

A COMPREHENSIVE OFFERING...

I need a choice, not a one-size-fits-all solution...

STREAMLINED APPROACH

When you're putting together a communications network, consider the advantages of a provider that offers a fully managed solution. Getting end-to-end connectivity from a single source lets you consolidate, standardize, and simplify voice and data communications throughout your organization.

Look to the MFS Telecom Companies for a wide range of connectivity options that can be tailored to provide your organization with a built-to-order communications solution.

SERVICE CATEGORY	MFS OFFERS	BENEFITS TO YOUR BUSINESS
	<ul style="list-style-type: none"> • Digital Products in a range of signal speeds • International Services with fully managed connections end to end • SONET (Synchronous Optical NETWORK) in a range of signal speeds 	<ul style="list-style-type: none"> • Uses your communications facilities efficiently while lowering costs and increasing performance. • Provides consistent service at all points from a reliable, high-quality source • Features super-high capacity with unmatched speed, reliability, and scalability.
	<ul style="list-style-type: none"> • Business Lines 	<ul style="list-style-type: none"> • Offers cost-effective alternatives in local dial-tone service. • Includes a wide variety of time-saving and business saving features that ensures your customers reach you when they call. Our robust service includes more features as part of the basic service.
	<ul style="list-style-type: none"> • Digital PBX Trunks • DID/ DOD Trunks 	<ul style="list-style-type: none"> • Facilitates high-capacity connections for large voice applications. • Provides direct connection for outside callers, or direct connection to calls outside.
	<ul style="list-style-type: none"> • Comprehensive Service Offerings 	<ul style="list-style-type: none"> • Connects domestic and international sites over the same integrated network and billing platform. This technological integration allows us to offer a seamless, end-to-end service

Industry Leadership

...CUSTOMIZED TO MEET YOUR NEEDS

...High-speed, high-quality communications from one reliable, consistent source—that pretty much sums it up.

SERVICE CATEGORY	MFS OFFERS	BENEFITS TO YOUR BUSINESS
• High-speed LAN Interconnect (HLI) Services	• High-speed LAN Interconnect (HLI) Services	• Connects dispersed LANs with a high-speed, fully managed network.
• Frame Transport	• Frame Transport	• Provides bridged and routed services; fractional and native rates.
• ATM Interconnect	• ATM Interconnect	• Lets you access benefits of our ATM network using your existing Frame Relay technology.
• Multipoint Video	• Multipoint Video	• Extends your ATM capabilities across town or to companies across the globe.
• Wide Area Voice Exchange (WAVE)	• Wide Area Voice Exchange (WAVE)	• Delivers business-quality video to the desktop.
• Metro Area Exchange (MAE)	• Metro Area Exchange (MAE)	• Increases the efficient use of access links with voice and data integration by connecting to MFS' nationwide ATM network.
• High-Speed Serial Interface (HSSI)	• High-Speed Serial Interface (HSSI)	• Provides sophisticated, high-speed interconnections for Internet Service Providers.
• SNA (Systems Network Architecture)	• SNA (Systems Network Architecture)	• Brings a higher-speed alternative to wire-speed LAN Interconnect services.
		• Provides a fully managed solution for end-to-end IBM remote-to-host connectivity

COMPLETE COVERAGE

MFS offers all the components for optimum results.

- Redundant and route-diverse fiber-optic networks in over 40 metropolitan areas worldwide—with aggressive plans for continued expansion.
- Landmark cooperative agreements with local exchange carriers and wide area providers for an unprecedented variety of options.
- Proactive network monitoring, management, and security, with 24-hour surveillance provided by Network Management Centers around the world.

To find out how MFS can provide you with a flexible, innovative solution that meets the specific needs of your organization, call for more information today.

1-800-MFS-4USA

<http://www.mfst.com>

A Timely Alternative

TCG

OMNILINKSM PRIVATE LINE SERVICES

Reliable, secure connections provided over an all-fiber digital network optimize efficiency and flexibility.

Managing a corporate telecommunications network effectively is essential for companies hoping to succeed in today's competitive environment. OMNILINK Private Line Services from Teleport Communications Group (TCG) allow customers of all sizes, from interexchange carriers to small businesses, to configure their networks for maximum reliability, capacity and flexibility.

OMNILINK Private Line Service Options

To accommodate their unique networking requirements, TCG users can choose from a number of private line services, including DSO, DS1 and DS3, as well as DS1E (which allows users to accommodate international traffic). TCG will also strive to meet a customer's needs by delivering other private line services or developing special applications.

