

“MFS [Datanet] has enabled us to provide our customers with highly robust, high-speed services.”

—John Sidgmore, President, UUNET Technologies, Inc.



*Albert L. Fenn, Jr., President
and Chief Executive Officer
MFS Datanet, Inc.*

Industry experts indicate that more than half of all business communication is data, not voice communication, and that the need to transmit data will continue to grow at a faster rate than the need for voice communications.

MFS Datanet's goal is to offer innovative methods of data communications that meet the evolving needs of business customers. MFS Datanet offers its services over an advanced, international ATM (asynchronous transfer mode) network.

MFS Datanet introduced the first national ATM network in 1993 and the first international ATM service in 1994. ATM technology is recognized by a growing number of carriers and customers as the fundamental technology for the future of data transmission. MFS Datanet's ATM network enables companies to send vast quantities of mixed voice, data and video information across town, throughout the nation or internationally at speeds exceeding other technologies. And, ATM makes it possible to send this “multimedia” information internationally as easily as sending it from one computer to another within the same office.

Lengthy transmission jobs that used to take hours now take minutes. For example, it used to take 30 minutes to transmit the contents of an annual report from New York to London. It now takes less than 40 seconds with the new MFS Datanet high-speed ATM network.

In 1994, MFS Datanet became the first carrier to provide Frame Relay services over an ATM network. This allows customers to get the best of both Frame Relay and ATM technologies at the same time. Using MFS Datanet's Frame Transport Service, customers can take advantage of the faster, less congested ATM network, while preserving their Frame Relay equipment investment. Additionally, as customers' applications and traffic requirements expand, they can move to ATM smoothly with no additional financial investment—because MFS Datanet provides the necessary equipment.

The ATM network has played a key role in a number of recent innovations that give some idea of the kinds of multimedia applications that are possible with ATM. For example, in 1994, MFS Datanet and the National Broadcasting Company (NBC) jointly announced the first LAN-based multimedia information service for the financial community. The service, which is called NBC Desktop Video, operates over MFS Datanet's ATM network and enables investment professionals to access critical financial news and market information instantly on their desktop computers. The service functions as a television channel for computers, providing video, audio and text in a format that can be accessed at a trader's workstation.

Recognizing the growing need for competitors to cooperate with each other for the customer's benefit, MFS Datanet signed an agreement with Southern New England Telephone last year to jointly offer advanced communications to Connecticut customers. Under the agreement, customers of both companies will now be able to work through their existing sales and service contracts and receive one bill for combined services.

The relationship allows the companies to focus their resources on the markets they serve best, while simplifying matters for customers seeking to extend local area networks across wide areas.

Similarly, in 1994, MFS Datanet entered into a “one-stop shop” agreement with Pacific Bell's Data Communications Group that allows the two companies to coordinate local and long-distance links for their customers' Frame Relay networks. Under the agreement, Pacific Bell provides the local network support for Frame Relay traffic within its service areas, while MFS Datanet provides the long-distance links using its ATM network.

Expanding its product offerings in 1994, MFS Datanet acquired Cylix Communications Corporation—a pioneer in providing wide area networking services especially suited for IBM systems. The IBM-based products offered by Cylix strategically fit into the MFS Datanet portfolio of services. Cylix's customers are also provided an easy migration to the most advanced data transfer technologies represented by ATM.

The Internet has clearly captured the imagination of the public, and to many is what comes to mind when they think of the Information Superhighway. MFS Datanet plays a major role in making the Internet available to users across the nation.

MFS Datanet is one of several companies selected by the National Science Foundation to operate the exchange points—or Network Access Points (NAPs)—through which traffic on the Internet must pass in order to move from one Network Service Provider's system to another. Currently, MFS Datanet manages the Metro Area Exchange (known as MAE East) in Washington, D.C. It is the oldest and most heavily used NAP, and it is estimated that nearly 50 percent of all Internet traffic nationally passes through this hub. MFS Datanet is scheduled to assist in the inauguration of a second NAP—MAE West—in San Jose, California, this spring.

