

# Do SMBs Need Triple-Digit Bandwidth? The Case for Mid-band Solutions

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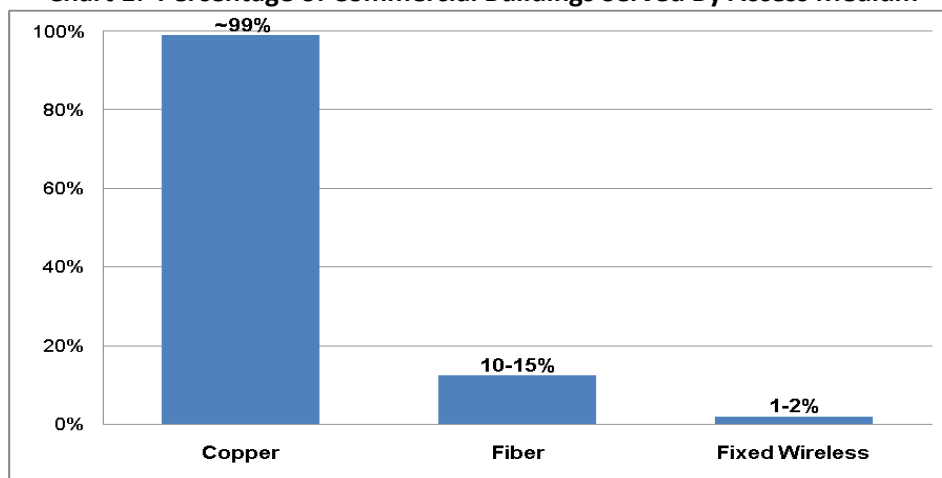
New Paradigm Resources Group, Inc.<sup>1</sup>

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With Verizon rolling out 150 megabit-per-second broadband service and 4G wireless service on the march, the notion of broadband over copper wires might seem dated or lackluster. But for telecom service providers targeting small businesses, copper – and in particular, copper-based mid-band Ethernet services – continues to shape up as a sustained opportunity.

Yes, fiber is faster, and therefore perhaps sexier, than copper. But fiber is available to less than 20% of today's small businesses, and deploying it isn't cheap – a consideration that can't be taken lightly in an anemic economy or amid a customer base notorious for pinching pennies. But set that point aside.

**Chart 1: Percentage of Commercial Buildings Served By Access Medium**



Source: New Paradigm Resources Group, Inc.

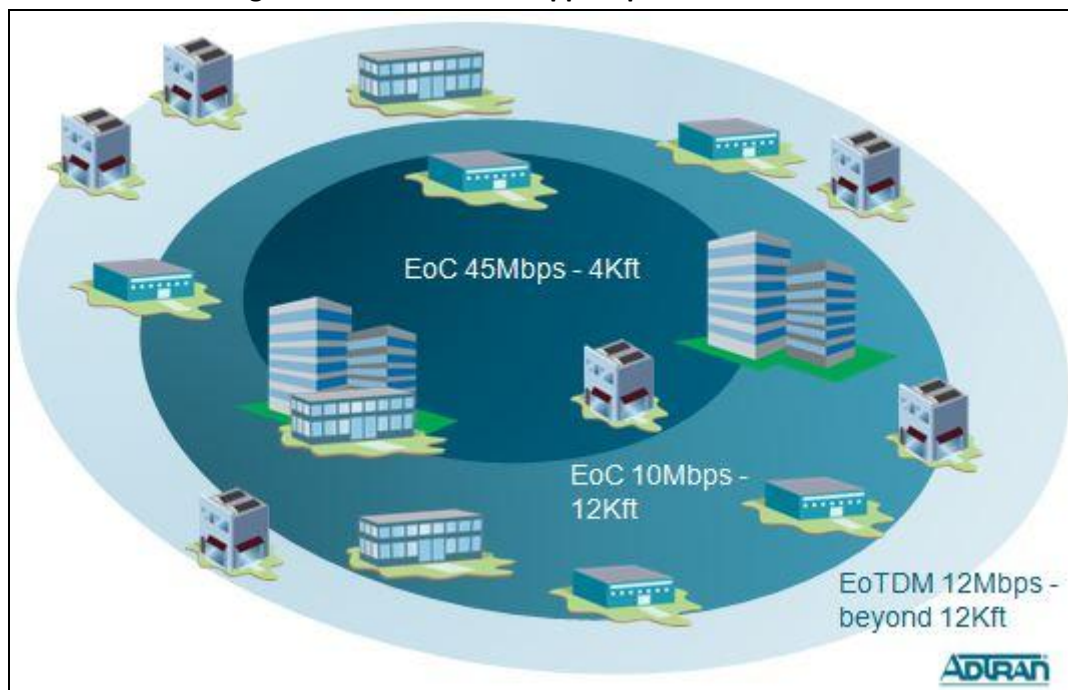
Large enterprises require high-bandwidth services at the Fast Ethernet (100 Mbps) level and above to create wide area networks for file sharing and application access, as well as to carry voice (as VoIP) and web conferencing traffic. Their complex systems also make extensive use of remote storage and mirrored backup

<sup>1</sup> 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](mailto:cclausen@nprg.com), [jkestel@nprg.com](mailto:jkestel@nprg.com), and [egubbins@nprg.com](mailto:egubbins@nprg.com) or (312) 980-7848.

for data recovery purposes, which necessitates use of enormous point-to-point pipes. In contrast, small business users are mostly interested in plain-vanilla always-on Internet access—it’s just that, more and more frequently, they need more bandwidth but do not want to pay the incremental cost for a second (or perhaps more) T1. And in this arena, Ethernet over Copper (EoCu) is proving to be an attractive alternative to multiple T1 scenarios in both price and scalable bandwidth.

