



By Don Horne

A FUTURE OF FLAT WIRE, WELL-ROUNDED ELECTRICIANS

When Columbus reached the New World in 1492, he proved the earth was round.

Electrical wire and cable have been round since the beginning, but now Robb Sexton is ready to make the world flat once more with his FlatWire technology.

As thin as a business card, this flat wire can be easily (and safely) applied fully exposed to existing walls, carrying everything from electrical current to Ethernet to video and audio speaker signals.

Before this begins to sound too much like a commercial, it should be noted that new technology has made the plumbing industry much easier as well – what with the flexible plastic tubing that is replacing the copper and solder method.

It is conceivable that within a decade it will be as normal to run flat wire outside a finished wall on new construction as it is now to drill holes in studs and pull wire during the initial phases of rough-in construction.

With the expected decline in qualified electricians in the coming years, a faster, easier method of installing electrical wiring in buildings will not only be welcome, but necessary. A rethinking of how we will be training these future electricians and electrical engineers is necessary now.

The utility industry has already moved ahead into the world of wireless



communications, coupled with a greater reliance on automated systems. Electricians today are mostly kept busy trying to make existing systems work again (sometimes having to deal with equipment based on 1960s or '70s designs). The need to learn a whole new approach to wiring a building is the last thing on their minds.

But the making of the modern-day electrician won't stop at the technology. Electricians are rapidly becoming designers and ergonomic health advocates for the clients they serve.

Electricians are invariably asked by homeowners and business owners what

they should and shouldn't use when installing new lighting, or where receptacle outlets should be placed for maximum effectiveness. The questions usually are asked in a casual way, but the answers are taken as gospel.

Especially with the new LED technologies, electricians are expected to know not only the number of lumens of each unit, but the power consumption, effectiveness for the specific task they are illuminating (reading, food preparation or safety and security) and aesthetic qualities of the light. Long gone are the days when all that was required by an electrician to make the customer happy was for the socket to be wired correctly.

But it is going beyond just making the lighting pleasing to the eye and the pocketbook.

Studies are showing that correct lighting can have a tremendous boost on the health of the individual – and can mitigate or even slow dementia in those suffering from that disease.

Electricians are not just pulling and cutting wire – they are part of the health profession, making a better quality of life for those who benefit from their skills.

An exaggeration? Not if you look at the sick day records of a company that has installed specific task lighting and more ergonomic workspaces made possible by better-placed outlets and HVAC systems. Properly wired and better-lighted workspaces make for healthier employees, and that is money saved for businesses looking to keep costs down.

Of course the “modern electrician” will still have to know the basics, from Ohms Law and Electron Theory to Thevenin's and Norton's Theorems, but he or she will need to know not only how to read a circuit diagram, but how to read a client's specific needs. There will be a change from working during the early stages of a project to working at the completion, when all of the above-mentioned talents will come into play – making the electrician much more than just that guy twisting pigtailed on his knees in the sawdust.

don@electricityforum.com