TCG User Application	DS3	DS1	DSO
Definition and Features	A high-capacity service for users with high traffic volume between locations, including interexchange carriers and large businesses. Supports DS1 inputs up to 28 DS1s. Clear channel format optional; remote monitoring on alarms. Supports AMI or B8ZS coding of DS1s.	A mid-range service for companies with high volumes to multiple sites, to an IXC or to another high-volume location. Often chosen for LAN interconnections and corporate backbone networks. May be channelized or clear channel. Switch selectable AMI or B8ZS coding. Remote testing, continuous alarm, status and performance monitored. In addition, TCG offers DS1E service for international carriers whose networks operate at the European standard. The DS1E signal is 2.048 Mbps. All other features of DS1E service are identical to standard DS1.	Basic 2-wire, 4-wire and DDS* private line applications, including FX lines, Tie Trunks, Ringdown and "Hoot & Holler" circuits. Fractional and channelized DS1 locations also are provided. Compatible with all standard interfaces. Voice-grade channels are tested continuously for transmission path quality.
Capacity Level	Equivalent to 28 DS1s or 672 DS0s	1.544 Mbps (equivalent to 24 DS0 channels) 2.048 Mbps (DS1E)	Up to 24 DS0s per DS1
Availability	99.99+%	99.99+%	99.99+%
Transmission Rates	44.738 Mbps	1.544 Mbps 2.048 Mbps (DS1E)	2-wire, 4-wire 2.4 Kb - 56 Kb, 64 Kb, 128 Kb, 256 Kb

● Digital Data Service

megabits per second, supports **DS1** channels up to 45 Mbps, and can be subdivided into 672 DSO equivalent channels.

TCG's Mid-Range Service Includes A Selection Of DS1 Options. **OmniLinkSM DS1** service routes high-volume traffic to either your interexchange carrier's point-of-presence, or any other location of your choice. It is used effectively by corporations, **universities** and government agencies for their LAN interconnections and backbone networks. **DS1** options include:

- Standard **OmniLink DS 1** service which transmits at 1.544 megabits per second and can be divided into 24 **DS0** channels.
- **Fanout** DSI service which can aggregate up to 28 **DS1** channels from multiple locations into a single DS3 channel terminating in one location.
- **DSI E** service is a high-capacity, European- standard **DS1** channel, which transmits data at 2.048 Mbps. It eliminates the cost of electronic equipment needed to conform with European-standard countries.

Typical DSO Applications Include FX Lines, Tie Lines, PBX Connections and More.

DSO services meet the **needs** of customers with fighter volume of voice **and** data traffic and are offered in a variety of data rates below 1.544 megabits per second. **OmniLinkSM Voice Grade DSO** service (**2-wire and 4-wire**) is **available** on a digital or analog basis to interface with a variety of customer-premises equipment. **Typical** voice applications include:

~~• **Fronting** **Exchanging** **Lines** **and** **Tie** **Lines**.~~

- **Ringdown** circuits and "hoot and holler" circuits.

Digital Data Services are offered at transmission speeds of 2.4, 4.8, 9.6, 19.2, 56 and 64 **kilobits** per second. In addition, TCG provides Fractional **DS1** service in multiples of 56 and 64 **kilobits** per second up to 1.544 megabits per second. DSO choices from TCG include:

- Basic DSO Service which is a point-to-point DSO channel provided at any of the speeds specified above.
- **Fanout** DSO Service which allows a customer to aggregate up to 24 DSO channels terminating in one location. This service gives customers the control they need to more cost-effectively manage network growth and applications.
- Channelized **DS1** Service is a **DS1** circuit which terminates in a **DS1/DS0** channel bank at the customer's premises. A customer can terminate up to 24 **cus-**

OMNILINKSM SONET SERVICES

Product Facts

OMNILINKSM Sonet Services

Today's transport technology of choice for Information-Intensive Companies

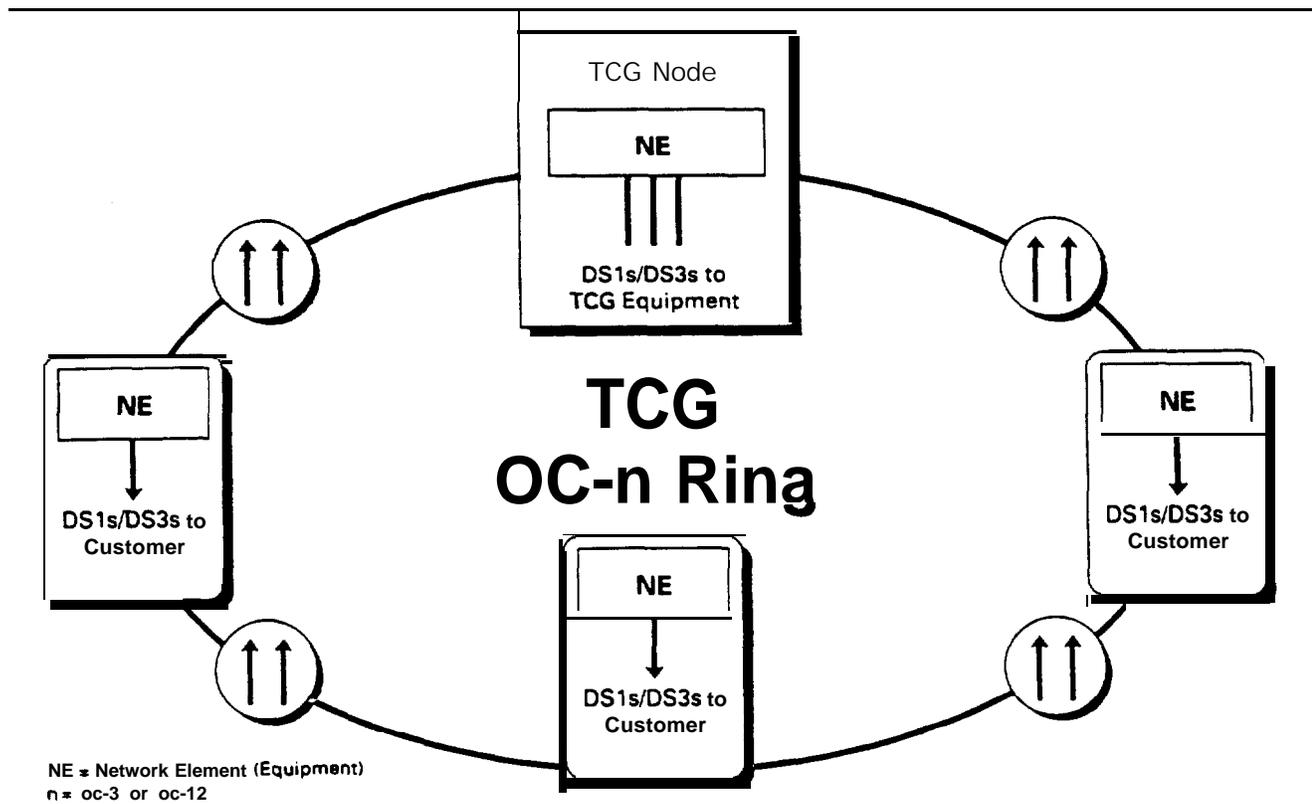
With its promise of increased network survivability, advanced architectures and centralized network monitoring and control capabilities, **SONET** is the smart choice for today's information-intensive companies. That's why TCG introduced **OMNILINK SONET Services**, a portfolio that consists of OC-3, OC-12 and OC-48 services, as well as linear OC-3c and OC-12c offerings.

