

Intelligent Systems  
for Enhanced Network  
Services

Timeplex

DDS-2

SONET

Fractional T-1

ISDN

Switched 56

T-3

SS7

E-1

## ***Introducing Timeplex: your strategic partner in provisioning tariffed and official services.***

*Today the marketplace for telecommunications services is more competitive than ever:*

- ☐ *New opportunities for generating revenue must be developed.*
- ☐ *Network operations require greater efficiency.*
- ☐ *Customers demand new services and expect them to be provisioned rapidly.*

*Timeplex can help.*

*Timeplex has 20 years of experience in serving carrier needs. Today we are the leading worldwide supplier of intelligent T-1/E-1, T-3 networking elements, and network management systems. These systems:*

- ☐ *Improve the efficiency and reliability of your internal networks*
- ☐ *Give you a competitive edge in provisioning new services*
- ☐ *Ensure the rapid deployment of the services and features your customers are demanding*
- ☐ *Raise and maintain customer satisfaction through improved service availability*
- ☐ *Reduce product lifecycle costs by 20 to 40 percent*
- ☐ *Help you increase revenues and profits.*



# Timeplex Intelligent Networking Systems quickly and efficiently connect your customers with the voice, data, and video services they require.

The LINK Integrated Connectivity System (ICS) is a family of intelligent networking devices designed to meet your service provisioning needs. The LINK family provides a full range of solutions, from cost-effective entry-level remote sites to major hubbing locations. All systems within the LINK family are fully compatible with one another.

**For the first time most of the functions your customers require can be accessed from a single intelligent network element.**

Right now, you need separate equipment for each service you provision. This means multiple network trouble points, high inventory costs, and difficult network management and control.

In the LINK ICS system, a single rack-mountable unit provides a full range of network services for provisioning. Voice, data, and image are integrated onto a single intelligent network element located in either your central office, the service feedpoint, or at the customers' premises. Software-programmable plug-in modules, each with the

capability of supporting multiple services, allow you to continually adjust service provisioning to meet your customers' total telecommunications requirements – quickly, efficiently, and cost-effectively. The ability to rapidly migrate special services into the tariff rate base can lead to significant added revenue.

## **Timeplex systems reduce your lifecycle costs.**

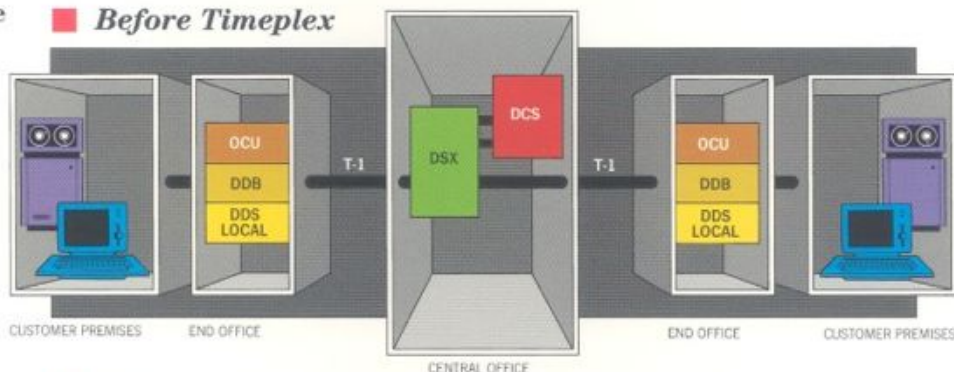
When you install LINK ICS, you reduce lifecycle costs because the multiple functions, built-in intelligence, and remote diagnostic capability make network service changes and maintenance easier and less costly. For example, reconfiguration and rerouting are software-controlled, eliminating the need to manually rewire connections.

## **Timeplex brings you the benefits of real T-3 networking.**

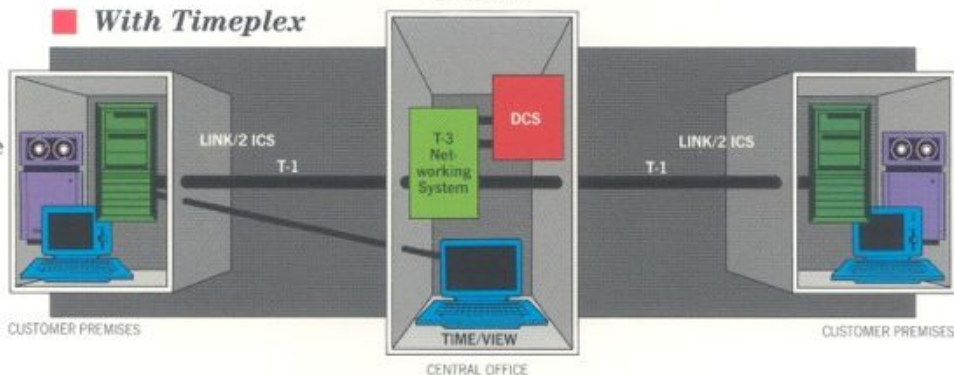
Timeplex brings the functionality and intelligence of the LINK ICS product family to the T-3 networking environment. Our industry-unique T-3 networking solution supports up to 10 T-3 lines or 196 T-1s with room for expansion. It combines T-3 and