MFS Datanet has customers throughout the United States and internationally, including major corporations, financial institutions and news agencies. Through its international ATM network and its role in providing critical infrastructure for the Internet, MFS Datanet has made itself a leader in global connectivity.

How the MFS International ATM Network Moves Information

To stay competitive in today's changing marketplace—where data now accounts for more than half of all business communications—more and more companies are faced with the challenge of transmitting heavy loads of digital information faster, more economically and more efficiently.

Thanks to asynchronous transfer mode (ATM) technology—a seamless, unified networking technology utilized by MFS Datanet—businesses can now communicate between local area networks (LANs) that are across town, across the nation or around the world... just as quickly and easily as they send data from one computer or LAN to another in the same office.

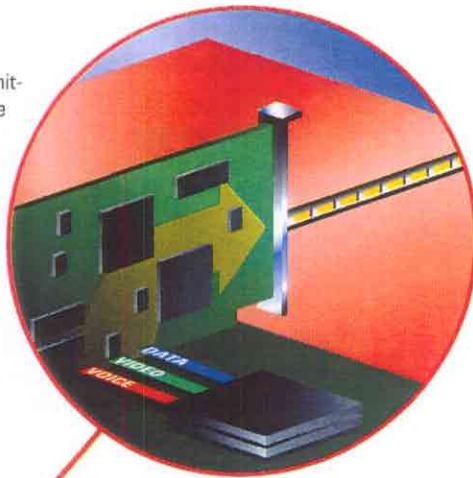
ATM is a packet-switching technique. These "packets" or bundles of information are of a uniform, short fixed-length and are called "cells." In fact, ATM is sometimes called Cell Relay. Each packet includes a

"header," which consists of the destination address and a set of instructions. Once the cells reach their destination, the header instructions provide the information to reassemble the data into its original format. Packet technology is not new. However, prior to ATM, older packet technologies were useful only for the transmission of computer data and only at slower speeds. Because of the short, fixed-length of ATM packets, ATM technology makes it possible to mix computer data with voice and video at very high speeds, thereby extending the benefits of packet switching to these multimedia applications.

Also, with ATM, the same circuit can now be used to carry data from many different sources simultaneously. Because many computers can share the same line, ATM makes better use of existing circuit space in providing access across town, across the nation or internationally.

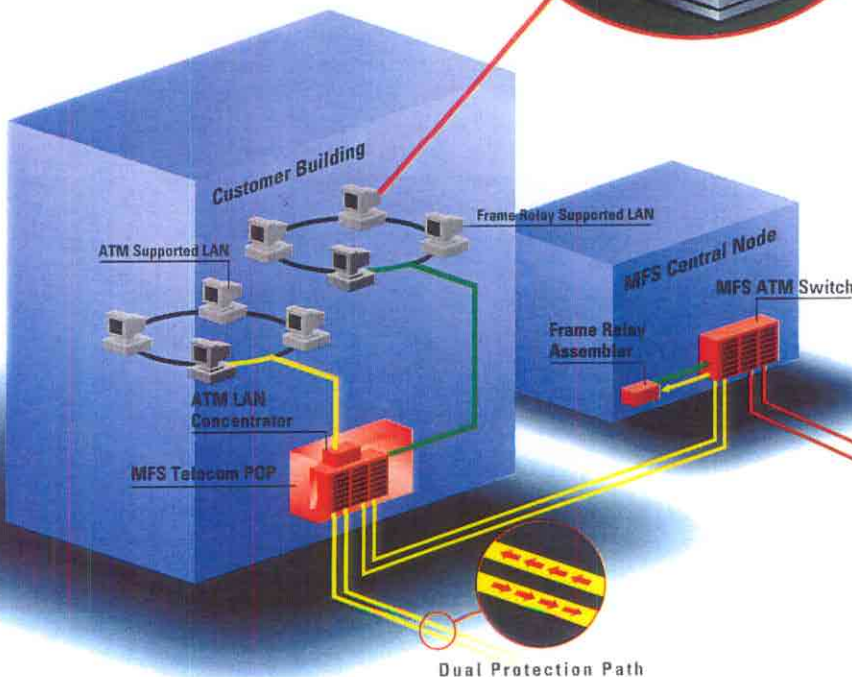
LAN-TO-LAN CONNECTIVITY—IT ALL STARTS IN YOUR PC

