



FIBER GIVES SMBs A FAST BUSINESS BOOST

By Kasia Lorenc

Channel Partners™

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ABOUT THE AUTHOR



KASIA LORENC has been working in technology and marketing for nearly a decade, most recently serving as the managing editor for Tom's IT Pro and Tom's Hardware, focusing on content strategy and development in business computing and computer hardware. In her previous roles, Lorenc pursued her passion for writing, technology and marketing, creating content for a variety of channels for the IT professional and developer audience. With strong ties to enterprise IT, she continues to write about cloud, security and mobility topics.

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FIBER GIVES SMBs A FAST BUSINESS BOOST

WHEN MOST PEOPLE HEAR “FIBER,” THEY THINK “SPEED.” BUT FIBER-OPTIC INTERNET HAS MUCH MORE TO OFFER

than faster connections. For small and mid-sized business (SMB) customers, it can translate into significant business advantages. As the three use cases we'll examine show, fiber offers a number of distinct benefits over traditional cable and DSL for SMBs.

Yes, the speed guarantee matters. It means no slowing down during peak times, which can help boost productivity and efficiency. But connections are also symmetric, so both download and upload speeds are equal; this can be crucial for businesses that upload lots of data to the cloud or have other outgoing data requirements.

Fiber also delivers lower latency, which can be important for organizations doing a lot of video conferencing or using

VoIP. Because it has less attenuation, fiber also delivers better signal strength, less degradation and improved reliability, especially during inclement weather.

For organizations relying on cloud services, fiber can make a significant difference for accessing data, applications, hosting and more. Additionally, although initial installation and construction costs with fiber can be higher than

What Is True Fiber?

Today, telecom companies offer a number of different network configurations where fiber-optic cables are used for all or part of the path to a business, and copper cables complete the connection. For a true fiber implementation, ensure that a customer is getting fiber all the way to its building

	Bandwidth	Voice Channels
Copper	1.5 Mbps	24
Fiber	2.5 Gbps	32,000+

cable, depending on business location, provider competition and infrastructure, customers may be able to get prices comparable to cable internet. Some have actually lowered their monthly bills while improving service.

Finally, what many don't realize is that fiber connections are typically a higher priority for service providers, so you can expect to see a better service level agreement (SLA) for fiber service.

SLAs 101

The difference between a 99.9 percent SLA and a 100 percent guarantee is seven hours of downtime per month. Read the fine print.

In a fiber SLA look for:

- Guaranteed dedicated bandwidth up and down
- Fast response time — max four to six hours — for outages and credits for extended downtime
- Early notice of maintenance that may impact service
- Portability and upgradability of the service without incurring costs

Also look into amortized construction costs, point-to-point service and what the provider may do if it determines that the customer network may be part of a botnet or source of malicious traffic.

“Businesses with fiber connections are prioritized much higher for support when there's an outage than those with cable broadband,” said Bryant Sullo, CEO at [Clocktower Technology Services](#), an information and communication technology company based in Franklin, Massachusetts.

Still, despite the long list of benefits, fiber is not for everyone.

For some SMBs, getting a fiber connection can require a long-term commitment to a provider, which might not be a good option for fast-growing businesses or startups that may need to move to larger offices. In many cases, they would have to either upgrade the infrastructure at the new site or pay for fiber service that they're no longer using.

For other businesses, especially those in isolated or distant locations, costs can simply be prohibitive.

Yet in some situations, fiber might be the only viable option. Sullo worked with one client based in Cambridge, Massachusetts, that had a tough time getting any type of internet service to work reliably.

“The building owner wouldn't allow any aerial cables from the street, which meant that cable broadband and FiOS were out of the question,” Sullo said.

Clocktower first set the client up with a metro Wi-Fi ISP, but invariably the service was affected by rough weather, and when a new building was constructed in the line-of-sight path to the provider's base station, the service went down completely. The next plan of attack was fiber. The downside was that it involved heavy construction costs. However, Comcast allowed the client to roll those costs into its monthly payment, without a long-term commitment.

Smaller customers considering fiber should know that they do have options, and negotiating costs and payment structures is possible. And for those in urban areas with lots of nearby businesses, fiber construction costs can actually be negligible.

This was the case for [Lowry's Inc.](#), a specialty distribution company based in Sun Valley, California, that went from a single 6 Mbps bonded T-1 connection to a 20 Mbps fiber MPLS. Lowry's CFO, Barry Greenberg, told us that construction costs for his seven branch locations were minimal.

"We were able to upgrade our entire network," said Greenberg. "Each location has faster speed than it did previously at a lower cost." He added that although the savings weren't as high as initially projected, the company ended up with faster speed and lower maintenance fees at an overall lower monthly internet cost.

"When we started to investigate prices and what the different technologies offered, fiber was the clear winner," said Greenberg.

Tap, Tap

At one time, fiber was seen as more secure than copper because it couldn't be tapped. Not anymore. While not trivial, it is possible to tap an optical network without generating enough attenuation to be noticeable. In 2013, British spy agency GCHQ secretly tapped more than 200 fiber-optic cables carrying phone and internet traffic and shared the data with the NSA, [according to The Guardian](#). So, customers must still encrypt sensitive data.

