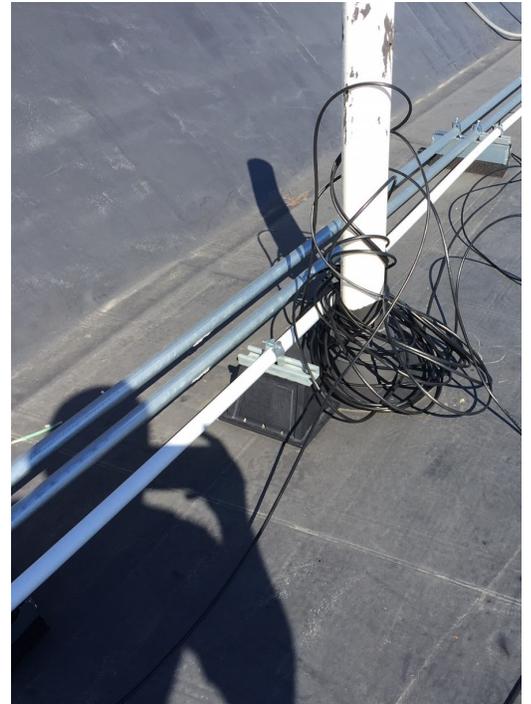




Ashton
TECHNOLOGY SOLUTIONS

Out of Sight, Out of Mind?

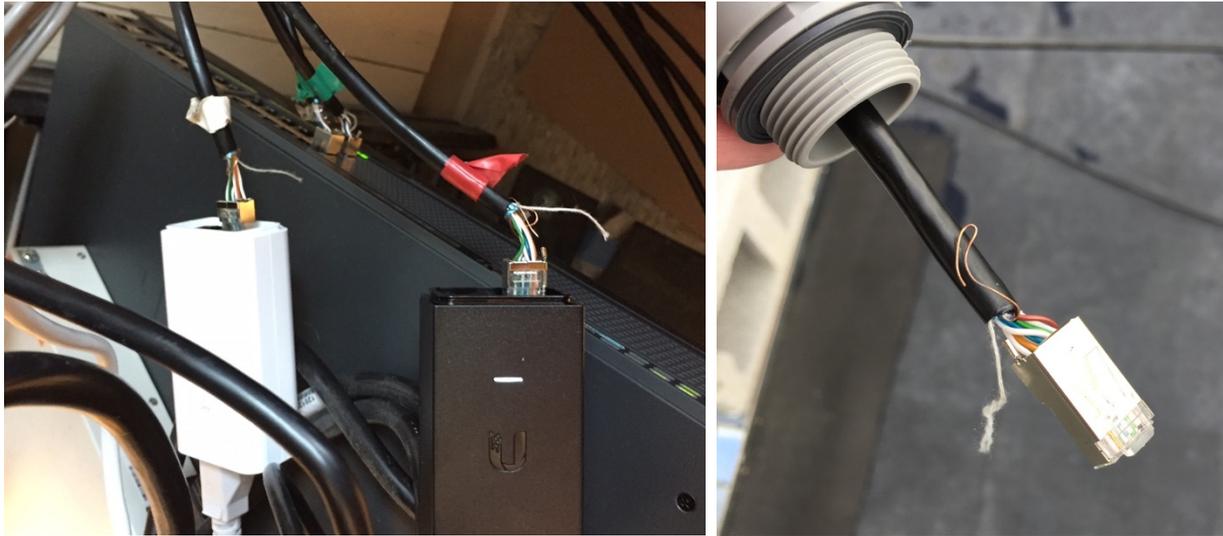
It's important to know who you're hiring to install hardware in places you might never go.



