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# Competitive Local Exchange Carriers (CLECs) … Charging Forward

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Service diversification is the trend in the service provider industry. Just witness AT&T's cable acquisitions so that it can combine its phone, internet and cable services in an all encompassing communications services package. And, it's not just the "big boys" who are expanding their services portfolio through mergers and acquisitions. Providers of all sizes are joining the movement to capitalize on the belief that bundled solutions are the key to success. CLECs are buying Internet Service Providers (ISPs) and vice versa so that CLECs can provide Internet solutions and ISPs can offer voice services. Soon, there may not be any difference between a CLEC, an ISP, or an Interexchange Carrier (IXC). However, it is important to know the history of CLECs so that you can understand the challenges they face now and where they are going in the future.

## Market Overview

## History

In 1996, the U.S. Telecommunications Act removed the financial barriers that had kept the local telephone market safe from outside competition, spurring the creation of many Competitive Local Exchange Carriers, or "CLECs." Prior to the Act, any company that wanted to compete with the Incumbent Local Exchange Carriers (ILECs) would need to lay down their own wiring infrastructure to provide it, a very expensive proposition.

CLECs are, by definition, new entrants into the local market for telephone services that directly compete with ILECs. CLECs must differentiate themselves to attract customers who are currently serviced by the ILECs. It is for this reason that CLECs are a diverse group. The approaches and technologies may vary, but the goal is to control the "last mile" access to customers – whether business or residential. No one profile can describe all of them. For that reason, the following material in this white paper defines some of the general categories and strategies of CLECs today.

## CLEC Types

### Traditional CLECs

Currently more than 1,000 CLECs are registered in the United States. However, only a small group of those CLECs is producing the majority of the revenue.

The majority of CLECs enter the market by either re-selling unbundled LEC services or building a local access network, partnering with another carrier for long distance services and negotiating interconnection agreements with the LEC. As a result, CLECs concentrate their initial offerings on traditional telephony services – voice and private line.

As traditional CLECs evolve, they concentrate on expanding their geographic coverage or range of integrated data services – most often Internet or Internet Protocol (IP) services – to become more like the "full service" carriers.

### Data or DSL CLECs

Digital Subscriber Line (DSL) is a means of carrying high-speed data (and now voice) over standard four-conductor, twisted-pair copper wire that is installed in homes and businesses throughout most of the industrialized world. There are a number of competing types of DSL technologies that offer varying speed and distance characteristics.

The promise of DSL technology is greater speed at cheaper rates than current T1 offerings. With local T1 rates hovering in the neighborhood of $500/month, average DSL pricing (including Internet access) runs between $60 and $110/month.

Among the market leaders seizing the DSL market are Covad, Northpoint, and Rhythms. All three have adopted a strategy of negotiating with the LECs for access to unbundled copper loops and network interconnection. They then create facilities within the specific Local Access Transport Areas (LATAs) and wholesale DSL solutions to ISPs, traditional CLECs and/or other telecommunications providers (bandwidth barons, IXCs).

**Covad Communications**

Covad (Cupertino, CA) rolled out initial DSL services in December 1997. Covad sells only to ISPs and corporations that require high-speed remote access nationwide.

**Northpoint Communications**

Northpoint's co-locates only single-line DSL equipment – and therefore supplies only symmetrical services. In symmetrical services, the upstream and downstream flows carry the same volume of data at the same speed. Northpoint offers services in San Francisco, Boston, and eight other cities. Northpoint plans to offer services in 30 cities by 2002.

**Rhythms NetConnection**

Rhythms (Englewood, CO) offers wide area network connectivity along with DSL access services. Rhythms has struck co-location agreements with LECs in San Diego and San Francisco and offers Asymmetric Digital Subscriber Line (ADSL) access services through ISPs and other resellers. Los Angeles and Orange County were added in 1998. Rhythms also has offerings in Chicago, New York, Boston, Philadelphia and Washington DC.

These CLECs, which occupy a highly competitive space, are well funded, data oriented, and moving quickly to capture and retain market share.

