

# THE WORLD IS FLAT – OR SOON WILL BE



By Don Horne

FlatWire can be applied right over finished walls.

If you ask Robb Sexton, our world will once again be flat.

The President of FlatWire Technologies (a part of Southwire Company, best known as the makers of Romex), Sexton is leading the charge to bring a wire no bigger than a 15,000th of an inch thick to every home and business.

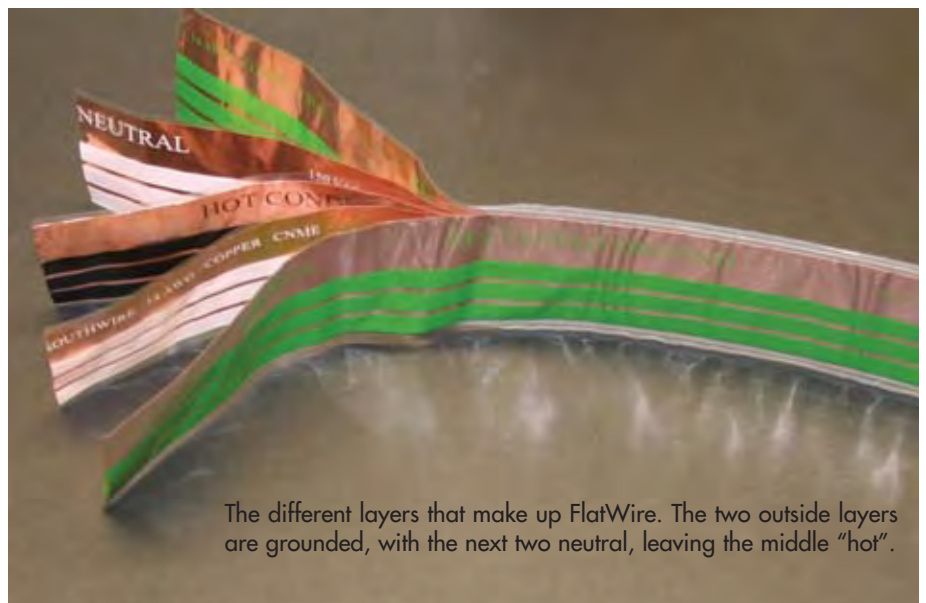
And it all started with a room renovation.

“I redid a room and was left with a lot of exposed wire, as I didn’t have easy access to hide the wire,” says Sexton. “I thought to myself, ‘Why can’t this round wire be flat?’”

With a background in electronics, Sexton began his research into perfecting a flat electrical wire. By 1995, he had started to file patents.

“I was looking for something that would be 120 volts, 15 amps for a standard electrical wire. I knew if I could do this, it would drastically change the paradigm of wiring.”

Sexton began bouncing his ideas off of the Underwriters Laboratory (UL),



The different layers that make up FlatWire. The two outside layers are grounded, with the next two neutral, leaving the middle “hot”.

and it became clear immediately what their major concern was.

“They wanted the wire to be safe from penetration, without a monitoring product,” says Sexton. “There had to be

no shock potential or fire potential.”

The two outside layers are grounded, and the next two layers are neutral, leaving the “hot” conductor encapsulated in the middle.

“The risk of shock or fire has been completely neutralized, because if this wire is ever penetrated, you always hit ground first and neutral second. By the time you hit the hot layer, you have created a short, which trips the circuit breaker every time,” says Sexton.

FlatWire electrical engineers also create active electronics that monitor for ground faults, mitigate arcs and act as a secondary overcurrent device. The intelligent device constantly monitors 110-V FlatWire installations to detect faults that could cause shocks or fires.

Sexton invented FlatWire after founding DeCorp Americas Inc., which was acquired by Southwire in 2005. Since then he has dedicated his time to perfecting different form factors of FlatWire for all types of signals. Today, in addition to the new power-cable replacement product, there are FlatWire versions for replacing Ethernet RJ-45, coaxial cable, three-conductor (RGB) component-video cable, S-video cable, stereo audio cable and speaker wire.

Those who attended this year’s International Builders Show had the opportunity to preview Concealable Nonmetallic Extension (CNE) wiring methodology, which was approved for standard 120VAC electrical wiring applications under Article 382 of the 2008 National Electric Code, the governing entity that establishes requirements for electrical wiring and other systems.

FlatWire is currently coming up with tests as part of the listing process with UL.

“If an extension cord had to go through the tests we did, there would be no extension cords,” Sexton says half-jokingly. “This is the latest, safest wiring that is available.”

Although the price per foot can be as much as \$10 a foot, the final installed price can be cheaper than regular wire.