Inside your computer network, information is transmitted first as LAN packets, which are converted by the MFS LAN concentrator into ATM cells. Next, the data travels via two diverse or different paths on the MFS network to the switch in the MFS Node. There, the packets are directed to extremely fast ATM switches. These switches act as access points for replacing or interconnecting ATM packets with Frame Relay service and other protocols. One major advantage of the ATM network is that it can simultaneously handle uniformly-sized bundles to multiple addresses and specify different levels of service for different types of traffic.



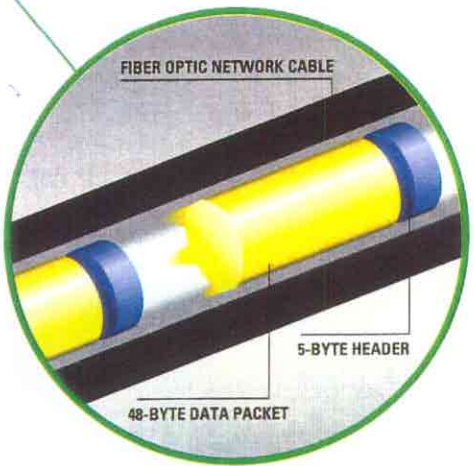
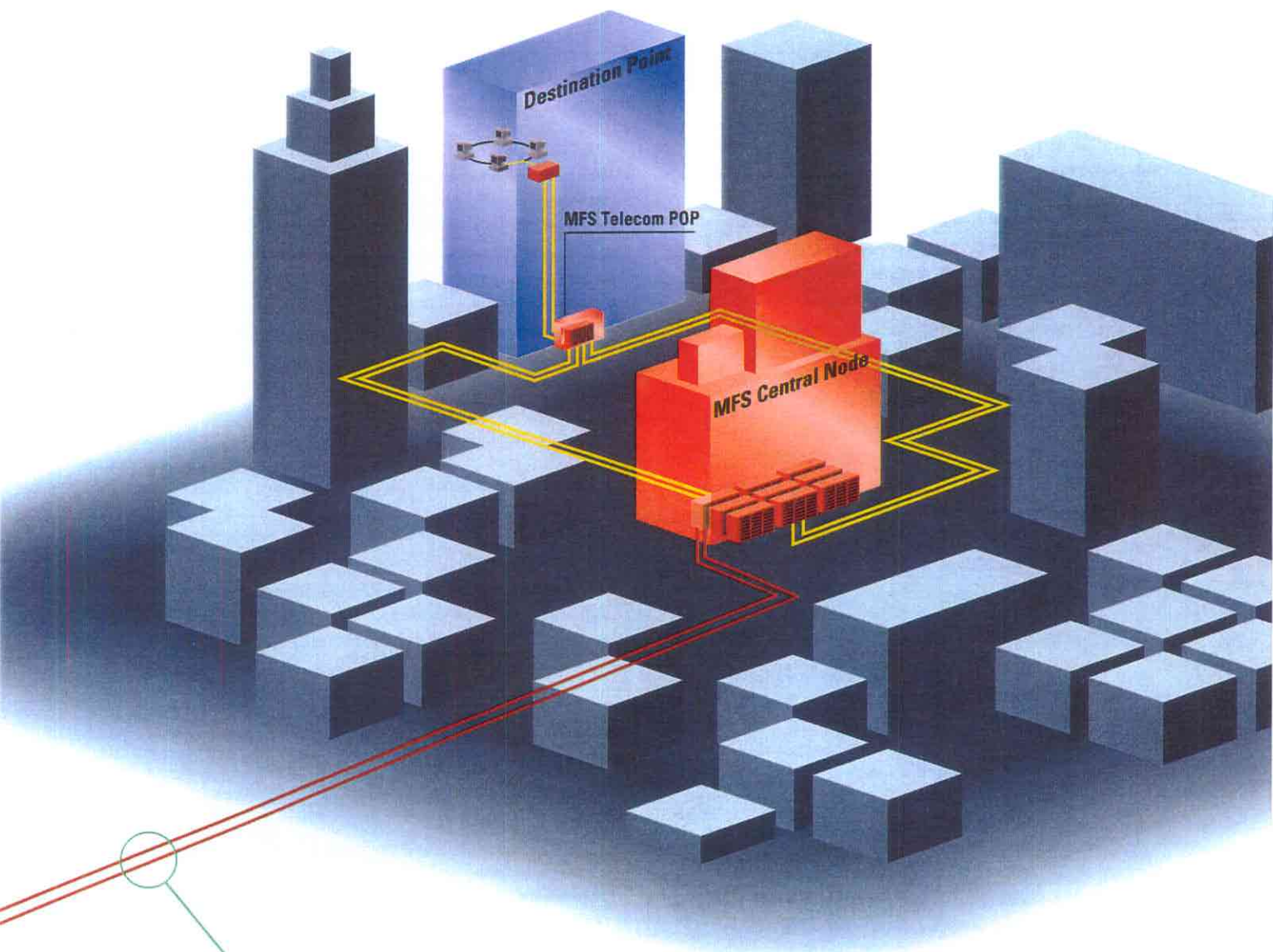
ACROSS TOWN OR AROUND THE GLOBE