Companies in many industries cannot afford the risk associated with downtime caused by such events as cable cuts and wire center/central office outages. This is why **SONET** increasingly is becoming their transmission medium of choice for point-to-point and ring architectures.

SONET promises to be the transmission mechanism of choice for tomorrow as well. It not only provides for the transport of existing DS3 and DS1 signals but also lays the foundation for future services as they become available.

SONET-based fiber transport and digital cross-connect systems provide robust architecture, allowing survivable high-speed transmissions on a **SONET** platform that will evolve with new and emerging technologies. Future upgrades will require only software changes.

OMNILINK SONET Services guarantee automatic restoration of services when a cable fails. Ring benefits include simplicity, flexibility, and fast restoration time. That's why more and more companies choose **OMNILINK SONET Services** as their best economic alternative to existing point-to-point asynchronous architecture.



TIME WARNER

Dedicated Services

Time Warner Communications' dedicated transport products are backed by a 100% SONET network. This fiber based platform is the most reliable and flexible means of supporting today's highly specialized and rapidly changing telecommunications requirements and technology. Time Warner's dedicated *services* provide customers of all sizes with sophisticated technology and the highest levels of reliability and performance in their networks.

Dedicated Transport Service

Time Warner's **customers** can choose from a variety of dedicated transport services that include the following:

DS3 - A dedicated high capacity duplex channel for customers with high traffic volumes between locations. The line speed of the service is 44.736 Mbps. This service can be used for a variety of applications that includes full motion video, medical data imaging, and video distance learning.

DS 1 - A dedicated high capacity duplex channel for customers with high traffic volumes between locations. The line speed of the service is 1.544 Mbps. This service can be used for a variety of voice, video, and data applications.

continued on other side



TIME WARNER
COMMUNICATIONS

120E. 23rd Street *New York, NY 10010
212 608 7200 - FAX 212 420 4004



DS0 -The basic building block in the digital hierarchy can be used for voice and/or dedicated lines at speeds from 2.4 Kbps up to 64 Kbps for a variety of applications. Time Warner also offers Voice Grade Service in either a two-wire or a four-wire configuration. An analog circuit termination is provided at customer designated locations that can be used for either voice or data transmission at speeds of up to 9.6 Kbps.

Because Time Warner understands that your dedicated transport needs are constantly changing, we've recruited experienced network design engineers to create custom solutions to address your specific requirements.





TOMORROW'S NETWORK TODAY

Time Warner Communications will complete network deployment in over twenty cities by mid-1995. These new *networks* will evolve to offer a dazzling array of services designed to meet your need for a state-of-the-art alternative that offers a broad spectrum of services across the nation.

100% FIBER OPTICS

Imagine 32,000 conversations transmitted at the speed of light along a flexible glass fiber the thickness of a human hair. Transmitted by lasers, not electricity, communications are virtually instantaneous. Carried by glass, not copper, transmissions are unaffected by water or electrical interference. Because the signals are digital, not analog, your communications have the clarity that only the most advanced technology can provide. These are but a few of the benefits our all-fiber-optic networks provide.

SONET TRANSMISSION

Our networks are designed and constructed using state-of-the-art Synchronous Optical Network (SONET) transmission standards.

SONET is the international standard for transporting telecommunications products and services of the future. It was designed to meet customers' increasing needs for broadband services, optical interface standards, timing systems and network monitoring. SONET provides the security that your telecommunications investment will not become obsolete.



**Time Warner/
US WEST
deal creates
an entirely
new type of
telecom
animal."**
— *Telephony*

SELF-HEALING ARCHITECTURE

Unlike conventional copper, hub and spoke networks, Time Warner Communications utilizes a network architecture comprised of self-healing rings to provide constant protection from a potential cable disaster. In the unlikely event of a cable cut or outage, the signal is automatically switched from the primary route to the backup route in a matter of milliseconds. This ensures virtually no interruption of your vital telecommunications traffic.