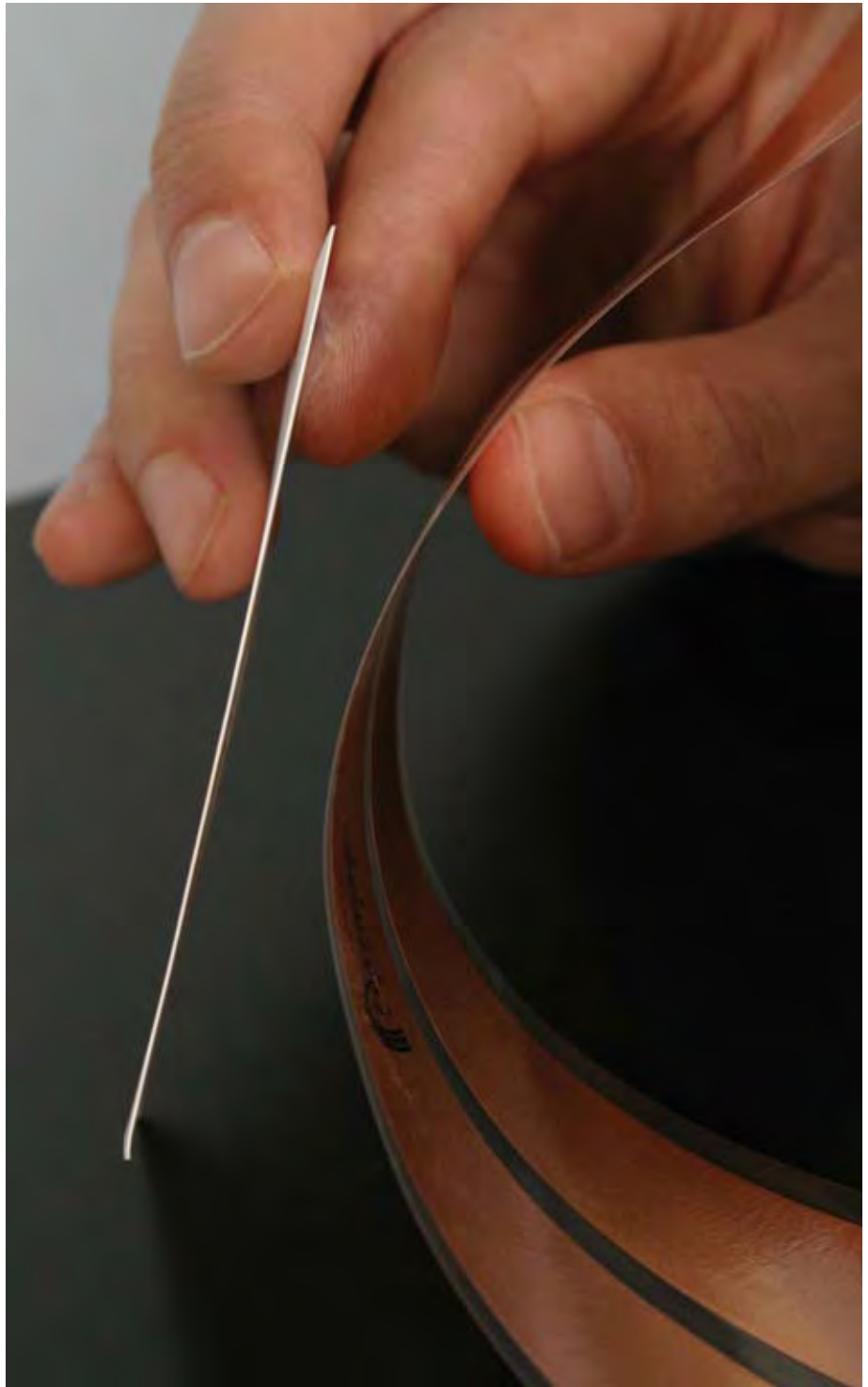
“If you don’t have to open a wall, drill through studs and pay for that extra labour from an electrician, you will find that FlatWire is less expensive.”

As for S-video and high definition cable, the FlatWire has proven to be better at transmitting signals than round wire.

“These types of signals travel on the surface, so a flat surface is actually better than a round one,” points out Sexton.

For Sexton, FlatWire allows a rethinking of how we live.

“Instead of designing rooms around



FlatWire is no thicker than a normal credit card.

outlets, allowing outlets to choose where we place furniture and electronics, we can design the room around how we live.”

Custom homes have been designed with extra wiring and cable to accommodate future expansion of computer, stereo, communication and video systems. “With the cost of copper and

labour, that can be cost prohibitive,” he says. “Now you choose what you want, when you want it.”

Those who wish to learn more about FlatWire or concealable nonmetallic extension wiring technology can contact Southwire, or go to:

[www.flatwireready.com](http://www.flatwireready.com).