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Introduction

Once seen as an added customer benefit, reliable connectivity without restriction – all the time, at full speed, on any device, from anywhere – has become the expectation in our connected world. In many areas, including healthcare and higher education, customer experience and customer satisfaction have become a primary business objective. This expectation is why business professionals now consider their telecommunications infrastructure a “fourth utility” that is just as crucial to their employees and clients as electricity, water, and HVAC.

The mindset of telecommunications infrastructure as a utility marks a definitive change in the way business owners and developers have traditionally approached their networks. Over the years, the need for additional bandwidth has been addressed reactively, as technology and associated demands evolve. This often has been accomplished by the creation of multiple parallel networks, and these copper-based networks can require more duct and closet space than a building can support. Not to mention how disruptive it is to customers – and owners! – to perpetually catch up to greater bandwidth demand by reactively adding new cables and equipment.

In industries such as commercial real estate, network owners have realized that if they stick with the catch-up approach, they may never be done with the endless upgrade cycle. An **ABI Research** report indicates that more than 80 percent of the world’s mobile traffic happens indoors. That kind of mobile usage alone, as consumers access Wi-Fi, cellular, and VoIP networks, already stresses existing communications networks inside commercial properties. And as property managers add evolving demands from their security, automation, and other building operations, it’s clear that demand for bandwidth will only increase.

“Rip and replace” is out

Feeling the current demand for reliable mobile communications and reliable connectivity – and the potential for years of playing catch up – many of these commercial real estate professionals have become early adopters to a technology that will allow them to improve their customers’ experience and meet business objectives. They are now selecting converged all-fiber solutions instead of traditional copper networks.

Fiber solutions are highly flexible and future-ready, and allow forward-looking managers to build high-quality networks that support multiple in-building applications, including cellular, Wi-Fi, BMS, LAN, security, and other IP-based services. They allow for the creation of the powerful fourth utility that addresses today’s communications needs, while laying a foundation to easily handle disruption-free future connectivity that lasts the life of a building ... no ripping and replacing of outgrown cabling required.

A complete fiber optic infrastructure is gaining real acceptance beyond just the vertical backbone. Already used to connect continents, regions, cities, homes, and buildings, fiber is quickly becoming the de facto standard for in-building infrastructure. Proactive real estate professionals understand why: only base-building systems created through an all-fiber infrastructure can provide the bandwidth that customers and tenants require well into the

future. They realize that, as voice and data traffic increases, using copper cabling in horizontal networking creates unnecessary and cumbersome “choke points” in any network. Delivering high bandwidth to the edge of the network alleviates these challenging bottlenecks, simplifying day-to-day operations for building owners and IT professionals.

And while we have discussed commercial real estate professionals being early adopters to this technology, traditional local area network (LAN) owners can realize the same benefits and provide the same level of satisfaction to their customers.

“All fiber” is in

Solving choke point challenges and opting out of the catch-up game is even smarter than you’d think. By going “all fiber,” network owners and operators can converge multiple disparate network applications over a single-fiber infrastructure with virtually unlimited potential for growth and expansion. The benefits are impressive. Starting on day one and extending over the life of the building, fiber-based infrastructures enable lower power consumption and reductions in equipment, installation, and maintenance costs when compared with legacy copper networks. Even better, buildings that already have fiber optic infrastructures in place are realizing both CapEx and OpEx reductions, the return of valuable floor, overhead, and telecom room space, and alleviated congestion in conduit and closets.

These deployments embracing the building’s network as a fourth utility make a strong case that the initial cost of a converged fiber infrastructure, deployed just once, saves time and expense in the long run, discontinuing the expensive rip-and-replace cycle caused by copper’s distance and bandwidth limitations. And here’s the kicker: a **study conducted by Coleman Parkes Research** suggests that a robust indoor wireless infrastructure can increase a property’s value by 28 percent on average.

Why wait?

Commercial real estate professionals are preparing for the future. More and more, they have realized that fiber is the ideal choice for their investments, meeting evolving infrastructure needs while delivering virtually unlimited bandwidth and significantly enhanced capabilities. A converged fiber solution makes multiple, independent copper-based systems – and their costly, disruptive rip-and-replace cycles – a thing of the past. It gives commercial properties an environmentally friendly infrastructure that is ideal to accommodate today’s explosive mobile use and is easily upgradable to work with tomorrow’s network demands.

Ultimately though, it’s for their tenants that real estate professionals are compelled to provide a converged fiber infrastructure. Reliable connectivity differentiates commercial properties to tenants whose businesses can’t afford network disruptions, dead zones, or buffering. With high occupancy rates increasingly dependent on network investments – it’s not a matter of “if” but a matter of “when” investors will get out of the catch-up game, and this includes traditional local area networks. With the value that comes with a converged fiber network starting on day one, the time to invest in the fourth utility is now.

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