MAKE THE CASE

Fiber can translate into important workplace productivity and efficiency improvements, and even business growth for many SMBs. Faster internet has both internal and external advantages, helping employees get more done faster and offering better service to customers, whether they're accessing [an e-commerce website](#), completing a transaction or using on-site internet.

It is also an important component of a [managed WLAN offering](#).

[DCG Technical Solutions](#), based in Los Angeles, has been involved in a number of fiber installation projects and supports fiber users. The IT services firm is also a fiber customer and is currently in the process of doubling its fiber speed to support a growing cloud business. In addition, the company is implementing a backup fiber connection through a separate fiber provider.

"We are doing this because we are adding SIP VoIP phones to our environment," said Brent Whitfield, CEO at DCG. "We are also moving our backup cable connection from old-school cable to fiber because we can't have any internet downtime."

DCG can't afford downtime because its cloud solutions are the fastest growing part of its business. The firm offers cloud services through Amazon Web Services and two private cloud facilities, so reliable, high-speed access for customers and staff is a top priority.

Since implementing fiber, DCG's cloud services sales are up 40 percent year over year, Whitfield told us, estimating that the growth in the last three years has been close to 400 percent. DCG also relies on fiber's bandwidth to move projects along faster.

"When we're onboarding a new client, quite often we're uploading a lot of data, which means we have data going in both directions — from the client site to our site and from our site up to the cloud," he said. "So when we can onboard a client in 16 hours instead of 60, it really helps."

For [The International](#), a specialty events venue and hotel based in Bolton, Massachusetts, the move to fiber brought big improvements in guest satisfaction as well as new business opportunities. As a conference destination, The International has to be prepared for large, unpredictable bandwidth requirements, said Sullo, who worked with the business on implementing fiber.

"Many conference goers will want to connect a laptop or tablet as well as a mobile phone to the local Wi-Fi network," said Sullo. "When they're in the conference center, they're all syncing email and files at the same time."

And of course, in hotels no one watches TV anymore. Most people stream on-demand video to their portable devices.

All this can put huge strains on any internet connection, especially during peak times. That's where fiber's reliability, symmetrical bandwidth and other advantages are worth the cost. Fiber has created a better experience for The International's guests, especially during conferences, which are critical times for the business.

"You only get one chance to get it right with a conference," said Sullo. "You can't say, 'Our internet connection is down; let's wait a few hours and see if it comes back.' In a few hours, everyone's headed home or back to their office. It's critical for The International that they know they can rely on their connectivity all the time."

Reliability was also one of the main concerns for Lowry's and, so far, the only downtime that the company has experienced was when the fiber lines were cut earlier this year. The service was down for several hours and the business had to rely on its backup wireless connection, which the company uses to offload casual internet traffic, according to Greenberg.

In addition to improved reliability, Greenberg's business is reaping the benefits of faster speeds at a lower cost which, in turn, translates into improved productivity.

"Most people don't want to increase bandwidth because it costs more money," said Greenberg. "We were able to triple our speed at a lower cost."

NG-PON2: The Next-Gen Wave

NG-PON2 supports from four to eight wavelengths of 10 Gbps passive optical network (PON) and is in testing now by Verizon, [which expects to provide up to 40 Gbps of total capacity and up to 10 Gbps speeds per customer, both upstream and downstream, over a single fiber — a tenfold increase over some of the current speeds in the industry.](#) NG-PON2 will be available to businesses in 2017. Find more on standards for ultrafast broadband over fiber [here](#).

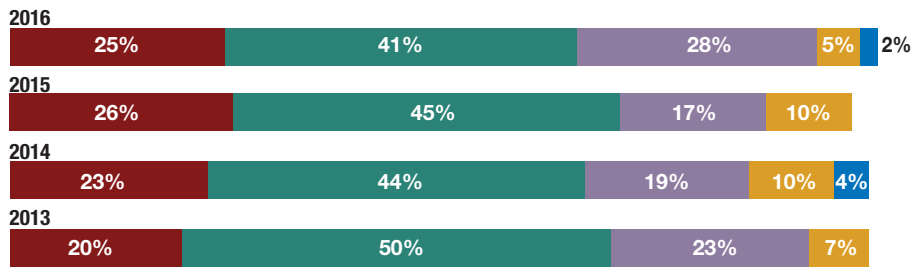
WHAT TO EXPECT WHEN MIGRATING CUSTOMERS TO FIBER

Although fiber coverage is becoming much more common, there are still some challenges and considerations to take into account with the migration. Costs are becoming less of an issue, although SMBs do have to factor initial construction as well as monthly expenses. Still, fiber prices can be comparable to other solutions and in certain scenarios even less expensive than a dedicated T-1 connection. And because fiber is so reliable, businesses typically won't need to pay for an additional, backup connection — but service shouldn't be taken for granted. For all its benefits, one thing fiber can't overcome is a rogue backhoe. In May, an accidental fiber cut on Level 3 Communications' network disrupted service for customers in New York City, Connecticut, Rhode Island and Massachusetts. And, it's not just accidental cuts. [Zayo suffered](#) a series of deliberate attacks on its San Francisco area fiber networks last year.

