



BY MAURY WRIGHT, EDITORIAL DIRECTOR

## Immaturity in 802.11n products guides a return to a wired LAN

I recently bought a Draft-n-compliant wireless router but was extremely disappointed in the performance. The event revamped my thinking about the “IT” infrastructure in my home. And it made me wonder how many people might come to the same question that perturbed me: Does integrating wireless support in a router make sense?

I’ve written regularly about the need for a multimedia-capable home network. And going back more than five years, I’ve regularly stated that range is often more important than speed in wireless-networking products. I’ve certainly hoped that 802.11n would finally deliver the speed necessary for video along with whole-house coverage.

I had for a couple of years been happily using a Belkin router based on an early MIMO (multiple-input/multiple-output) chip set from Airgo Networks (now part of Qualcomm). In my test, that product bested all other 802.11 products that I had tested in offering the range to cover my entire home and yard ([www.edn.com/article/CA6296066](http://www.edn.com/article/CA6296066)).

Recently, however, my son bought a Nintendo Wii console. The Wii includes an 802.11g client but not a wired-Ethernet port. The Wii didn’t connect with the Belkin router. A little Web research revealed a number of wireless issues with the Wii and the fact that the Belkin router was one of a few products that absolutely doesn’t work with the Wii.

I figured it was time for an upgrade, anyway. I had recently discussed Draft-n products with Broadcom and even written a column about the conversation ([www.edn.com/article/](http://www.edn.com/article/CA6434332)

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CA6434332). Broadcom had assured me that its Draft-n chips would be software-upgradable to the 802.11n standard and that it was matching the performance of Airgo-based routers—which are really 802.11g extenders, because the shipping products don’t follow the Draft-n path. So, I bought a \$99 Linksys WRT150N router with an integrated Ethernet switch that I’m fairly sure uses a Broadcom chip.

The performance was miserable. With the router in my office, I couldn’t get a reliable signal in my living room on the Wii or my notebook PC. A quick search of reviews on the Internet (yes, I should have done that research first) revealed that all of the Draft-n products perform poorly. So, I returned the Linksys router.

I spent a few days researching my next move. Ironically, the RangeMax 240 that Netgear announced a while ago seems to be the top-performing product. It uses Airgo’s third-generation MIMO chip. But it no longer

seems to be on the market. I did consider other wireless routers; then, while standing in an aisle at Best Buy, it hit me that I should just buy a wired router with a GbE (gigabit-Ethernet) switch.

I did a bit of research on wired routers. Inexpensive options with 100-Mbps Ethernet abound. But, if I was going to separate my wired and wireless networks, I felt that a product with a long life expectancy was essential. So, I paid \$129 for a Linksys RVS400 with a four-port GbE switch. The product appears to target small businesses more than home users. It comes in business attire rather than the loud purple package of most Linksys products. And it offers far more features in VPN (virtual-private-network) support and configurability.

I had a Category 5 link to my living room and a switch there to connect the Xbox 360 and the SlingBox. I went to Fry’s and bought one of its loss-leader, generic 802.11g access points for \$25. The user interface for the Airlink access point isn’t as slick, but it is up and working just fine. The Wii and my son are happy. The access point in the center of my house seems to be providing good coverage wherever I need it.

I figure I’ll sit out the first round of 802.11n products. A wired-only router may seem like a step backward, but it feels more like a step forward now that it’s up and working. And I’ll recoup the investment in GbE over time. I won’t need to replace the wired router for years, and I can change the access point when better options become less costly. And, if I were a router vendor, I’d design products thinking that other customers might make the same decision I made. **EDN**

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