### **Digital Networking Services Environment**

#### **Before Timeplex**



#### **With Timeplex**





T-1 crossconnections with the ability to add and/or drop T-1 channels. Since most sites of this type are unstaffed, the systems can also perform remotely controlled testing, monitoring and configuration operations.

Our T-3 solution offers all of these functions in a single system. As a result, it is much more cost-effective to purchase, install and maintain than traditional methods of supporting a small number of T-3s. Those methods entail buying M13 multiplexers, patch panels, DS1 or DS0 crossconnect systems, external monitoring, and test access equipment, and so on.

Here's an example of how much the Timeplex T-3 solution can save: four M13 multiplexers, with 28 T-1 channels each, feeding into a T-3 hub. With our T-3 system, you convert each set of four 28 T-1 circuits into one T-3 line. Timeplex's T-3 system terminates the T-3 signals directly, breaks them into their T-1 circuits and crossconnects them instantly in any combination. The installed cost is about 60% less than it would be with the M13s.

### **TIME/VIEW™ centralizes and simplifies network management, operation, and control.**

With LINK ICS and TIME/VIEW, our Unified Network Management System, your entire network can be configured and controlled from user-friendly terminals at central locations. Network alarms and commands can be customized by the user to provide a high level of automated response.

Using Bellcore-endorsed OSI Network Management protocols, TIME/VIEW provides interfaces to other network management systems and can communicate with such products as AT&T's Unified Network Management Architecture\*, DEC's Enterprise Management Architecture\*, and IBM's NetView\*.

### **Network partitioning enhances customer service and increases carrier revenue.**

TIME/VIEW allows you to partition your network by subnetwork node, device, port, or domain. By doing so, you can give your customers end-to-end performance monitoring, enhanced diagnostic capability, and the ability to reconfigure circuits and channels. This not only provides your customers with the degree of control they desire but also serves as an added source of revenue for you as well.

### **Timeplex protects your current network from obsolescence – today and tomorrow.**

All Timeplex equipment and systems are designed in accordance with our Systems Connectivity Architecture (SCA), a key tenet of which is our commitment to standards. This carries over to the Open Network Architecture (ONA) mandated by Computer Inquiry III for Information

Services. Timeplex is committed to supporting existing and evolving standards such as OSI, ISDN, and SONET and is an active participant in the standards development process.

By adhering to national and international standards, Timeplex achieves a "drop-in" technology that ensures compatibility with the existing services and equipment you now deploy. In fact, Timeplex technology is complementary to your embedded base, bringing the benefits of enhanced intelligence and functionality to your network mix.

