

An XZact Technologies, Inc White Paper



9731-A Southern Pine Blvd.
Charlotte, NC 28273
(704) 527-1515
www.XTCORP.com

Inferior Structured Cabling Components Offered as Equals

A Case of Caveat Emptor

By Richard A. Sousa, RCDD

Tuesday, May 19, 2009

INTRODUCTION

During World War II, General Electric first coined the phrase “value engineering” to denote cost-effectiveness through the use of alternative designs, materials, or innovative practices. They probably did not expect that it would someday be used as justification for “de-value” engineering. Unfortunately, that is what is happening in our industry, right under the noses of quality manufacturers—and at the expense of the uninformed, unsuspecting end user and the well-intentioned designer or installer.

Now with the economic slowdown, the problem has the potential to get even worse. In light of recent testing conducted by the Communications Cable and Connectivity Association (CCCA; www.cccassoc.org) it's time for the industry to take action. (See “CCCA cautions: Don't always believe the Jacket,” February 2009, p. 32 of the February issue of Penwell's, Cabling & Installation Magazine).

Over the past five years especially, the increasing number of Asian producers, coupled with the amount of global trade, has allowed more offshore-manufactured products to make their way into North America than ever before. The CCCA estimates that more than 6 billion feet of Category 5e and 6 cables are now being sold in North America annually. While not every offshore manufacturer is failing us, some are cutting corners and cost by deploying inadequate methods and quality assurance, which results in inferior products entering the supply chain and flooding the market.

Recent scares in the general consumer market over such items as pet food, pharmaceuticals, and toys have shed much light on the problem. If cabling-system end users believe offshore manufacturers are not cutting the same corners when they produce cable and connectivity components, they need to think again.

Tuesday, May 19, 2009

“Many of the offshore cabling products are marked as ETL- or UL-verified, but what these producers have done is to send in a ‘golden’ sample for testing and certification,” explains Rob Wessels, president of research-and-development and engineering for Commscope (www.commscope.com). “There's no way for an end user to know the fire safety of these products, and many are taking for granted that the producer is actually making them to the same specifications as the samples that were tested and certified. While some offshore producers have inadequate processes that prevent their products from meeting standards, evidence shows that many others are very aware of what they're doing and [are] blatantly cheating by making substitutions and cutting corners.”

Companies in North America that are willing to purchase and install these components ultimately cause them to be behind the walls of uninformed and unsuspecting end users. Some of these willing participants have well-recognized names and are certified to install systems from reputable industry manufacturers. In some cases, these installation contractors are bidding on projects under the pretense of those certifications, then once they have gotten a foot in the door with the end user, are offering these alternative, inferior products as equals.

PRACTICAL IMPLICATIONS

As this situation persists, well-intentioned design and installation professionals risk losing business to those who import, remarket, and install these low-quality products at a reduced price. But the overall problem is far greater than just competition. Components that do not meet minimum performance requirements spelled out in the TIA-568 series of standards can cause substandard network performance, increased bit error rates, and network-signal retransmissions—ultimately impacting business operations and

productivity. "I've visited a fair number of factories in Asia, and in many instances, these facilities have less-sophisticated machinery and technical expertise than many Western manufacturing facilities," says Commscope Wessels. "Some even try to cut corners by blending their own materials, resulting in aging problems like cable jackets cracking and discoloring. Even though some of these countries have a large number of standards, the enforcement is often quite lax."

An unreliable network is a serious problem; a cable's inability to meet safety requirements is far more of a concern. The aforementioned article (CI&M February 2009, p. 32) discussed the CCCA's findings about the flame-spread and smoke performance of the cables tested. "There are certain fluoropolymers and low-smoke PVCs that are properly mixed to meet safety standards, but some of these materials are expensive," says Wessels. "So, some producers use standard polyolefin or generic PVC instead." Whether it is ignorance or greed that drives some manufacturers to put networks, and potentially lives, at risk, neither is acceptable.

From an end-user perspective, much of the problem results from ignorance as well as taking "creative" specifications and certifications at face value. The more technology-savvy the end user, the less chance they have to be convinced that cabling and connectivity components are generic. But in a struggling economy in which many are looking to save money, less knowledgeable end users and those who put decision-making authority in the installer's hands may be tempted to take the least expensive route and ultimately short-change themselves.

Particularly vexing is that some companies offering inferior products are certified by reputable manufacturers, which makes it difficult to accept that they are not aware of

the potential consequences for their end-user customers.

"I don't think those buying and installing these components are necessarily trying to do the wrong thing and put lives at risk, but in such a competitive environment, they may certainly be driven by the savings," continues Wessels. "I believe they may also be hiding behind the testing certifications and approvals that come with these products, thinking that their hands are clean. That is the wrong attitude, though, and their hands really aren't clean. They owe it to their customers and to the public to have the integrity to do the right thing and not just try to win the bid with the lowest possible material cost."

The Consumer Product Safety Improvement Act of 2008 increases the maximum penalty to \$15 million for a person who knowingly "manufactures for sale, offers for sale, distributes in commerce, or imports into the United States any consumer product that is not in conformity with an applicable consumer product safety standard." Perhaps it is time for those buying and installing these products to reconsider their actions. And if they try to push liability back to a manufacturer across the globe, they will have little luck getting the support they need. (Information on the Consumer Product Safety Act can be found at www.cspc.gov/about/cpsia/cpsia.html)

THREE RED FLAGS

For a long time, members of our industry have driven home the point that the physical infrastructure represents a small percentage of an overall network implementation. As such, the amount of money that can be saved with inferior products simply is not worth the risk. Fortunately, end users can look for three specific red flags that indicate they may be considering inferior products:

- "No-name" or private-label products. If the products being provided are not associated with a well-known industry manufacturer, beware. It's important to ask who the manufacturer is and

where the components are produced. That's true even if it is a private-label product that carries the name of the installation company. If the response to your question about who manufactures the product is an elusive one, it could be an indication that the components are from an unreliable source.

- Short-term installer warranty. A warranty is only as good as the company providing it. If you're offered a 1- to 5-year warranty from a distributor or installer, that could also be a red flag. Solid, reputable manufacturers that have been in the business for several years typically offer 25-year warranties. If the only warranty you have comes from an installer, you could be in danger of having no warranty at all if that installer goes out of business.
- Verify testing and certification. When purchasing products, make sure you ask for ETL and/or UL testing results and certifications, then be sure to verify the information provided. You should even set up several test links and channels and do some field testing before you choose a solution. If products fail or barely pass these test links and channels, it could be another red flag.

While many reputable manufacturers are working toward solutions to this problem, there is much more they could do. Many are aware that their own certified installers are installing inferior products, and possibly even using their certification to get a foot in the door. Some of these installers have a significant footprint, with the buying power to significantly impact the industry. "This is something that has been brought to our attention, and we are certainly addressing it by educating our customers and installers," concludes Commscope Wessels. "There are ways to apply pressure. We believe there is more strength in coming together as an industry to address the problem rather than trying to take care of the situation as an individual company."

Many reputable manufacturers don't yet seem willing to take drastic measures, but perhaps it is time for them to consider stripping those who install inferior products of their certification and incentive programs. If they don't, the situation could get worse.

AUTHOR



RICK SOUSA, RCDD, is chief executive officer and a principal owner of XZact Technologies Inc. (www.xtcorp.com), which provides planning, design, installation, certification, and maintenance services for communications networks.

XZact Technologies publications are protected by international copyright law. XZact requires written requests whenever XZact's literature or portions of its literature are reproduced or used. For more information, please contact XZact Technologies at (704) 527-1515 for reprint permissions.