

Why your Cat6A has stood the test of time – and your mobile phone hasn't

Choosing the right technology has never been easy. But, in 2004, for one of CommScope's customers, it was more important to get the right cabling standard than the right mobile phone

In 2004, one of our customers had a few important decisions to make. As IT planner for a large state-of-the-art manufacturing plant of a global company, he was responsible for getting the cabling infrastructure right for future applications. At the same time, he needed a new mobile phone...

He made the second decision fairly quickly: a mobile phone that was unbelievably advanced. This was a phone that played music, took photos and recorded video clips. It even was able to access WAP. The internet from a phone—fantastic!

But the choice of copper network at the plant was less clear cut. It had to last at least 10 years. The 100 Mbps possible through Category 5 up to 100 meters seemed ample at the time but he knew the demand for bandwidth was going to grow steadily and this would soon seem restrictive. Category 6 permitted 1 Gbps, but only up to 55 m or so. After consulting with various people, he made the call to go for Category 6A.



Why Cat6A?

With the RJ45 interface, there was something familiar (and backwards-compatible) about Category 6A. But this was clearly one for the future, able to support 10GBASE-T to 100 m. In 2004 it may have been unthinkable that such bandwidth would be needed, but time and technical innovation wait for no one—and he knew that being ahead of the curve would pay dividends in the long run.

Now, in 2020, those dividends are coming in. As expected, the demands of applications and devices have increased, but they have still not reached the full bandwidth of the copper infrastructure. Recent deployments of new PoE and Wi-Fi 6 devices at the plant have been seamless and trouble free—yet this may have been impossible if a different decision had been taken back in 2004.

At the plant, over the past 15 years, there have been no incidents or downtime due to the physical IT infrastructure. As a result, our customer always asks for CommScope SYSTIMAX® 6A in their technical bids for new extensions or deployments in an ever-growing network. CommScope is one of the few vendors that not only tests their cabling solutions to make sure they are compliant with the applicable cabling standards, but publishes the results and backs it up with a warranty.



Still going strong

Even though it has been around since 2004, Category 6A is still the category recommended for new installations in healthcare¹ and education². It is globally available in shielded and unshielded versions and is thoroughly trusted. Wi-Fi technologies are already exceeding 1 Gbps, and the increased need for applications like streamed video, storage area networks and grid computing mean that many now consider 10GBASE-T to be a must-have. Its popularity also means the cost is coming down. While Category 6A was probably deemed to be a premium option back in 2004, the volume of cable being manufactured means it has become more reasonable, and now represents the lowest cost category per transmitted gigabit.

Is it time for a change?

But is it time to replace Category 6A? It's hard to see why—or with what. Category 7 and 7A are not recognized by TIA and use non-RJ connectors, although some hybrid networks exist using shielded connectors and patchcords. Category 8 has been an option “on paper” for years. The standard is approved, but no manufacturers have launched 40GBASE-T equipment³.


Perhaps they know Category 6A is everything many need—and more. The good news for our customer: He knew that 15 years ago, and they are now reaping the benefits.

Your old mobile phone might be long gone, but the Category 6A has stood the test of time and looks likely to stay in place for some years yet. Our customer expects it will easily outlive his new smartphone...

¹ Published in 2010, TIA-1179 recommends Category 6A for all new installations in healthcare facilities and was the first standard to recommend Category 6A for new installations outside of the data center.

² Published in 2014, TIA-4966 recommends Category 6A for new education facilities based on the need for high-performance infrastructure required for wired and wireless connectivity.

³ The facts mentioned are accurate at the time of publishing this article, as far as CommScope is aware.



Cat 6A: the Fact File

Cat 6A: the copper cable technology that has stood the test of time

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