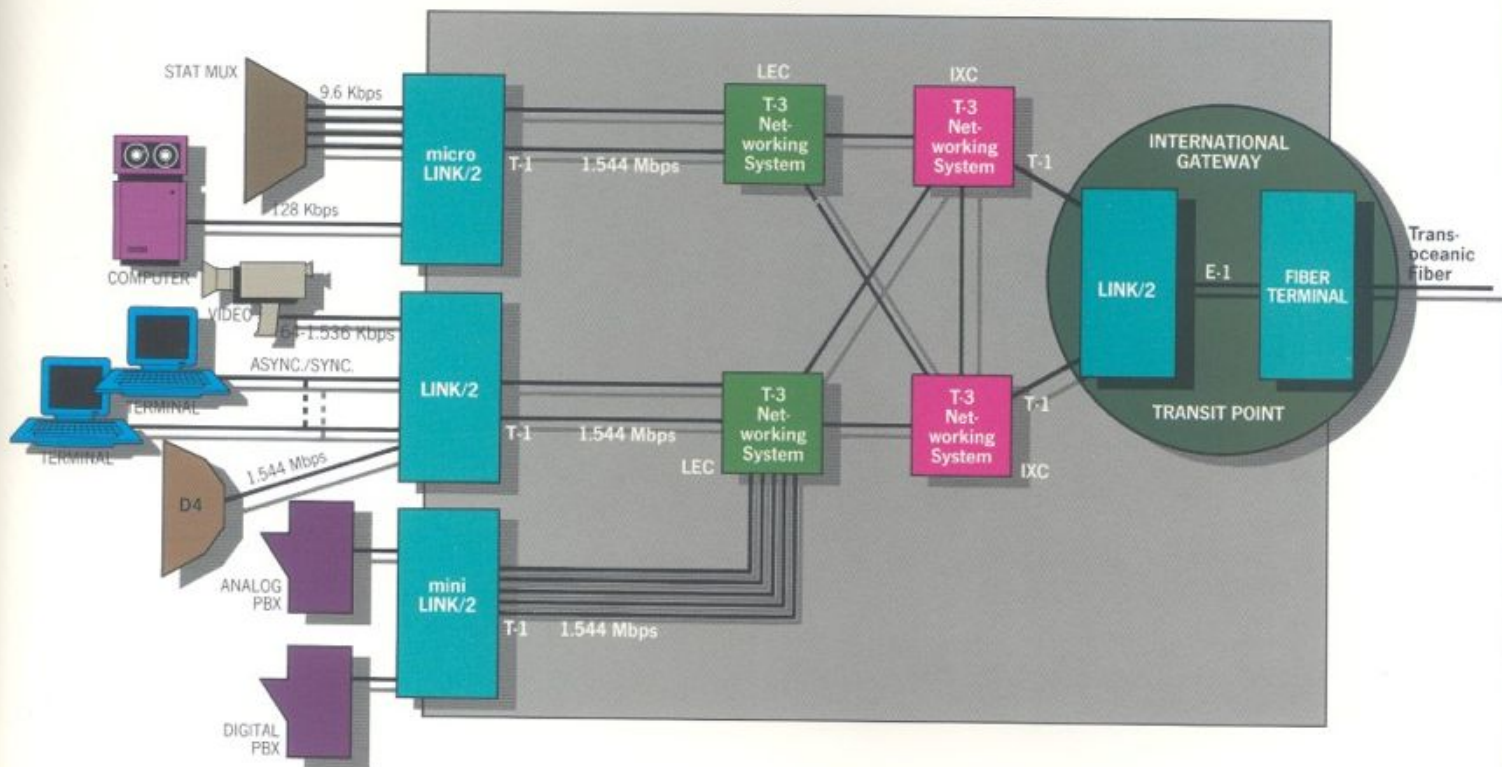
### **A "migratable" platform**

Timeplex's unique Systems Connectivity Architecture assures a smooth and easily manageable migration from the Timeplex equipment you implement today to the products and services you add tomorrow. In fact, many of our early systems are still in use and are now providing the latest feature/function sets.





## Intelligent Service Access



**Modular design and "soft provisioning" enable rapid deployment of new services.**

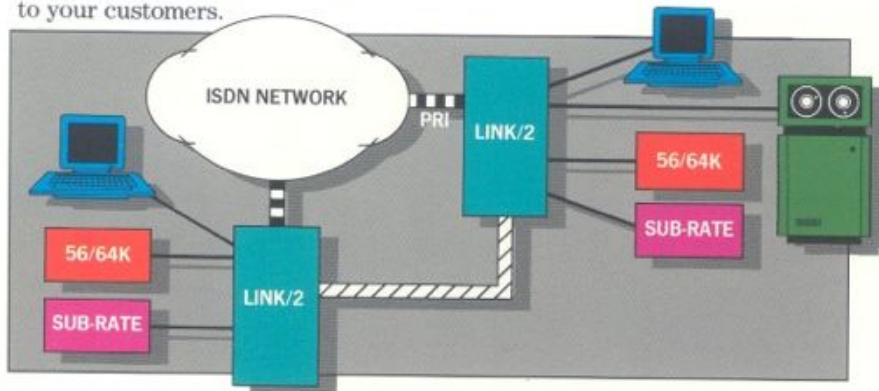
Another advantage of our modular and software-programmable design is that new services can be turned up rapidly as demand dictates. This enables you to bring your customers the latest offerings of DDS, digital private line services, DDS-2, and other enhanced systems and services like ISDN. In addition, LINK ICS, with its channelized services processor, allows you to provision new fractional T-1 services to your customers.

**Timeplex technology ensures network survivability.**

Timeplex provides node-resident intelligence for reliable, round-the-clock access to network products and services. Key features such as built-in redundancy, data base backup, and automatic alternate routing and reconfiguration allow us to provide an average system availability of 99.8 percent in our ever-expanding user base of 2,600 organizations worldwide.