### Wireless CLECs

Companies such as WinStar are looking to bypass the traditional infrastructure of thousands of miles of telephone lines in favor of using Local Multipoint Distribution System (LMDS) radio towers to transmit voice (and data) over the air waves. These companies tend to rely on rooftop and line-of-site access for their towers. Although most of these providers primarily offer only voice services at this time, they have ambitious plans to offer Internet access and other data services directly to cellular phones or modems in the near future.

## Key CLEC Business Drivers

### Regulation

#### *Co-location Decision: CLECs Win*

The Federal Communications Commission (FCC) favored CLECs in a recent ruling that mandates that ILECs must offer alternative co-location options to new entrants (CLECs and other new service providers). These options include shared co-location cages, no minimum size requirements for colo cages, and even "cageless" co-location. Co-location allows a CLEC to use the facilities of an ILEC (or an IXC) to provide services within that service area (for a fee, of course). It involves the placement of some transmission equipment on the ILEC or IXC facility's premises.

Applicants will also have the ability to review the ILEC's space if their request for co-location is denied. ILECs must now publish a listing of all offices that are currently out of space, and they must remove any obsolete or unused equipment to make room for co-locations. In addition, ILECs are now mandated to allocate the costs for space preparation, security measures, and other co-location costs on a pro-rated basis so that the first co-locator doesn't bear the burden of the entire cost of preparation.

As a result of this legislation, CLECs will be able to establish connections with customers through new co-location locations faster and at a lower cost. This change should both strengthen the position of current CLECs and encourage new entrants, since the set-up costs to become a CLEC will be drastically reduced.

### *Reciprocal Compensation: ILECs Win*

The FCC recently ruled that the nature of Internet dial-up calls is interstate (rather than local). This ruling means that calls placed through the ILEC's last mile to the CLEC's local service and then out to a national or international number serviced by the IXCs are now considered interstate by virtue of the call's termination point.

Why is this important to ILECs? Well, in the old system, the IXC and the ILEC would have to compensate the CLEC with a portion of the revenue that was generated from the call, since it was the CLEC's customer who placed the call. Therefore, the CLEC gave the ILEC and the IXC revenue they would not have received without the CLEC routing it through them. In return, the CLEC would get a portion of that revenue as a "kick-back" from the other providers. It is this "kick-back" portion that has been eliminated from the process. The ILECs (and IXCs) no longer need to pay the CLEC an extra portion of the call fee just for the privilege of getting that call routed to them instead of another provider.

It is now up to the individual states to decide whether to change their rulings to match that of the FCC. If they do, the Regional Bell Operating Companies (RBOCs) do not have to pay past reciprocal compensation fees to CLECs. Then again, most CLECs are not depending on this revenue.

In fact, although this ruling shuts off certain sources of revenue that the CLEC once enjoyed, it opens up other more lucrative opportunities for the CLEC. By judging Internet dial-up calls to be "interstate" in nature, the FCC may have jeopardized the long-standing ISP exemption from interstate charges, and CLECs could argue that this ruling gives ISPs an unfair advantage. On the other hand, there is nothing in the ruling to stop a CLEC from buying or merging with an ISP. In fact, a CLEC can even circumvent this judgement entirely by diversifying its services portfolio to become an ISP.

## Investors

One of the major influences on the CLEC market today is Wall Street. When CLECs first entered the local markets, they were originally valuated based on metrics such as Voice Grade Equivalents (VGEs) and Property, Plant, and Equipment (PPE). These measurements were foreign to the average investor and left investors confused as to how these numbers would translate into local market presence and market share. Eventually, however, CLECs began to report on access lines, the traditional metric for local carriers. This shift in valuation metrics benefited the CLECs. Now, instead of being evaluated based on the value of their equipment, CLECs can be judged by their revenue, potential cash flow, and profitability. Using these figures, they can position themselves much more favorably with potential investors. In fact, these new carriers have raised more than $14 billion in capital since the passage of the 1996 act, according to the Association for Local Telecommunications Services (ALTS).

