, a catalyst for strategic change that can improve the greatest number of lives and help communities search for lasting solutions to critical and complex problems. We take pride in the coalitions we've stimulated around priority community needs at the local, regional and national level, especially when those collaborations keep change moving forward after our financial support ends. Thanks to a unique combination of extensive local presence, leadership expertise, employee volunteers, and financial resources, we are well positioned to understand local needs and make a difference where it counts.

Providing the impetus for strategic change requires action on several fronts:

- Stimulating business retention and expansion, especially in distressed or disadvantaged neighborhoods.
- Support for small business development to increase employment and economic diversity; broadening adult literacy and workforce training for skilled, higher wage jobs.
- Support for innovative uses of technology to meet community needs and expand community access to the information highway.
- Programs that benefit and develop the entire community.

Since the scope of most social problems is enormous, one foundation can't solve every challenge. To maximize the effect of our limited dollars, we take a disciplined approach. We try to do a few things very well and pursue every avenue we can to leverage each grant.

Since the Foundation began, we have concentrated on needs within the education, community economic development, health and human services (primarily United Way) and cultural and arts arenas. Each year, more of our major efforts are tied to critical education and economic development issues facing communities in an information-based economy. We are convinced that strategic change that can facilitate lasting improvement in the quality of education and in the economic strength and vitality of our communities is crucial to the people we serve and to the future of our business.

As with any large corporation, SBC Communications is in business to increase shareholder value. We believe that strong communities, strong economic development plans, and strong educational infrastructure support our fiscal goals. It's not just the right thing to do—it makes good business sense.

EXHIBIT F

Ameritech Base Rate Service

Ameritech Base Rate Service is designed to carry data between and among your locations. It is a point to point or multipoint service that gives you flexibility when setting up your network. Choose the speeds that are just right for your business needs—2.4, 4.8, 9.6, 19.2, 56 and 64 Kilobits per second (Kbps). *(Quick translation—the equivalent of sending 1/6th of a page to 4.5 pages per second.)*

Ameritech's Secondary Channel Capability also can be ordered to monitor your Base Rate circuit(s).

Put Ameritech Base Rate Services to work for your business:

Transmission of sensitive data—between and among locations, or consolidate data from branch offices to a central computer.

LAN-to-LAN connections—connect physically separated LANs into a single, powerful resource.

CAD/CAM file transfers—easily move information where it's needed.

High-speed faxing—send and receive information quickly!

Remote data base access—share information without the expense of duplicating a data base.

Overseas communications—64 Kbps is the international communications standard. Connect a 64 Kbps Base Rate line to the long distance carrier of your choice, for reliable, crisp digital transmissions—end-to-end.

Ameritech DS1 Service

Ameritech DS1 Service is designed for the transport of your data, voice, video and imaging communications. At 1.544 Megabits per second (Mbps)—the equivalent of sending 96 pages per second—it's a highly affordable choice for sending massive amounts of information between locations.

Each DS1 line can carry 24 discrete 64 Kbps voice or data channels. You can reduce line and equipment expenses by aggregating Base Rate Services onto a high-capacity DS1 line by using a central office multiplexer or Ameritech* Reconfiguration Service. This creates a cost-effective backbone network for the transfer of information between your business locations.

Ameritech continues to expand the deployment of Performance Monitoring on DS1 circuits. And, you can order Ameritech Reconfiguration Service to reroute DS1 traffic and manage line costs from a terminal at your location.

Ameritech DS1 Service is ideal for:

Secure transmission—of data, voice and video between locations.

Host-to-host computer connections—share information without the expense of duplicating a data base, or update common files between computers as a contingency planning solution, should one computer fail.

LAN-to-LAN connections—tie networks together, enabling users to share files or access E-mail as if in the same location.

Video conferencing—let DS1 lines bring the meeting to you, and save the time and money spent on traveling.

IS YOUR ENTERPRISE READY FOR THE NEXT WAVE OF CHANGE?

In today's unpredictable global marketplace, one fundamental truth remains: The only constant your business will face is change.

Indeed, the pace of change is accelerating as organizations embrace new information technologies not simply to enhance operations but for competitive advantage and profit. As new, networked applications such as sales force automation, e-commerce, and Enterprise Resource Planning (ERP) are revolutionizing business processes, executives are demanding an ever-greater return on their IT investments.