Timeplex's proven system availability is why carriers worldwide count on our equipment to handle their most critical applications, including Billing Data Collection, Signaling System 7, Emergency 911, Calling-card verification, and Business Office operations. They know that if a circuit or network element goes down, they can depend on Timeplex, because the Timeplex intelligent network node automatically reroutes the flow of traffic quickly to keep the network up and running. In fact, most service outages in Timeplex-based networks recover automatically without operator intervention.

In one instance of multiple facility outage, over 200 SS7 control channels were restored automatically in approximately three minutes. A follow-up study showed that, based on the traditional methods of remapping crossconnects and manually patching channels, it would have taken a non-Timeplex network seven hours to restore service.



## ISDN Gateway for Services Access, Signaling Conversion, and Number Conversion



Timeplex has the technology, resources, and products to support your service provisioning requirements into the 1990s... and beyond.

#### A leader in standards development

Timeplex is an active participant in standards development through such organizations as the Exchange Carrier Standards Association, ANSI T-1 Committees, CCITT, Corporation for Open Systems, and is a founding member of the OSI Network Management Forum.

#### An organization dedicated to serving you, the carrier

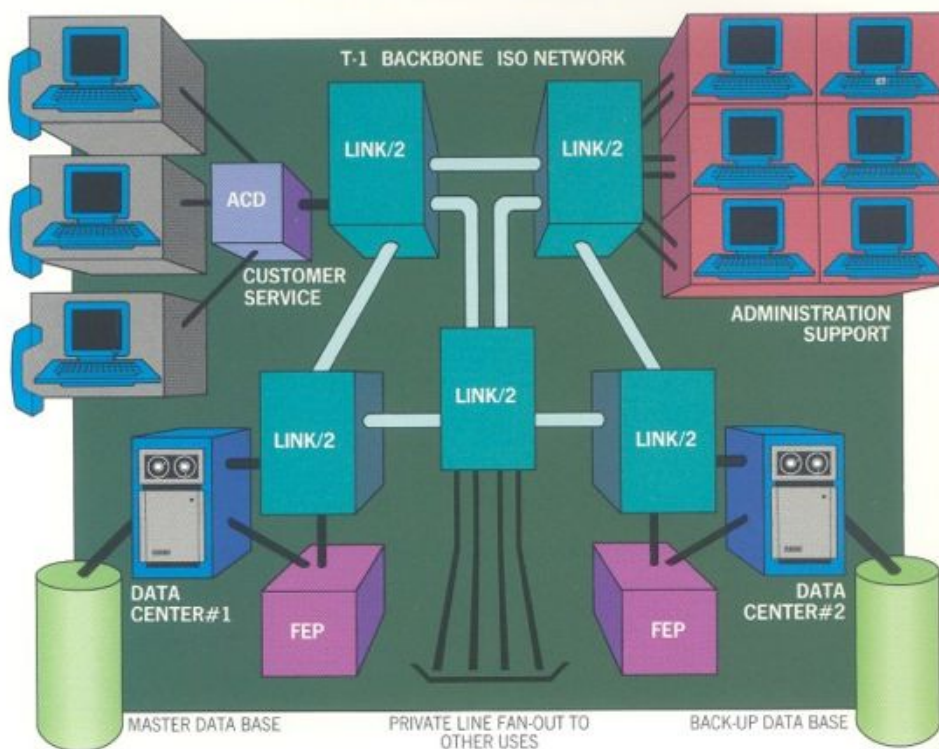
Timeplex has management, sales, marketing, and product development teams dedicated to serving the carrier marketplace. While other vendors focus only on the end-user, Timeplex has dedicated resources in place to meet your requirements and to solve your most pressing problems.

