

Surviving CLECs Face 360-Degree Fight

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Having survived two global economic downturns by the time it reached its teen years, the competitive local exchange carrier (CLEC) sector has grown lean, tough and wise. Although this isn't the first time CLECs have begun the long, slow crawl out of recession, the present environment is arguably unlike any they have seen before. Whereas CLECs

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once positioned themselves as nimble insurgents storming the strongholds of incumbent providers, CLECs themselves are now the prey, beset by newer, nimbler competitors on all sides, from web-based applications providers and wireless carriers to business-focused divisions of cable operators. The strategies and operations of today's CLECs are shaped by a range of specific technological and market trends as well as newly developing opportunities, as New Paradigm Resources Group, Inc. (NPRG) found in its latest intensive examination of the space.¹

Setting The Direction: Critical Drivers

Market drivers for the CLEC sector are mild. The strongest drivers mirror those favoring other sectors in telecom, putting facilities-based CLECs at no net advantage. Others, like customer costconsciousness, can be a mixed blessing with uncertain long-term effects. One of the principal drivers of telecom service, of course, is



rising bandwidth demand, which is in turn driven by applications like video conferencing and web presentation services as well as telecommuting and remote collaboration.

But price also plays an important role, especially in a harsh economy.

It might seem counterintuitive to posit customer

CLEC Sector Sizing

(2009)

Facilities-Based CLECs	56
Total Revenue	~\$28 billion
Metro Fiber Route-Miles	185,000+
Circuit Switches	1,000+
Packet Switches	800+
Access Lines	~30 million

Source: New Paradigm Resources Group, Inc.

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¹ New Paradigm Resources Group, Inc. "CLEC Sector Analysis Report 2009TM;" <http://reports.nprg.com>.

cost-cutting as a driver for the CLEC sector. But for small businesses purchasing basic phone and Internet access packages from incumbent providers, their remaining option to reduce costs is to switch to a lower-cost provider. Under pressure to minimize personnel expenses, some corporate technology departments have adopted more-complex services with higher per-unit costs in order to “do more with less,” reducing total overhead. Many have delayed capital investments in hardware and software that are quickly obsolete and require constant maintenance in favor of temporary boosts to operating expenses like telecommunications services. Businesses require secure, high-bandwidth low-latency communications services to share information and resources amongst employees as well as to back up data as stipulated by internal policies and external compliance needs. The broadest impact has stemmed from regulatory requirements such as the Sarbanes-Oxley Act of 2002, which tightened oversight of companies’

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financial reporting, and the Health Insurance Portability and Accountability Act of 1996, which requires meticulous storage of healthcare data. Some pressures are driven simply by evolving market forces borne of technological advances. In the financial services vertical, for example, intense pressure to shave time off securities trading executions and other financial transactions—where microseconds can be worth millions—fosters demand for ultrahigh-performance communications services. Disaster recovery concerns have led enterprises also to distribute IT and storage resources around the country, or the globe in the case of multinationals. A growing number of companies record and warehouse all voice calls—made using VoIP—for possible use by auditors.

The advertisement features the NR Group logo at the top center, with the text "NEW PARADIGM RESOURCES" and "STRATEGIC CONSULTING & RESEARCH FOR COMMUNICATIONS INNOVATORS" below it. The background shows a person's hands holding a smartphone. The main text reads "Looking for the right decision?" followed by "TRUST OUR EXPERIENCE TO GUIDE YOU" with a right-pointing arrow icon. At the bottom, a button says "Click this ad for more information".

This generates demand for connectivity among storage and hosting facilities, services offered by many facilities-based CLECs.

Slowing Growth: Market Challenges

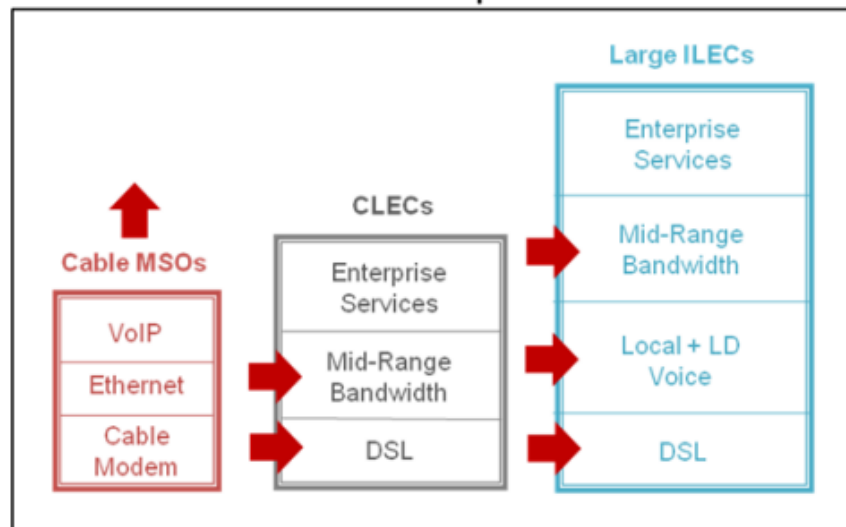
Macroeconomic deterioration and financial crises wreaked havoc across most industries in 2008 and 2009, and CLECs still remain vulnerable,

