

## Wires Are Good

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I do radio for a living. I chose it because people said it was hard, (“we choose to go to the moon...”) maybe hard isn’t the best word, but esoteric at least. The arcane specialty of the magic everybody uses and less than five percent of the population understands.

Like many things, the more you know about it the less attractive it looks. To paraphrase Dennis Leary, there are so many ways to fail in radio. In wireless design, things like receiver self-quieting where your receiver can’t hear what it’s supposed to because your memory bus is screaming in its face like a drill sergeant or intentional radiator spurious emissions where you’re transmitting on frequencies you don’t intend and are not allowed pose great challenges. And issues like these occur before you get to the things you can’t fix like installation issues (you know, your parent’s wifi AP?) and environmental details like concrete and metal walls.

Wires don’t do that. Keep your unintentional radiated emissions in check and your golden. Oh, and you don’t have to share bandwidth with the neighbors like with wifi. In fact, since it’s your own private piece of spectrum you can use any frequency you want and jam as much data in it as you like – at least as long as somebody runs the wire. The wire is your friend.

Radio is for connecting things that move and for uncontrollable situations – like people, animals, packages, planes, trains and automobiles. Don’t get me wrong, radio can be reliable. The military and police need independent communication systems to handle the exact events that can break all those high-bandwidth wires. But radio is for when you need to do something too hard for a wire.

But sometimes it’s not YOUR wire to use. Sometimes it costs more for someone to put that wire in place than your product does so it destroys the business case. What about when the wire gets torn down for the scrap copper or you can’t put it up because the shooting hasn’t stopped? You can’t put a wire on everything right? That’s what radio does best – it provides a solution for hard problems. Easy problems are for wires.

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