With T1 access over copper, throughput is a standard 1.5 Mbps per T1, whereas EoCu bandwidth using the same physical medium can deliver upwards of 40 Mbps—simply by means of a different access technology. While this is far less than the Gbps-range capability of a fiber strand, copper facilities are also ubiquitously available. EoCu allows SMBs that are “off-net” to tap into bandwidth speeds of up to 45 Mbps. And carriers are increasingly willing to deploy direct access EoCu solutions to SMB sites as a bridge to a time when more fiber might be available.

**Figure 1: Ethernet Over Copper Speeds and Reaches**

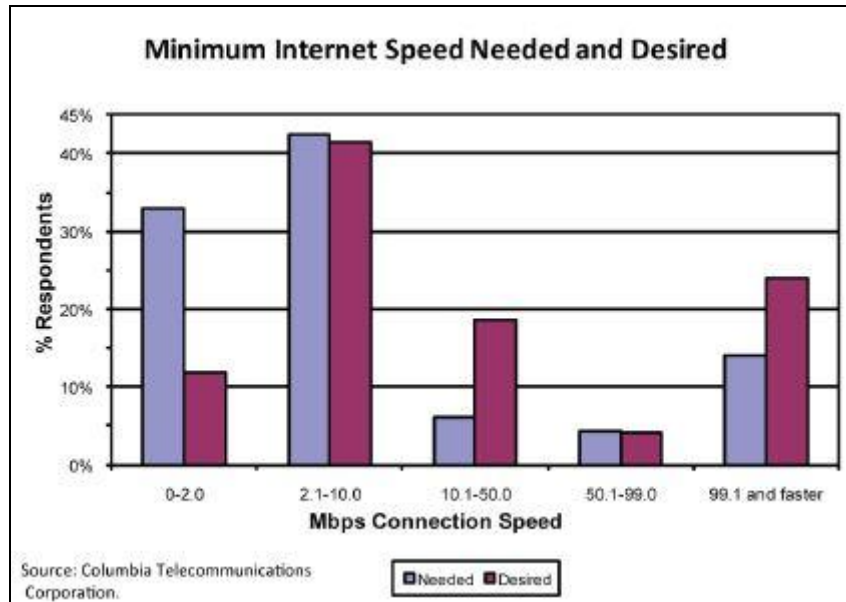


Although fiber boasts the kind of broadband speeds that make attention-grabbing headlines, most small businesses simply don’t need the kind of speed that justifies deploying fiber. In a survey of small businesses published this fall by the Small Business Administration (SBA) (nearly all of the small businesses surveyed had fewer than 50 employees), most respondents said their desired broadband speed is 10 Mbps or less; less than a fourth of respondents said they wanted 100 Mbps or more.<sup>2</sup> Additionally, more than 60% of cable and DSL subscribers (and nearly 60% of wireless subscribers) said their broadband speeds were just

<sup>2</sup> “The Impact of Broadband Speed and Price on Small Business” by Columbia Telecommunications Corporation for the Small Business Administration, US Department of Commerce. November 2010.

fine. The kinds of real bandwidth needs by SMBs are an excellent fit for the mid-band services (typically between 3 Mbps and 20 Mbps) that can be provisioned by using Ethernet-over-copper.

**Chart 2: Small-Business Bandwidth Needs and Desires Survey**



We don't see any significant shifts occurring with respect to SMB bandwidth requirements over the near future. Service providers are beginning to agree with this assessment. As CBeyond CEO James Geiger put it in a recent investor conference, "It's hard to envision in the next few years that our small-business customers will need more than 10 Mbps."

CBeyond, which targets small businesses with voice and data services, is rolling out Ethernet over copper to 30% to 40% of its base over the next year, saving \$20 to \$30 per customer over the T1s it typically provisions today and potentially charging customers a little more for the extra bandwidth. As that service is rolled out, the company's customer acquisition focus will be "heavily weighted" toward its EoCu footprint, Geiger said.

Other providers started years ago. XO Communications has seen the Ethernet over Copper wholesale opportunity and is marketing its mid-band services to resellers who are then targeting small businesses. This then allows XO to focus on larger clients up-market. XO's footprint has grown considerably, now reaching nearly four million buildings and ten million businesses across 39 markets. For resellers, that investment improves the overall economics of provisioning these services.

As fiber footprints grow, will they automatically trump EoCu? Not necessarily in the small-business space. In this weak economy, the broadband speed war is failing to capture the attention of many small business owners who are more focused on price. With broadband speeds mostly satisfying, price remains a bigger concern for small businesses, as it so often is. And it's here that fiber suffers a major disadvantage. The vast majority of small businesses in SBA's survey (about 80%) pay less than \$100 per month for broadband

service. SMBs are largely uninterested in upgrading to fiber-based service if it means they have to pay even a little bit more to get it. “Even for a 10% price increase, businesses are significantly less likely to switch to 100-Mbps service,” the SBA noted.