In addition, we provide backup systems in case of an electrical failure in the system or a power outage in your building. Battery backup is provided in your building to ensure a fail-safe network. Time Warner Communications stands behind its network quality by offering service guarantees.

QUALITY THROUGH SERVICE



NATIONAL OPERATIONS CENTER

Each of Time Warner Communications' networks are managed and controlled locally. In addition, they use the National Operations Center (NOC) to provide service support for customers throughout the United States. The NOC's adherence to national standards assures you the consistency, accuracy and quality of service that you expect.

Our **Customer** Interface Specialists and Network Analysts are your single **point** of contact for the following:

ORDERING SERVICE

Industry-standard Access Service Requests (ASR) or service orders may be sent electronically, faxed, mailed or even called into the NOC.

PROVISIONING

The NOC's comprehensive systems allow Network Analysts to quickly and accurately design circuits in response to your requests

BILLING

Your bill is provided in industry-standard format. Customer Interface Specialists can view all bills on-line for quicker, easier answers to your billing questions and assurance of billing accuracy.

MAINTENANCE

Network surveillance is performed 24 hours a day, seven days a week. SONET Network Management Systems alert Network Analysts of any problems so they may be responded to immediately. An 800 number is provided 24 hours a day for your convenience.

PERFORMANCE REPORTING

Customized performance reports for ordering, provisioning, billing and maintenance are available.

By centralizing these important functions, Time Warner Communications can assure you of the most consistent,

high-quality telecommunications services possible.



alliance...is with a partner that can bring significant advantages to the evolution of Time Warner's cable system...and underscores the... architectural advantage of cable systems... versus telephone systems, and the importance of the cable systems of the future.

—Goldman Sachs

MCIMETRO



MCI Local ServiceSM
From around the world
to around the corner.



Today, many companies need a local connection to a nationwide private line service or a local "on-ramp" to advanced voice, data and video services. MCI has a reliable option to meet your needs through our Dedicated Access Services.

Dedicated Access - DSO offers you a single 64 Kbps digital communications channel with the flexibility to operate in four modes, including voice-grade communications, voice-grade data transmissions, digital data service and clear channel digital service. DSO also gives your company the flexibility to utilize a wide variety of applications you'll need today and in the future.

Whether you require direct LAN access, direct data connections between terminal and host computers, connection to X.25 packet-switched services or simply off-premise extensions, MCI's Dedicated Access - DSO can make it happen.

Dedicated Access - DSI is the ideal local access option for both channelized and unchannelized services, from "simple" voice-grade communications to high-speed data streams for LAN inter-networking and mainframe connections.

If you have large or high volume needs, DSI is a T1 line with a 1.544 Mbps circuit that offers you a high capacity digital access. All over a single line. at affordable rates. It's also perfectly designed to function as a local access connection between your company and long distance carrier.

Channelized DS1 uses Time Division Multiplexing for up to 24 digital information channels, each supporting speeds up to 64 Kbps over a single access line. Each channel can be used separately to carry voice data or images, or combined for higher speed transmissions.

Unchannelized DS1 gives your company a single high capacity "pipe" to support high bandwidth applications into Frame Relay, LAN connectivity and high speed video conferencing as well as PBX digital trunking.

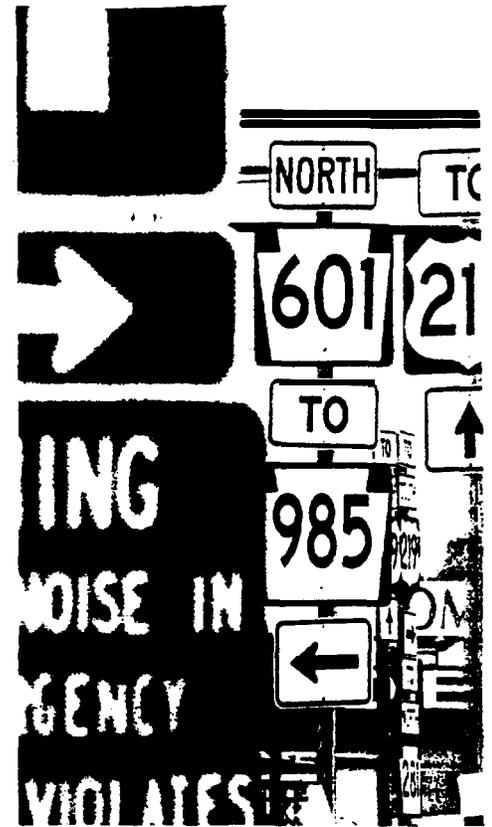
Dedicated Access - DS3 provides an end-to-end connectivity solution, no matter how large your communications needs may be or how sophisticated the application. DS3 runs high capacity digital communications through a 45 Mbps circuit (the equivalent of 28 DS1 circuits, or 672 DS0 64 Kbps channels) at less than half the cost.

Available in channelized or unchannelized configurations, DS3 is well suited for high bandwidth digital applications like Switched Multi-Megabit Data Services (SMDS), dedicated or virtual private line access to Asynchronous Transfer Mode (ATM) services, Frame Relay and full motion TV-quality video links.