This new breed of applications tends to generate high user demand and overstress the network by challenging LAN/WAN resources. As a result, IS groups are forced to improve network performance and expand their capabilities to prevent the traffic bottlenecks and system "brownouts" that prevent smooth information flow.

Unfortunately, this impending network congestion problem is often overlooked or unrecognized. What's the result? Delayed deployment. Frustrated users. Underestimated budgets. Lost ROI.

At Ameritech, we've found that empowering your organization with advanced applications is only half the battle. They simply won't perform as promised without an optimized, high-speed network.



CHANGE
ASSES
INVESTMENT

DO YOU HAVE THE RESOURCES TO RESPOND?

In recent years, the IS world has witnessed a proliferation of new networking technologies: ATM, Layer 3 switching, Gigabit Ethernet, XDSL, intranets, extranets, and VPNs just to name a few. As a result, it takes an ever-increasing degree of technical expertise to not only determine the best network architecture for your organization now, but also for its future.

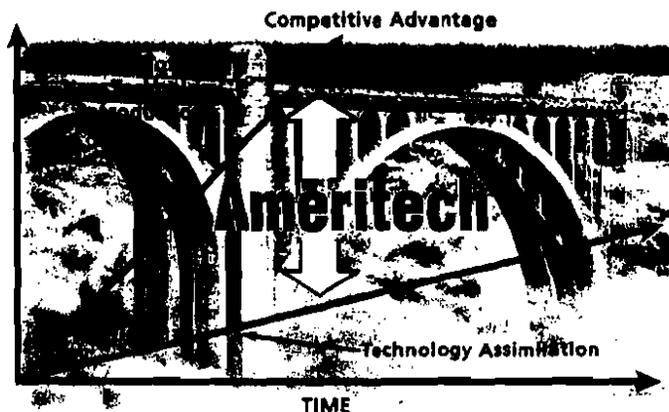
Do you have the resources to ensure your network is up to the task? Can you afford to retain and maintain such highly specialized technical expertise? Does your IS group have the right skill sets, the right training, the right tools?

As enterprise networks continue to grow, even the largest organizations may find themselves understaffed and under-trained. They discover they're lacking the people or expertise to implement new technologies simultaneously at multiple locations.

Ameritech realizes that your internal network resources may need to be supplemented by an experienced team of professionals that allow your network projects to be completed faster and within budget. An experienced integrator gives your organization the opportunity to quickly generate results and enhance your competitive edge.

BRIDGING THE GAP.

In the midst of change, a related concern for businesses is the time it takes to assimilate a new technology. Dataquest suggests that as information technologies become increasingly complex, IS professionals often require more time to get up to speed. However, they have progressively less time to acquire this critical expertise before the arrival of the next new technology. Ameritech can step in and bridge this assimilation gap by providing IS staff guidance and engineering support on an as-needed basis. New systems and applications can then be utilized as soon as they're deployed, enhancing your organization's competitive advantage.