particularly those with lingering debt loads and strained cash flow. While a slowdown can spur customers to shop on price and try new providers, overall spending deflates. Enterprises often postpone network initiatives. Layoffs leave organizations with fewer phones and computers requiring connectivity. Business failures lead to canceled service contracts and lost revenue. In addition, debt and equity markets became less favorable, limiting carriers' access to capital and, in turn, their ability to upgrade infrastructure, develop new services, and scale their businesses to serve new customers.

Broad factors have also added to the downward pricing pressure already weighing on telecom services. Unable to create sustainable advantage through technology or economies of scale, many CLECs are locked into selling commodity services. One defense against commoditization is the offering of managed services such as data-hosting, business continuity services or consulting. But the window for such differentiation is narrow,

as rivals are often capable of delivering similar valueadds – in some cases (e.g., large incumbents and major system integrators) on a larger scale. Meanwhile, CLECs are gradually being squeezed out of residential markets. As cable MSOs go after ILECs' perennial cash cow — business voice services — and ILECs target the cablecos' core

**New Competitive Pressures on CLECs:
The SMB Space**



Source: New Paradigm Resource Group, Inc.

business with video services, CLECs are pinched on two fronts by the industry's great powers. As incremental measures, a CLEC can continue facing declining telephony and DSL sales, or it can add resold video service via partnership but likely at a competitive disadvantage. More dramatically, a CLEC can build its own residential fiber infrastructure at enormous cost — a high-risk option for a business with significant first-mover advantages. Or it can exit the residential segment altogether.

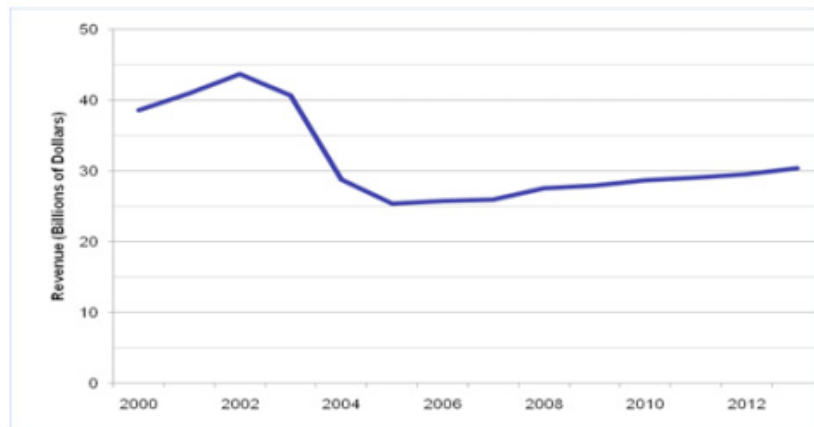
Emerging Opportunities

As CLECs begin to benefit modestly from any economic recovery, a few key industry trends in

technology and market dynamics shape their near-term strategies and day-to-day operations prominently. CLECs' network architectures have changed profoundly over the past decade due the shift to nextgeneration IP technologies. As a result, CLECs have aggressively delivered IP applications such as dynamic integrated access services (IAS), metro Ethernet services and customized traffic-handling. Small and medium-sized businesses have embraced lower-cost packet-based alternatives to legacy T-1/PRI combinations. And Fast Ethernet (100 Mbps) and Gigabit Ethernet offerings have allowed CLECs to compete for large enterprise and government/education customers. As well, a sub segment within wholesale is coalescing around demand for Ethernet from data centers, storage network integrators, and other non-traditional service providers that are now offering connectivity between their IT sites. Many CLECs are offering sub-45 Mbps "mid-band" Ethernet over copper lines, delivering high-bandwidth WAN service to locations lacking fiber. Advances in softswitch and media gateway technology have enabled CLECs to offer true IP-based services such as "digital voice," SIP trunking, IP Centrex, and integrated access services with dynamic bandwidth allocation that were not feasible just a few short years ago. In addition, these IP architectures pave the