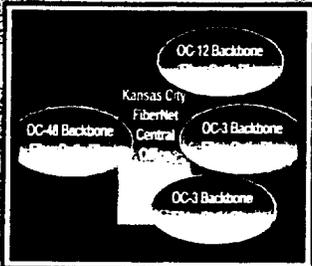
Dedicated Access - OC3 meets the needs of our largest business users for applications like full motion video, private voice and data networks, carrier-to-carrier super high capacity links and virtual private line access to ATM switches and services. With a bandwidth of 155.52 Mbps, OC3 provides the optical equivalent of three DS3 circuits or 2.016 DS0 channels.

Whether your company is a growing enterprise or one of the Fortune 500, MCI Local Service provides you with the options you need to optimize your local and long distance voice, data and video communications. MCI also provides you an affordable, reliable, integrated, end-to-end single vendor solution. A solution with innovative offerings that are unique even among the top telecommunications companies. And, a reputation for customer service and support that is unequalled in the industry.

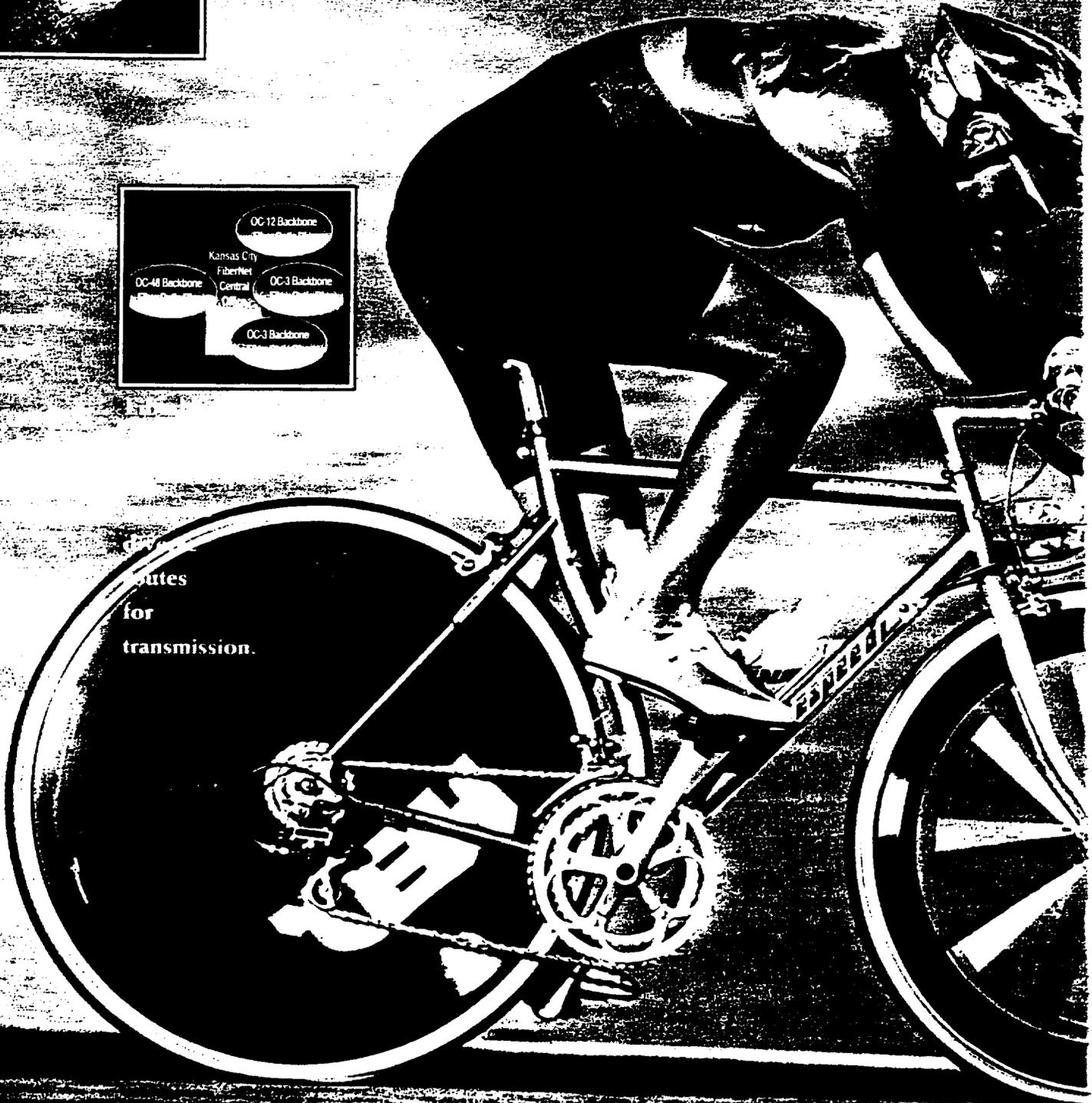
To find out more about how MCI Local Service can benefit your company, contact your MCI Account **Manager**. And please visit our web site at:
<http://www.mci.com>



KANSAS CITY FIBERNET



...
routes
for
transmission.