These new metrics mean that Wall Street is pushing CLECs harder than ever to show a profit. So far, very few CLECs are actually showing a return on their investment dollars. As a result, many CLECs are shifting their business strategies so that they can show a faster positive return. Some CLECs are accomplishing this by acquiring customers through the use of Unbundled Network Elements (UNEs). UNEs are items that the CLEC leases from the ILEC, such as copper wire connections to the customer, fiber strands, and local switching, with the intent of building out their network to the customer when the costs can be justified.

This shift in business strategy will help keep investors happy by showing some short term gains, but at what cost? This approach could mean that CLECs get distracted from building up their technology infrastructure to support their future business, which will be much more profitable in the long run, just to satisfy investors now. On the flip side, however, if investors pull their money out because they don't see a reasonable return, CLECs won't have the money to build their new network.

## Access Rights

Renting rooftop access to wireless CLECs should be a win-win situation for both the CLEC and the property owner. CLECs need the access and the landlords, generally, are all too happy to provide it *for a fee*. The CLECs install their antennas and then rent the space from the landlord for a monthly fee. There are only a couple of problems with this process. First, the time required to negotiate the access rights to each property is negatively affecting the CLECs competitive position. Also, in some instances landlords are leveraging their control to demand excessive fees.

## Consolidation

It's a buy or be-bought world out there. Companies are scrambling to cover more territory and/or offer more services. They want to control as much of the "last mile" access to the customer as possible. For many CLECs that means buying or being bought by other CLECs, ISPs, cable companies, or utility companies. In the case of cable or utility companies, they already have direct access to thousands (or millions) of homes and are looking to add voice and data services to their portfolio, which the CLEC is only too happy to provide. Other CLEC and ISP acquisitions typically give CLECs access to more territory where they can provide their services. However, these acquisitions rarely give CLECs a more direct channel to sell their services to the individual consumer.

Another way that CLECs are looking to expand their direct customer relationships is through partnerships with value-added resellers (VARs). Although many of these partnerships are only fledgling relationships right now, the CLECs are hoping that this may be a new way to sell more services, as well as differentiate themselves through the personal contact that a VAR can offer.

## The NetworkCare℠ Professional Services Strategy for CLECs

CLECs are in a race to bring new services to market, win new customers, and gain a competitive advantage.

Lucent NetworkCare is well positioned to help these insurgent carriers win in this "new world" market. We understand how various data and converged networking technologies must be deployed to support new services. We are experienced in business solutions consulting, networking technologies, and complex applications. And, we can help our service provider clients develop new organizational structures and staffing skills to economically manage their facilities. Through our partners and our solutions consultants, we can advise our service provider clients on how to package, price, and manage new services to promote and protect their technology investments.

Lucent NetworkCare can evaluate and validate service providers' services; determine the return on investment in delivering those services; design and build out technologies, processes, and organizations to support those services; and assist in the operation and management of those services. Lucent is an end-to-end provider of business-driven networking solutions Our goal is to enable service providers to move their services into the market fast, at the highest quality, and with the greatest cost efficiency.

Lucent is a perfect fit to help CLECs structure, or restructure, their businesses for growth. In many cases, these CLECs not only need outside help with their technology challenges, but also with their organizational obstacles. Most new carriers lack the in-house skills and resources to develop and deploy new technology in a methodical, policy-driven manner. So, gaining an objective outside perspective and the addition of specialized skills can break through these barriers and accelerate success.

CLECs have many technological and business needs that must be overcome to build a successful new world business. Fortunately, most of them have a lot of financial support for the building of a new business or new services. What many of them don't have are enough smart, experienced personnel to build the network capabilities to support their service offerings (or enough time to locate and hire knowledgeable personnel). That's where NetworkCare Professional Services comes in…

## Our Solutions

*Time to market* is the key competitive variable in the telecommunications market today. Those service providers who can rollout new data networking solutions that are secure and reliable at a competitive price are going to be the winners in the new millennium.