way for a new breed of IT services based on cloud computing and software as a service. Meanwhile, CLECs' wholesale operations are getting an injection of new life thanks to trends in wireless backhaul—the transport of traffic from cellular towers to network hubs and points of presence.² Mobile applications such as Internet browsing, photo- and video-sharing, social networking, and gaming are driving deployment of higher capacity fourth-generation wireless technologies such as WiMAX and LTE and with them, greater bandwidth in wireless carriers' backhaul networks. Although cell site backhaul is still largely dependent on copper-fed TDM circuits (T-1s) provided by incumbent telcos, other physical media—fiber lines and fixed wireless (microwave)—and next-generation technologies, namely metro Ethernet, represent alternatives that CLECs can use to compete head-to-head with incumbents.

Facilities-Based CLEC Sector: Annual Revenue (2000- 2013)



Source: New Paradigm Resource Group, Inc.

² See New Paradigm Resources Group, Inc.'s "Wireless Backhaul Market Study - 2009;" <http://reports.nprg.com>.

Despite these growth opportunities, CLECs' ability to scale through mergers and acquisitions has been shackled by weakness in the economy. As capital markets chilled in 2008 and 2009, M&A activity in the CLEC sector grew quiet, especially relative to the mid-decade megamergers conducted by the likes of AT&T, Verizon, Level 3, and PAETEC. Where CLECs acted in 2008 and 2009, they generally added piece parts. By and large, players in the sector and the broader industry are keeping their powder dry for when revenues are stronger and financing loosens up, with a resumption in deal-making by the end of 2010 likely.

Looking Ahead

Facilities-based CLECs have made a solid comeback from the sector's decimation in 2000-2004. The carriers that remain—true survivors—are typically bigger, more sophisticated, and keener competitors than the upstarts that characterized the go-go years. In the short-term, growth for individual CLECs is at risk for as long as the economy remains weak. As the economy rebounds and credit markets thaw, further consolidation is likely, and the sector should see modest revenue growth—a low single-digit percentage, in aggregate—in the first few years of the new decade.

The Facilities-based CLEC Universe - 2010

- Access One, Inc.
- AMA TechTel Communications, Inc.
- AT&T, Inc. CLEC Operations
- BayRing Communications
- Birch Communications, Inc.
- Broadview Networks, Inc.
- Buckeye Telesystem, Inc.
- Cavalier Telephone, LLC
- Cbeyond, Inc.
- CenturyTel, Inc. CLEC Operations
- CIMCO Communications, Inc.

- Communication Options, Inc.
- ComSpan Communications, Inc.
- Cox Business Services
- DSL.net, Inc.
- Empire One Telecommunications, Inc.
- Falcon Broadband, Inc.
- First Communications, LLC
- General Communication, Inc.
- Global Crossing, Ltd. CLEC
- Global NAPs Networks, Inc.
- Globalcom, Inc.
- Grande Communications Networks, Inc.
- HomeTown Solutions, LLC
- Integra Telecom, Inc.
- ITC^Deltacom, Inc.
- Jaguar Communications, Inc.
- Level 3 Communications, Inc.
- Local Fiber, LLC
- Logix Communications Enterprises, Inc.
- Mid-Maine Communications
- Norlight, Inc.
- NTS Communications, Inc.
- NuVox Communications, Inc.
- One Communications Corp.
- Optimum Lightpath
- Orlando Telephone Company
- Otter Tail Telecom, Inc.
- Pac-West Telecomm, Inc
- PAETEC Communications, Inc.
- PCS1, Inc.
- Penn Telecom, Inc.
- Primus Telecommunications Group, Inc.
- Qwest Communications International, Inc. CLEC
- RCN Corporation
- RIO Networks
- RNK, Inc.
- Socket Telecom LLC
- StratusWave Communications, LLC
- SureWest Communications
- TDS Metrocom
- TelNet Worldwide, Inc.
- tw telecom Inc.
- US TelePacific Corporation
- Verizon Communications, Inc. CLEC Operations
- XO Communications, Inc.

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New Paradigm Resources Group, Inc. (NPRG) is a Chicago-based research and consulting firm focused on identifying, analyzing and forecasting emerging technologies and industry trends, fostering mission critical decision-making processes for service providers, technology developers and financial institutions. The authors are Executive Vice President, Director, and Senior Analyst, respectively, at NPRG and can be reached at cclausen@nprg.com, jkestel@nprg.com, and egubbins@nprg.com or (312) 980-7848.



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