Technology

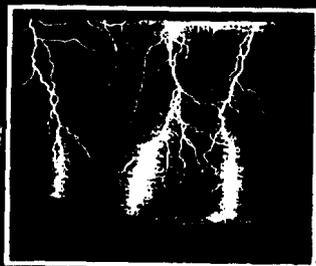
Today's telecommunications needs simply cannot be met by yesterday's technology. Kansas City FiberNet invests in the latest technology available and brings it directly to your business.

Our network – more than 200 miles of fiber-optic cable spanning the five-county Greater Kansas City area – is the foundation of our commitment to uncompromising technological excellence. There is no substitute for fiber-optic transmission. It provides unparalleled clarity of transmission, error-free performance, and tremendous capacity. This is the technology that revolutionized the long-distance market. Now it is doing the same for telecommunications.

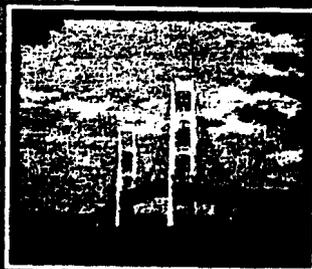
But fiber-optic transmission isn't enough. FiberNet is Kansas City's first network provider committed to an all-SONET network. SONET, which stands for Synchronous Optical Network, is a new international standard developed specially for fiber-optic networks. A network built to the SONET standard delivers more capacity for less money, and it does so with greater reliability than outmoded asynchronous transmission systems.

But FiberNet doesn't stop there. All network elements, from alarm systems to fire suppression systems to power systems, are of the highest quality. Primary components are backed up by redundant elements. Automated systems manage the entire network.

Although we have today's latest technology, we're always working to stay ahead of the competition. Our SONET-standard electronics and 100 percent fiber-optic network prepare FiberNet for new generations of technology – making possible



Our
fiber-optic
network
is
immune
to
degradation
caused
by
moisture
or
electrical
interference.



FiberNet
spans
the
outdated
technological
gulf
presented
by
industry
local
service
providers.



Reliability

Reliability is more than **great** technology and innovative work design. It is great network performance, excellent **customer** service, accurate and timely billing, quick response to service requests, and on-time installation. It requires constant attention to detail and a dedication to consistency and responsiveness. **Kansas City FiberNet's** reliability is why all the interexchange carriers (long-distance companies) trust **FiberNet**.

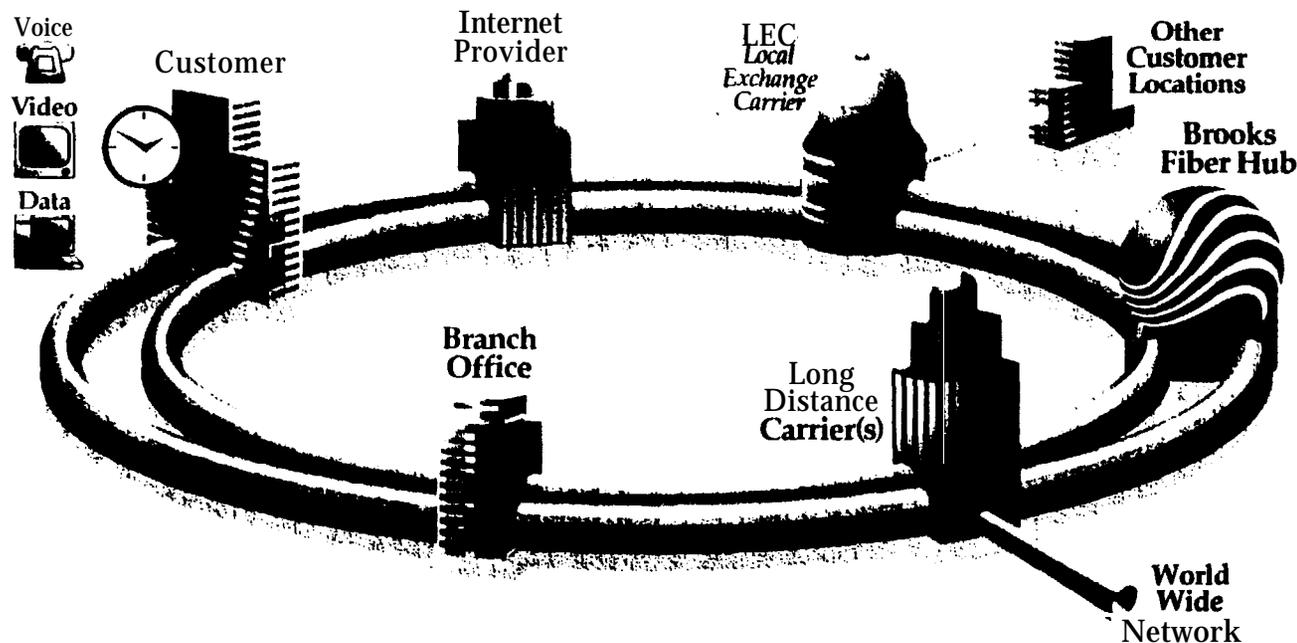
Interexchange carriers (**IXCs**) use **FiberNet's** high-speed **DS3** links as part of their backbone networks. The **DS3** links are routed over our **SONET-based** fiber network, giving **FiberNet** direct connectivity to all the major **IXCs** serving Kansas City.