To meet this challenge, today's new carriers must rapidly develop and deploy a new generation of IP/data networking technologies and management platforms that tie together their front- and back-office operations. They must also align their centralized and field support organizations to respond to changing customer needs.

This is Lucent NetworkCare's business. This is what we do. We are the leading experts in internetworking planning, design, implementation, operations, and optimization. We understand the business, technology, and organizational requirements for successfully competing in the new world of telecommunications. Therefore, every CLEC could use our services, our software, or both. Our solutions for CLECs include:

### Program Management

Unparalleled program management expertise and experience in carrier environments to help new and established service providers more quickly and reliably deploy these technologies, and gain a competitive advantage by being first to market with new IP/data networking services.

### Business Consulting

Proven business and networking expertise that uniquely qualifies us to provide services that map your business objectives to required technology solutions, determine the cost implications of such solutions, and define the operational infrastructure needed to support your network infrastructure.

### Network Engineering and Deployment

Planning, design, deployment, integration, operations, and optimization services to help new and established service providers more quickly and reliably deploy IP/data networking technologies, and gain a competitive advantage by being first to market with new world services.

### Network Operations and Management

Our unparalleled network engineering expertise and experience in carrier environments can help new and established service providers plan, design, build, staff, and monitor "world-class" integrated network management operations. Our world-class Network Knowledge Centers also offer outsourcing or out-tasking solutions for your network management needs.

### Custom On-Premises Solutions

We can help new and established service providers develop and deliver custom on-premise solutions to ensure end-to-end residential and commercial service capabilities using our unparalleled network engineering expertise and experience in carrier environments.

### Service-Level Management Solutions

Our VitalSuite application and performance monitoring tools enable service providers to monitor and manage their networks, so that they can offer a guaranteed Quality of Service (QoS) to their enterprise customers.

## Case Studies

### A Boston Area CLEC Adopts a New Network Model

Lucent NetworkCare has also helped a Boston area CLEC convert its business from a pure reseller to a facilities-based model. NetworkCare developed the architecture and design specifications for the backbone network and the network operations center (NOC), project managed the accelerated deployment, and provided a long-term staffing model and training program for this company. All in all, NetworkCare provided the technical expertise and project management skills to guide the accelerated rollout plan. "Lucent NetCare contributed substantially to the design and engineering of the ICN network," said the CEO of this CLEC.

### Triton PCS Meets Compressed Deployment Schedule

To meet rapid deployment schedules and shorten time-to-market, Triton PCS was required to quickly design and build a complete PCS infrastructure, including selection of a Personal Communication System (PCS) switching platform and incorporation of third-party applications for billing systems, fraud, customer service, and roaming. A data network was also required to support traffic from various third-party applications and systems.

Faced with the huge challenge of designing and deploying – on a very tight schedule – a new data network to support its entire East Coast infrastructure, Triton PCS turned to International Network Services - INS (now Lucent NetworkCare) to help with the design and implementation. "…We chose INS for this project because we felt that they had the depth of resources and the technical strengths to help us meet our goals," said Clyde Smith, executive vice president and CTO of Triton PCS.

### NorthPoint Communications Exceeds Goal

NorthPoint needed to quickly add co-location sites in three cities while extending its services to 25 additional metro areas to meet its strategic plan that included an IPO. Lucent provided the technical resources to perform a wide range of services to help NorthPoint meet its need for simultaneous deployment, installation, and rollout. "Lucent's experience in configuring and installing multi-vendor equipment and managing nationwide projects enabled us to meet and even exceed an ambitious schedule for our nationwide rollout of NorthPoint Services," said Richard Morris, Vice President – Engineering, NorthPoint Communications.

## Resources

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"The FCC Gains Momentum with Recent Rulings," *Telecommunications Report*, Yankee Group, Vol. 14, Number 6, April 1999.

For further information, see NetworkCare's website at http://www.lucent-networkcare.com or call 1-888-767-2988 in the U.S. or 1-727-217-2303 outside the U.S.

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