Give us a chance to change your world

A Monopolist

You have decided to become a CLEC

You have decided to go head to head against some of the most entrenched monopolies in the world. These entrenched monopolies have enormous cash flows, recognized brand names and long relationships with the regulatory bodies that govern the industry. Virtually all the customers are taken. To succeed you have to take customers away from companies that have provided service to these customers forever. To serve the customers that you do manage to take away, you must build your own network and connect it to the public network under the terms of an interconnect agreement that you must negotiate with the same monopolies from which you took the customers. Or, of course, you could rent facilities from your monopoly competitor and be totally dependent upon your competitor for service to your new (and their former) customer. You are going to undertake all this probably with limited capital and with whatever experience you have mustered to date in the telephone business. You have decided to become a CLEC.

Are you crazy?

Of course you're not crazy. You know that monopolies are not efficient. You know that they are overstaffed and slow to react. You know their moss-bound procedures and policies are meant to preserve the status quo and not give their customers the best choices possible. You can see that the current pricing has little relationship to cost. You know that they often treat their customers with scorn and that the service that they provide can be terrible. You know that these monopolies had to be dragged kicking and screaming into today's telephone environment and that their hearts are not into making the changes they should. You know that monopolies have never embraced cutting edge technology.

So how are you going to do it?

First, you know that you are going to avoid like the plaque using the monopolies' facilities. Thirty minutes with the resale tariffs is enough to dispel any such notion. Why would you hold yourself hostage to their systems, their procedures and their workers, especially at those prices? You won't.

You have to build your own network, but what kind? You know one thing for sure, you cannot beat the monopolists playing their game. You have to be all the things that they are not – responsive, cost effective, efficient and dedicated to each and every customer. Your entire strategy will be to differentiate yourself from your monopolistic competitor in order to attract the type and number of customers that you want. They have to serve anyone and everyone. You don't want to serve everyone and have no obligation to do so. It boils down to the fact that you are not in the same business that they are. Since you are not in the same business as the monopolists and don't want to be, you do not have to conduct your business the same way.

You certainly should not build a network that works like theirs. If you have the same network design, you will have the same cost structure. Aren't you trying to be more cost effective as well as better?

If you started with the idea of a couple of places to put your switches and sift through the three or four manufacturers and try to decide the best ways to get dial tone to your prospective customers, then you are going down the road the Bell System traveled in the 1940's. The big boys of switching can show you all kinds of ways to design a centralized system. They should know because they sat with the telephone companies for 100 years working the problem and setting the rules. They can even make it appear that the centralized switches are distributed with their remote modules and line carrier systems that connect to the brains at the Central Office. They might even convince you that switching topology they use is modern rather than twenty or thirty years old. Your costs will be high (or higher since you don't have the monopolies' buying power) as your competitors' and you will be tied to the same or similar OSS that he uses.

As long as the monopolists maintain the pricing anomalies and the government decides it likes more "competition" you might be all right – for a while.

If you start designing your network by defining the location and the size and the specific needs of your target customers, then you are well positioned to design a network than can differentiate you from the LEC and can make you money.

Start with a blank piece of paper.

You need to connect your customer to some device that will bring him into your network. If this device operated in a normal office environment and was smaller than a standard refrigerator then you could put that device very near the customer and eliminate long cable runs. You could install the device in a matter of days and you could even relocate and reuse the device if necessary. If the device were modular and completely scalable, then you could deploy your network while matching capital expenditures directly to revenue. If even the smallest module of the device could stand alone as a full telephone end office or tandem with complete connectability to the Public Switching Network, you could minimize your connectivity issues and costs. If the device had user friendly menu and GUI interfaces, you could quickly and inexpensively tailor your network to the needs of your individual customers. If the device's capabilities came from software rather than hardware, you could gain enormous flexibility over the design of your network and be able to reconfigure your network on demand. If the software was itself modular and was optimized solely for telecommunications applications, you would be certain that you would be able to provide additional features and functionality to your customers with no disruption to the network.

In short, if you could find such devices, you could build your network to meet your business goals.

If you want to build the same networks as the Local Exchange Carriers build, then you should buy switches from the companies that grew up with those monopolies. You will be playing telephone company by their monopoly rules. If you want to build a network in harmony with the freedom of today's marketplace and the power and flexibility of today's marketplace and the power and flexibility of today's technology, then you must talk to us.

What is a monopolist telephone network?

Its primary characteristic is that it centralizes intelligence and functionality, The centerpiece of the United States' telephone system is the "Central Office." Whatever intelligence exists in the local telephone exchange (and there is surprisingly little) exists within this building.

The reasons that the Central Office structure was embedded in network design were good ones at the time the topology was constructed. Almost all Central Offices were conceived and constructed in the days of electromechanical switching. Given the large size and the considerable degree of attention that these switches demanded, the only logical approach to telephone network design was to minimize the number of switching points and therefore centralize switching functionality. Even today the monopolists place their switching equipment in Central Offices and connect that equipment to the subscribers within the Central Office boundaries by means of cable and wire. As we approach the 21st Century, those 1940's and 50's and 60's reasons for centralized switching no longer exist.