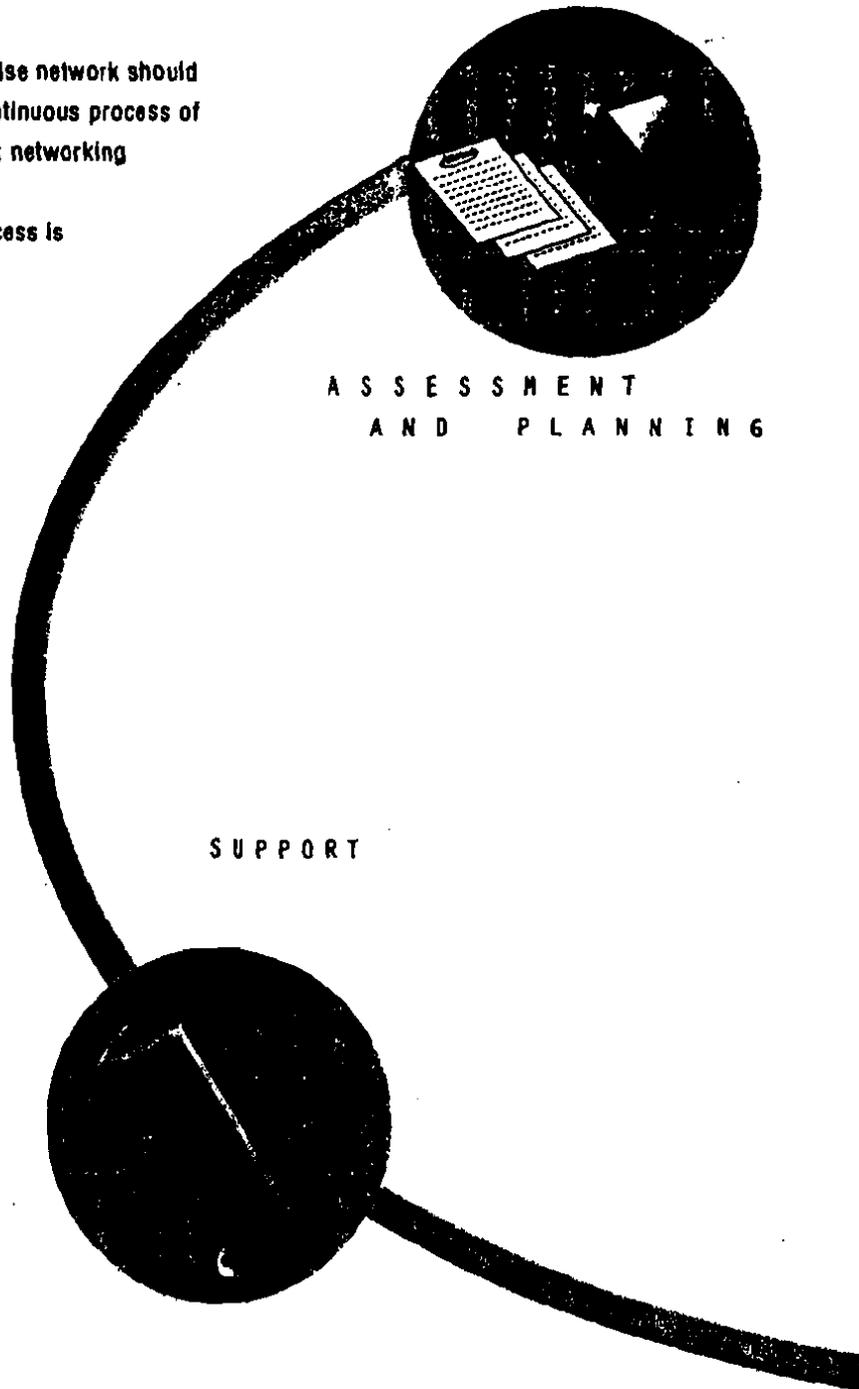


CONSIDER THE VALUE OF A
FULL LIFE CYCLE
NETWORK INTEGRATOR.

To meet your changing business requirements, the enterprise network should be viewed as a dynamic, evolving system engaged in a continuous process of improvement. At any corporation, at any moment, different networking initiatives are at different stages of development.

Thus, what is increasingly needed for networking success is a network integrator: a single, accountable resource with international scope plus the proven ability to support and coordinate each step of an enterprise-wide solution from design to support.

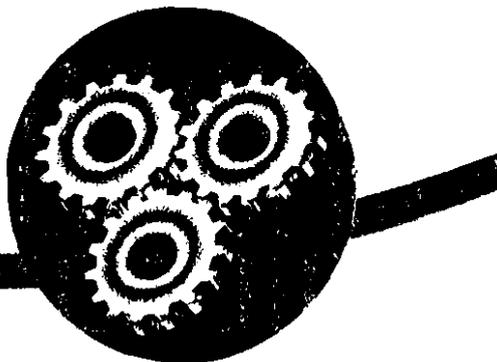
Successful networking also requires an intimate grasp of your organization's information flow. With this knowledge, network experts can construct a customized solution that addresses your particular business requirements without over- or underbudgeting.





D E S I G N

D E P L O Y M E N T
A N D I M P L E M E N T A T I O N



KEY ATTRIBUTES OF A "BEST OF CLASS" CONSULTANT.

The Meta Group recently identified the primary criteria that distinguish an outstanding IS consulting organization.

Technological expertise.

Ameritech's engineering team spends at least 20% of their time in training. Plus, our networking knowledge is constantly augmented by close ties with leading manufacturers, feedback from our Customer Support Center, and independent findings from our multimillion dollar Interoperability Lab in Mount Prospect, Illinois.

Proven, consistent processes.

Ameritech employs a number of time-tested methodologies to assist thousands of clients daily. Our approach to project management and logistics continues to set the standard for the industry.