#### 20 years of experience and expertise

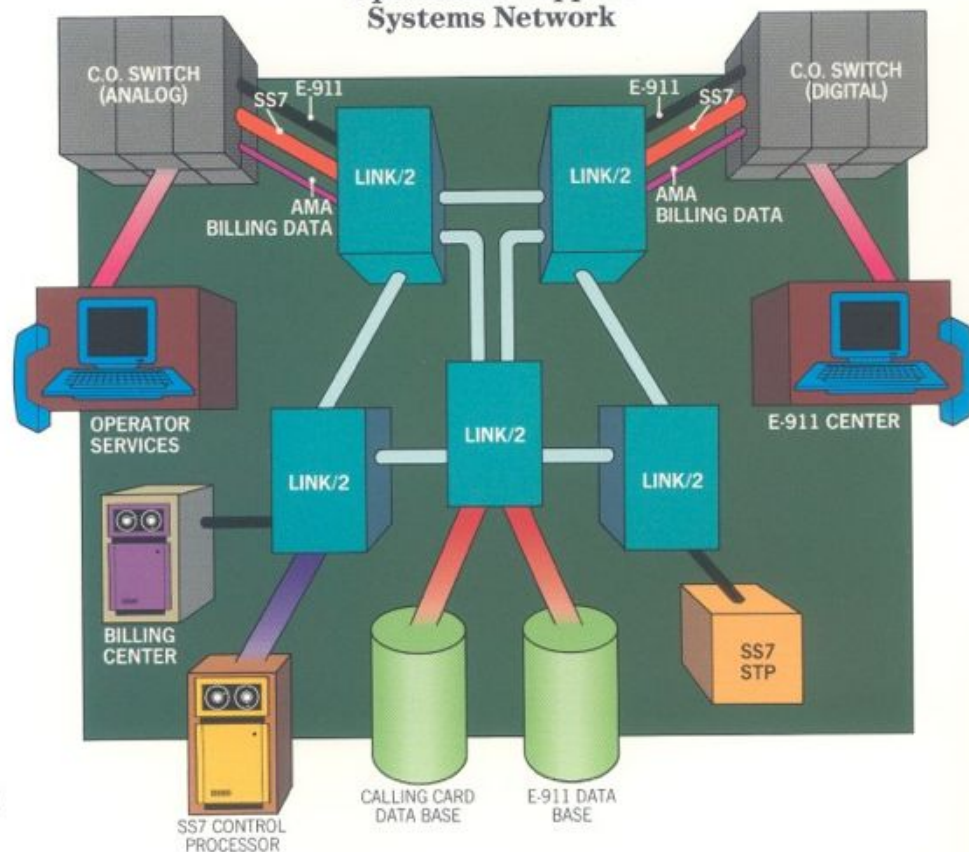
Timeplex has been a market leader in voice, data, and image communications for 20 years. Our customer base consists of more than 2,600 organizations and 8,000 systems worldwide. In fact, Timeplex is the *only* vendor of T-1 and packet switching equipment with proven ability to develop and support networks of more than 100 nodes... including a 150+ node network in a major U.S. Regional Bell Operating Company.

Timeplex is a proven vendor to telecommunications service providers. Six of the seven U.S. Regional Bell Operating Companies use Timeplex equipment, as do all Canadian carriers, the major U.S. interexchange carriers, 15 telecommunications administrations (PTTs) worldwide, and all the major international record carriers.

### Internal Communications Network



### Operations Support Systems Network





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**Timeplex is part of the Unisys team.**

Timeplex is a vertically integrated subsidiary of Unisys, a world leader in information services. Timeplex will be here to help support your network requirements over the long haul.

**A full-service vendor**

Timeplex provides everything you need, from planning and network design, to installation, maintenance, and training. What's more, Timeplex manufacturing and software development procedures are backed by a fully documented Quality Assurance program which has been reviewed and certified by Bellcore.

**Training makes you the master of your network.**

Timeplex offers a complete schedule of comprehensive training programs. Classes are held at our modern training centers in Clearwater, Florida; Langley, England; and Toronto, Canada; and also at Timeplex regional offices and customer sites. Timeplex conducts more than 4,500 student-weeks of classes per year in all phases of network operations, design, maintenance, and engineering – for students ranging from novices to seasoned professionals.

**Round-the-clock support**

Timeplex's Field Service organization is the most respected in the communications networking industry. Field Engineers staff Timeplex Technical Assistance Centers (TACs) in the U.S., U.K., and Canada round-the-clock to help customers with network fault isolation or configuration programming. For customers with dial-up capability, TACs can connect directly to their networks for immediate diagnostics, and more

than 40 percent of problems are resolved over the phone. Average problem resolution time from the initial call is less than 20 minutes. Timeplex offers a wide range of service options which can be customized to meet your specific needs – including ComWatch, a remote monitoring and diagnostic capability that allows our technical experts to assist your operations staff.

**Worldwide presence**

Timeplex equipment is installed in 70 countries on six continents. LINK systems, for example, are compatible with all major North American and CCITT international standards and are type-accepted in 40 countries and PTT-certified in 24 countries, everywhere in the world digital service exists. LINK ICS also provide such features as NTT framing (Japan), ESF framing (U.S. and Canada), DPNSS PABX-to-PABX signaling (U.K.), and integrated A-law (Europe) to  $\mu$ -law (U.S.) encoding and conversion.

## *The next step*

*For more information, call the Timeplex representative in your area or contact Timeplex, Inc., 400 Chestnut Ridge Road, Woodcliff Lake, NJ, 07675 (201) 930-4600.*



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