This is the age of microelectronics and microprocessors and software. Why should we build the same network our grandfathers would have built? The monopolists have no choice. Their huge embedded costs in cable and wire homing on those central offices have tied them to this topology.

You have no such investment. You are a CLEC. You are free.

What kind of network should you build?

You must build a network that supports your business goals, one that meets your needs and those of your customers. Each CLEC will be different but there are commonalties.
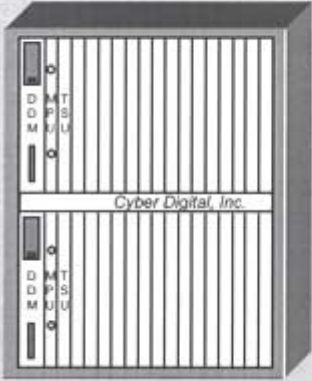
- You want to use your capital effectively (put investment where it produces revenues) and efficiently (most plant for the buck).

- You want your network to be re-deployable. Forecasts are not perfect. Customers can be fickle.

- You want your network to fit each of your specific customer's needs, not the needs of someone's idea of an average customer.

- You want your network to be designed simply and quickly without armies of engineers.

- You want additions to your network to be completed in the short time frames demanded by the marketplace.

- You want the network architecture to be flexible in order to minimize interconnection costs.

- You want your network to take advantage of today's technology in transmission, in switching and in software and be positioned to take advantage of tomorrow's ADVANCES.

It's your vision, it's your company, it's your business plan and it's your strategy. It better be your idea of a network – and not your competitor's idea and certainly not Granddad's.

We are Cyber Digital.

Cyber Digital offers a full array of distributed digital switching systems that are ideally suited for the deregulated telecommunications market. Cyber Digital's products enable you to build your network by your rules. We design, develop, manufacture, market and service a full array of software controlled digital voice and data switching systems based on our proprietary operating system.


Your Network Building Block

Single Node

- 512 Time Slots (Ports)
- 30 Universal Card Slots
- Fully Redundant Common Control

Line and Trunk Cards
- VIU - 16 Port Analog Lines
- DVU - 8 Port ISDN Lines
- T1U - 2 T1s (48 Channels)
- VTU - 8 Port Analog Trunk

The hardware building block of each system is a 512 time-slot node that can be configured for voice and data services to subscribers or for trunk ports connecting to the public switched network or to other nodes. Each node has a non-blocking switch matrix providing 36 CCS of traffic capacity per port. Universal card slot shelves allow printed circuit boards that provide trunk and line circuits to be installed in any physical slot. Full redundancy is available for all common control and power back-up systems.
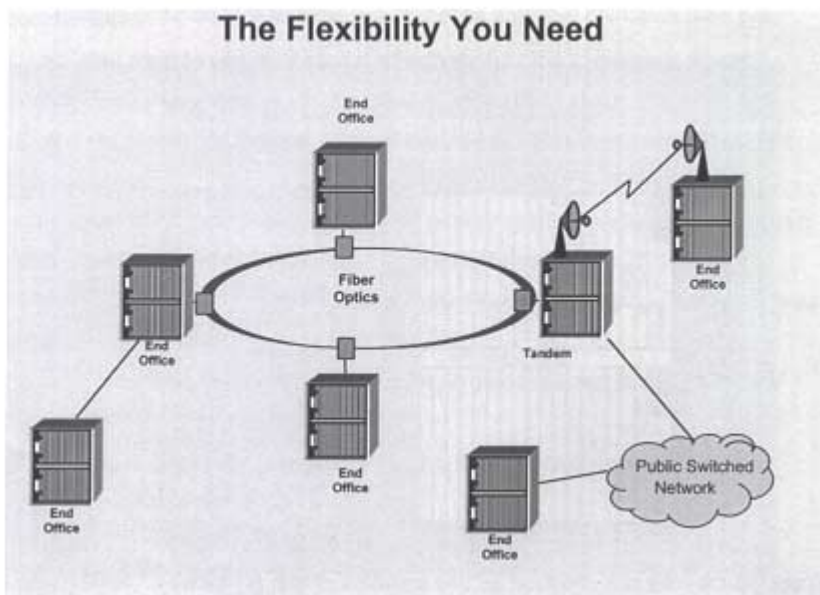
Any number of nodes can be interconnected via standard T-1 circuits to provide the required number of ports and the required traffic capacity for any configuration. Nodes may be end offices, tandems or a combination depending on the software loaded. The Generic Operating System permits changes to the functionality of the system by using different software while keeping the same common hardware.

Cybermesh software enables all nodes connected in a mesh network to form an autonomous hardware and software entity that not only sends and receives its own traffic, nut also routes the traffic of other nodes. Nodes can be placed close to your customer thereby eliminating the costs and lengthy provisioning intervals associated with infrastructure cabling. Cyber Digital's modular hardware design permits you to deploy and quickly configure our systems, allowing you to respond to customer demand while conserving your capital.

We are Cyber Digital.

Cyber Digital's products give you the ultimate flexibility you require to design the network you need and to build that network with less capital. At Cyber Digital, we are focused on solutions to our customers' problems. All of our research and development efforts are driven to meet your needs and those of your customers. We understand the competitive marketplace. We want to work with you to solve your business and network problems.

Give us a chance to change your world.