IXCs demand error-free transmission of **data** signals. **FiberNet** delivers higher-than-ever quality with bit-error rates approaching zero. **IXCs** demand reliability. **FiberNet** delivers with an availability record that measures downtime in seconds per year rather than hours. And **IXCs** demand responsiveness. **FiberNet** shaves hours off of industry average repair intervals.

Many **IXCs** take advantage of **FiberNet's** automated systems for billing, ordering and service requests. **FiberNet** helps them eliminate many of the hassles often associated with managing their local access networks.

FiberNet is continually searching for new ways to meet the local access needs of **IXCs**. Through its collocation points with Bell, **FiberNet** can provide carriers with entrance facilities to the local phone network for both special- and switched-access traffic. The same demanding levels of reliability required by the **IXCs** make **FiberNet** the right solution for all sophisticated users.

BROOKS FIBER

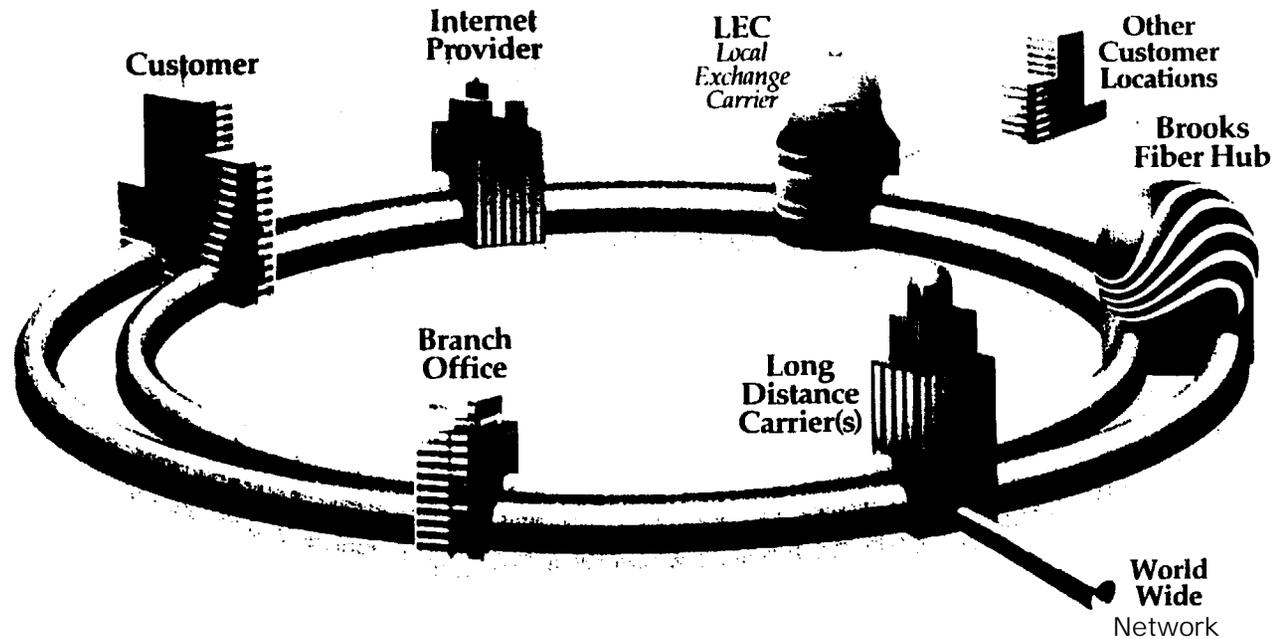


GATEWAY FLEX T™ is a flexible DS1 service that provides the user with contiguous bandwidth to two or more applications totaling from 128 Kbps to 1.54 Mbps. GATEWAY FLEX T is designed for use either by time of day or by need to allocate bandwidth among multiple applications. This service is an excellent choice when bandwidth requirements are variable with time of day.

GATEWAY FLEX T is designed for users who need the advantage of variable bandwidth without the expense of multiple dedicated circuit and expensive multiplexing equipment. GATEWAY FLEX T is ideal for many banks, insurance and brokerage houses, law firms, information service providers, data centers and government organizations.

FEATURES:

- 100 percent fiber-optic SONET-based backbone facilities
- Routing that is independent of the local telephone company
- 24-hour performance monitoring – seven days a week
- Bandwidth is varied by time of day or user controlled
- A variety of voice, data, and video interface is available