Channel Partners' Preceptions of Cablecos as Primary vs. Secondary Providers

I would recommend cablecos as a primary provider for fiber-based services, such as Ethernet.

■ Strongly Agree
 ■ Agree
 ■ Neutral
 ■ Disagree
 ■ Strongly Disagree



Source: Cablecos & The Channel: State of the Market 2016

The lesson for partners is that customers that absolutely can't suffer downtime need redundant links from different providers. One great option is 4G LTE, as we [explain in this report](#).

Another challenge is construction. As Sullo pointed out, most companies don't have fiber running along the street next to their building, let alone into the structure. In many instances, getting the physical infrastructure in place can be complicated and time consuming, Sullo told us, and might require cooperation and coordination from the building owner or management, other tenants, the municipality and multiple subcontractors — a costly process, timewise, for the partner involved in the project. There are various permits and permissions needed, and just as unanticipated costs can rise during the implementation, the timeline can also be prolonged unexpectedly.

In Lowry's case, the quote at the start of the project came with an estimate of 60 days, but the project ended up taking more than four months to complete. However, this was a more complicated effort because it involved seven locations across three states.

"We really couldn't get much benefit until all seven locations were completed," Greenberg said.

Related Reports



[2017 Outlook: Cablecos Broaden Channel Appeal](#)

Among the top-level findings of Channel Partners' Cablecos & The Channel: State of the Market 2016 survey: Leading cable TV suppliers of business-grade internet access have won serious attention from U.S. indirect sales channel executives. This Report takes a look at what's next for cable operators as those executives plan their 2017 strategies.



[5 Business Needs Where Fiber Is a Must-Have](#)

This Report looks at five application categories where fiber is essential in obtaining the necessary speed, performance and reliability for businesses to optimize application performance and employee productivity — and that represent a significant growth market for partners who can deliver those applications on top of a fiber deployment.



[Private Direct Connects: Fast Lane to Cloud](#)

Using cloud services for business once meant traffic jams as critical packets competed with Netflix movies and cat videos. No longer. Private Ethernet connections from AWS, Microsoft Azure and others let you build an "express lane" and put customer traffic in hyperdrive.



[Managed Wi-Fi: Your Next Services Money-maker](#)

Got the chops to design and deploy a robust wireless LAN that's capable of delivering enterprise-grade, wired-equivalent performance and security? Then a turnkey service where you deliver — and then support and secure — fast Wi-Fi for customers and employees is a great addition to your managed services slate.



[Mind the Gaps: Web Presence Opportunities for Trusted Advisers](#)

This Report identifies four gaps that almost every organization has in its web presence, which, if left unchecked, will undermine its potential, or worse. There are great opportunities in performance testing, analytics analysis, and site optimization and management. Will you grab them or leave them for someone else?

He also told us that it took several cutover attempts to get everything running properly, which involved a lot of coordination between the business, the service provider and the partner supporting the implementation.

On top of the timing delays, Lowry's was also met with unexpected costs because during the transition time, the company had to run its existing internet service in addition to the new fiber service.

In Sullo's experience, most fiber implementations take about one to two months from the day the contract is signed to the day the business is up and running. Whitfield told us the typical timeline he's seen is closer to three months. For multiple branch locations, businesses will likely be looking at a phased process that can take several months to complete.

The technical requirements involved with implementing fiber can also be different from what most SMB customers are used to — or what the typical small business IT department is prepared to handle without help, according to Sullo. Prepare customers that they might need additional edge hardware, for example.

"It's something we weren't prepared for when we first started doing this," said Sullo. "It wasn't until we started to talk to the Comcast reps and they were telling us about the technical requirements."

FIBER ADVICE FROM THE EXPERTS

One of the biggest challenges of selling fiber to SMBs is that many business owners just don't know what fiber can offer, what problems it can solve for them and what a difference it can make for their bottom lines.

"Even at similar speeds, there really is a difference between a shared, asymmetrical pipe, like cable broadband, and a dedicated, symmetrical connection like fiber," said Sullo.

When selling small business customers on fiber, have a complete picture of the advantages the service can offer, the costs in their regions and what options are available both with and without construction.

Whitfield also cautioned to make sure that you're reselling true fiber, as some providers can be a bit misleading, repackaging Ethernet over copper and calling it fiber. On paper the offerings might look impressive, but if the costs sound too good to be true, the customer might end up with fiber only to the backbone and not all the way to the point of entry, Whitfield told us, which is critical if you're looking at improving latency, uptimes and SLAs.

"If you're not getting fiber all the way to the suite, to the minimum point of entry, then it's not true fiber," said Whitfield.

In regard to costs, Whitfield advises current and potential customers to regularly check on the price of fiber and to not sign long-term agreements, because plan costs continue to drop.