Remarkably fast and powerful, the ATM switches on the MFS Datanet network route the cells of information to LANs on the same MFS network across town, across the country or internationally. If the packets are headed overseas, they travel by transatlantic fiber cable. In any case, when reaching the final destination, the cells travel to a concentrator inside the end-user's building, where they are reassembled into their original format. At this point, the data can easily be converted to any LAN protocol.



FRAME RELAY—THE FIRST STEP TO ATM

Many customers are equipped to use Frame Relay services and are not prepared to make the change to ATM at this time. While not having the speed of ATM technology, Frame Relay does offer significant efficiencies to these customers. Others are perplexed by new technologies and question whether this is the right time to move up to ATM. To help these customers, MFS Datanet became the first company to offer Frame Relay services over an ATM network. Like the ATM signal, Frame Relay packets are moved through the MFS system to the MFS Node, then through a piece of equipment known as an "assembler" where the signals are changed into ATM format. Transmission instructions in the ATM/Frame Relay Packet headers tell the receiving terminal to "reassemble" the signal into Frame Relay to match the receiving equipment's system requirements. When ready, customers using MFS' Frame Relay can move seamlessly to ATM.



CELL RELAY—IT'S JUST AS FAST AS BEING THERE

An ATM cell consists of 48 bytes of information—plus five bytes for the header that contains an address and other operating instructions. The header is comparable to the mailing address and zip code on an envelope. The system operates at speeds of 1.544 megabits per second to 1.2 gigabits per second. ATM technology is especially appealing to cost-conscious businesses because there is little up-front investment. All the necessary equipment is provided by MFS and literally “plugged” into the customer’s existing equipment. Price is based on usage. Customers use the service as much or as little as they need it.

HOW MFS WORKS

A Look at a Transatlantic Videoconference

On May 25, 1994, MFS unveiled its London network and international ATM connections. To demonstrate the versatility and capabilities of this international ATM link, a transatlantic videoconference was conducted using MFS fiber optic facilities, end-to-end. The videoconference originated in the London offices of MFS and the Washington offices of the Federal Communications Commission (FCC).

The videoconference featured Sir Bryan Carsberg, director general of fair trading for the United Kingdom in London; and Reed Hunt, chairman of the FCC, in Washington, D.C. They discussed the state of telecommunications competition around the globe.

Two demonstrations were conducted simultaneously using the same video connection, but separate transatlantic lines managed by MFS.

One demonstration used a compressed video system that resulted in images being shown on large projection video screens, allowing the audience members on both ends to see and hear the participants.

A second demonstration featured desktop video conferencing with the images being transmitted using the Ethernet LAN protocol—a standard computer technology designed for LAN-to-LAN communications. Participants on both ends of the videoconference were able to view the session—live—on their desktop computer systems.