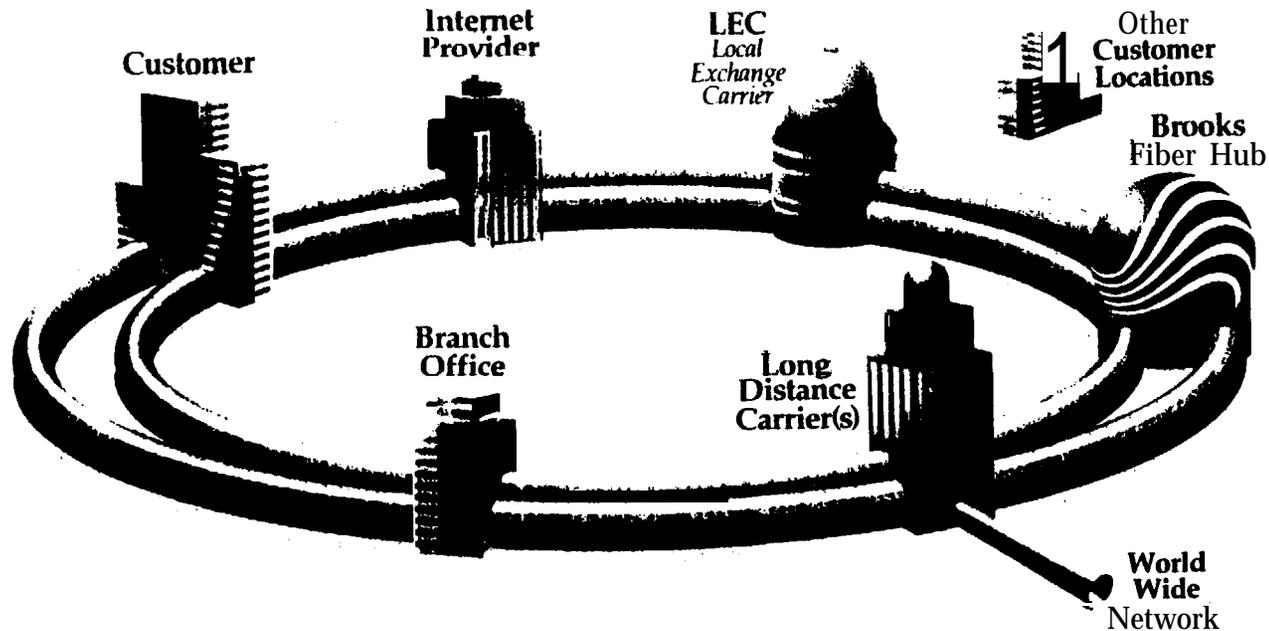
GATEWAY 1.5™ offers fiber reliability in a high capacity (1.544 Mbps) dedicated circuit. The GATEWAY 1.5 is provided as contiguous bandwidth. It is available in AMI or B8ZS (clear channel formats). Standard interface is DSX. Other interfaces are available.

GATEWAY 1.5 can be used by organizations which can take advantage of savings by using dedicated access for long-distance companies, with multiple office locations, and moderate speed data networking needs.

FEATURES:

- 100 percent fiber-optic SONET-based backbone facilities
- Routing that is independent of the local telephone company
- 24-hour performance monitoring – seven days a week
- Network redundancy

GATEWAY 45™



GATEWAY 45™ is a DS3 (45 Mbps) point-to-point service that is recommended for full-motion video, high-speed LAN-to-LAN connection, or other high-bandwidth applications. GATEWAY 45 is equivalent to 672 voice channels (DS0s) or 28 DS1 channels.

GATEWAY 45 is designed for users with high-capacity telecommunications requirements. The types of users that benefit from GATEWAY 45 include long-distance companies, businesses that need connectivity between branch sites or data centers, medical facilities and governmental organizations. GATEWAY 45 is also used for high-speed data and video services.

FEATURES:

- 100 percent fiber-optic SONET-based backbone facilities
- Routing that is independent of the local telephone company
- 24-hour performance monitoring – seven days a week
- Optional DACS (Digital Access Crossconnect System) service

FORBEARANCE

In the **NPRM**, the Commission asked whether high-capacity special access services should be removed from price cap regulation.¹ In addition, the Commission proposed to remove services **from tariff regulation** in areas where substantial competition is present.* Special access service not only should be removed **from** price cap regulation but also should be forborne **from** tariff regulation as well. In addition., the Commission should forbear **from** tariff regulation on dedicated transport to end offices and tandem offices, as well as on directory assistance, operator services and inter-exchange **services**.³

The 1996 Act provides for regulatory flexibility by requiring the Commission to forbear **from** applying any regulation or any provision of the Communications Act, to telecommunications carriers or telecommunications services, or classes thereof, if the Commission determines that, in any or some of its or their geographic markets:

- (1) enforcement of such regulation or provision is not necessary to ensure that the charges, practices, classifications or regulations by, for, or in connection with that telecommunications **carrier** or telecommunications service are just and reasonable, and are not unjustly or unreasonably **discriminatory**;
- (2) enforcement of such regulation or provision is not necessary for the protection of consumers; and
- (3) forbearance from applying such provision or regulation is consistent with the public interest.⁷

The first statutory requirement is that the Commission make a **determination** whether carriers could charge rates, or impose terms and conditions that violate Section 201 or 202 of the Communications **Act**.⁵ The Commission has concluded that the availability of close substitutes fostered market forces **that** will generally ensure that the rates, practices, and classifications of **interexchange** carriers are just and reasonable and not unjustly or **unreasonably** discriminatory.⁶

¹ **NPRM at 153**

² **NPRM at 149**

Carriers should be **allowed to continue to file tariffs** for **interexchange** services as advocated in **SBC Communications** inc. Comments filed January 28, 1997, with respect to AT&T's Petition for Reconsideration in CC Docket No. 9641.

⁴**10(a), 47 U.S.C. 160(a)**

⁵**AT&T Reclassification** Order, 11 FCC Rcd at 3305-07

⁶ Policy and Rules **Concerning the Interstate, Interexchange Marketplace**, CC Docket 96-61 page 14, adopted October 29, 1996