

Crossing the Digital Divide (v144)

Finish work

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for the Observer

I have a few clients with far more resources than I'll see in this lifetime – opportunity, timing, and a propensity for risk is often the difference between scratching along and being comfortable. I still haven't figured out why, as is the case with many of my high-net-worth clients, they all seem to have closets devoid of any real wardrobe, refrigerators lacking most basics, and zero clutter. Really. How?

When engaged with projects in higher-end properties, I keep a mindful eye open to where equipment is placed, cables run, and cords extended from AC outlets. This applies when setting up new systems or updating existing solutions.

Hiding a printer in a closet is easy enough, dressing a cable behind a wall, or using wireless technology to create a home network (a LAN by another name) is fundamentally the same whether an open shop or a three story Edwardian home. I've often referred to the LAN as digital plumbing, which, unlike water, can move data (voice, video or otherwise) across virtual (as in wifi) or physical media (Ethernet cables). Recognizing the basic needs: sharing Internet access with all the devices that require an outside connection. Roku boxes, Amazon Firesticks, Kindles, iPhones, Droids, Weather stations, security cameras, Alexa, etc., it's imperative that each transport option (wired or wireless) is deployed as optimally as possible.

When it comes to high-end homes, hiding cables is a given, hiding wireless access points somewhat more challenging – and the subject of this weeks' column.

Optimizing Wireless Distribution: Wireless Access Points are not all the same – some consumer grade devices have an effective range of under ten feet – suitable for a big room with couches and tables, woefully under-powered if you have walls, ceiling, floors, glass and distance between the Access Point and the device that needs access.

In most cases, a wifi signal resembles a donut. If your device has rabbit-ear style antennas, the donut essentially fits over the end of an antenna. Close to the antenna, wifi is strong, Internet is served as fast as it gets to you. Further away from the Access Point, the donut grows – the “whole” in the middle gets bigger, and the outer edge becomes a ring of broken lines – literally, you might get a good signal with your laptop titling left, but not right.

In the “nicer” homes or in a business environment, multiple access points can be configured to act as one, and can be placed, as discretely as possible, on walls/ceilings and passageways to provide continuous coverage for mobile devices, and placed where fixed location devices have as strong a signal as possible.

What if you only have one access point and don't mind that you can see it.

Place the unit close to where the majority of demand is, e.g., kitchen or living room

Raise the access point to a level where the "donut" won't run into things as the beacon grows. Example: if the wireless access point is on the floor, you've lost half the donut two feet off the ground, and another half at the first wall.

Most consumer grade access points broadcast wifi at 2.4Ghz as well as 5Ghz. The lower bandwidth does a tad better with light foliage, non-lathe & plaster walls, and second stores without metal beams. 5Ghz supports higher speed and great distance, but fails miserably at penetrating oak and pine forests.

Wifi signals bounce off glass and metal – avoid placement where the "donut" will hit your picture window or side-by-side freezer.

Wifi connections have a hard time with Metro Racks, chicken wire, metal roofs/siding, or ponds/lakes.

As much as my work involves wireless connections, where I can, when I can, a wired connected is always preferred – less variables, better performance, greater security, but you can't always run (and hide) a cable in a finished room.

Whether you're flush with resources and prefer minimal clutter, or move things around your cabin depending on what your space needs are, keep a mindful "eye" on your wifi donut, if "you" can't see it, neither will your device (in most cases).

Control those things you can, and keep the surprises to a minimum.