Scalable, sustainable resources.

Our deep financial and human resources, including a seasoned team of systems, network, and professional services engineers, give us the versatility to keep pace with your growing needs.

Flexibility to go beyond project scope.

If further needs are identified during any phase of planning or development, we have the depth of resources and experience to successfully complete the project.

Willingness to transfer knowledge.

Ameritech is not an outsourcing organization—we complement your IS resources by providing professional support to your staff. Our business is built on sharing expertise with our clients to help them implement their networking initiatives.

Key partnerships in place.

Since we maintain daily relationships with the leading IT manufacturers, you have a single source you can rely on for rapid answers and independent advice.

CONSIDER
AMERITECH.

There are many IT providers who claim network integration expertise. However, only Ameritech offers your organization multivendor integration experience, proven systems solutions, and international logistics capabilities.

As a single, independent point of contact for all your networking needs, Ameritech draws on years of experience plus extensive research from our Interoperability Lab. Our ability to address complex connectivity issues is unsurpassed.

Flexibility also allows our networking professionals to step in at any project development stage and provide prompt, comprehensive assistance. From assessment and planning to network support, we're geared to help you every step of the way.

Unlike many IT providers, we don't simply supply our clients with "off-the-shelf" services. We deliver unique solutions to meet specific business needs. Our customized solutions can be implemented today, with the capacity to migrate to new technologies tomorrow.

S O U R C I N G

THERE ARE FORMIDABLE CHALLENGES AT EVERY PHASE OF THE NETWORK LIFE CYCLE. THE FOLLOWING PAGES PRESENT SOME OF THE WAYS AMERITECH CAN HELP.

ASSESSMENT AND PLANNING:



LAYING THE

FOUNDATION FOR SUCCESS.

At Ameritech, we know it's difficult to determine the proper direction an enterprise network should take. It requires considerable knowledge of a client's business strategies and information needs as well as a solid understanding of all available technologies. That's why we strive to learn as much as possible about the issues you confront daily, even before you consider making a network upgrade.

You see, we want to get involved. We welcome the opportunity to collaborate with your IS group in the early

stages of application selection and development. The more we learn about your business, the better prepared we'll be to support you.

To initiate the process, key members of our engineering team can conduct a detailed analysis of your existing network. They'll show you where you stand today and how to leverage your technology investment tomorrow.





ELECTRONIC COMMERCE

DESIGN:



ANTICIPATING *WHAT'S* NEXT.

Network convergence. Virtual private networks. Electronic commerce. Enterprise Resource Planning. To many organizations, the impact of implementing such technologies on their existing network is uncertain at best.

We also know that achieving the highest possible speed and bandwidth enterprise-wide isn't always the key to networking success. Our mission is not to maximize network performance everywhere, but to optimize it to satisfy each workgroup's anticipated requirements. For example, a design engineering division may rely heavily on multimedia applications, while an overseas subsidiary's networking requirements are considerably less graphics-intensive. By applying this kind of pragmatic thinking, we can design the most cost-effective solution for your business.

Ameritech supports this phase of the network development process with services that go far beyond design from

a detailed analysis of your current network to an in-depth assessment of security risks and vulnerabilities.

When your network architect is Ameritech, you can also rest assured that the solutions we recommend will perform according to plan. That's because they're backed by rigorous research and testing. At our multimillion dollar Interoperability Lab, our engineers conduct proof-of-concept testing to determine how networked, multivendor technologies will perform. The latest equipment, cable, and software applications are mixed, matched, and evaluated from end to end.

This unique capability frees our clients from having to test possible solutions on their own "live" networks, saving themselves significant time, money, and aggravation.

SOURCING:



ACQUIRING *ALL THE* RIGHT COMPONENTS.

Many businesses start upgrading their network at a break-neck pace only to discover that some components aren't readily available to get the job done. Other organizations don't budget for the network changes needed to meet their business needs. So when an upgrade is required, they lack available funding.

If either situation is familiar to you, Ameritech is here to help. Our service locations are linked by a sophisticated, real time network capable of processing millions of orders

daily. From our strategically located warehouses, we can immediately ship from one of the most extensive inventories of multivendor products in the networking world.

We're even prepared to help you financially. By taking advantage of one of several flexible leasing programs we provide, you can immediately acquire the solutions you need without breaking your budget. So instead of making an unexpected technology investment, you can put your capital to work in other profitable, productive ways.