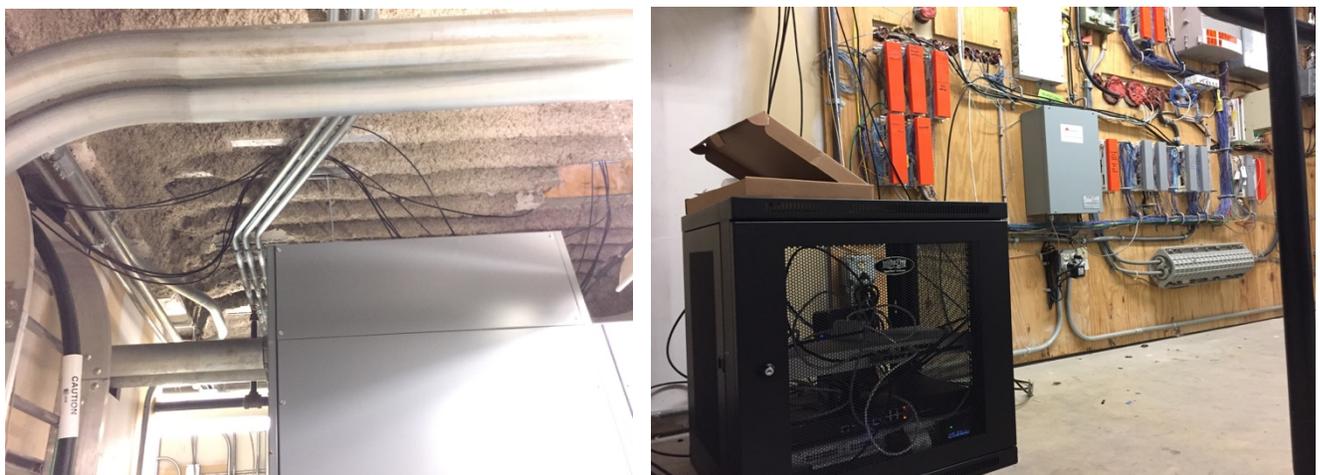
Recently we received a call from the owner of a satellite communications company based in Texas. He'd found our name in the user forum on the Ubiquiti Networks web site, and he was hoping we could help with a problem. He'd been subcontracted by a Cleveland-area company (see sidebar) to create a wireless network and install the hardware (Ubiquiti and Cisco Meraki) for public WiFi at Crocker Park, a 1.4-million-square-foot shopping and residential complex in Westlake, Ohio, about a half-hour drive from our office. But the installer he'd sent had been called home for a family emergency, leaving the job unfinished. The caller had not been to the site but assured us that, according to his installer, less than a day's worth of work remained. We said we'd send someone out and get right back to him.

Our systems engineer and wireless networks expert, Justin Oaks, was stunned by what he found.

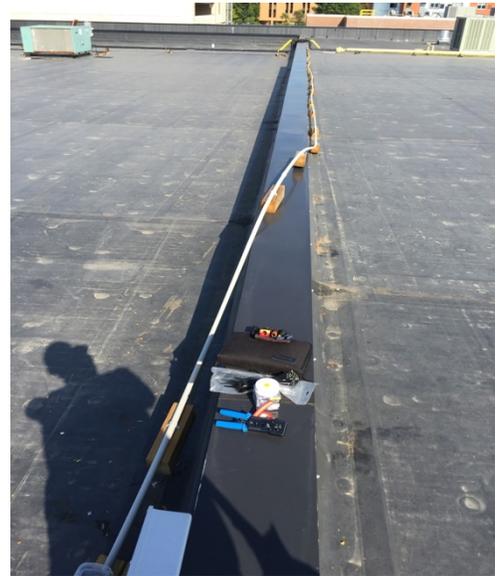
The original installer had used high-quality cables and components to match the high-quality hardware, but that was probably the only reason anything was even close to functioning. The work was amateurish, to put it mildly. The cable terminations (the points where cable connects to hardware) were a mess, with lots of visible wires. This can result in “crosstalk” among the four pairs of wires that are carefully wound within the sheath.



Cables were draped carelessly (below left), which can lead to interference and inefficiency. In one IT room, a server rack sat on the floor (below right), inside an unnecessarily large case that was positioned right at the top of the stairwell that provided the only access to the room. This was, at best, unnecessarily inconvenient, and possibly a fire hazard.



The scene was no better on the rooftops where the Cisco Meraki (access points) and Ubiquiti (NanoBeams and Rockets) hardware was positioned. Cables were strewn about, uncovered, and often left loosely coiled instead of trimmed to proper length (like in the photo on the first page). The only conduit we saw was on a cable that ran along and then over a low wall for no apparent reason, as if the installer had started on the wrong side then, upon discovering the mistake, had opted for the easiest fix (see photo at right).



On one roof (photo below), a line drop was left uncovered, creating something like a funnel for rain water to flow inside the building. The head of maintenance was especially irate when we showed him that.

Matt Nelisse, from our subsidiary Neletech (a low-voltage cabling provider), said it was the worst cabling job he'd ever seen.



On all roofs, weather-proof boxes were stuffed haphazardly with batteries, power management units, and other components. The PoE (power over Ethernet) switches were 48 volt, but Ubiquiti gear runs on 24 volts, requiring an additional PoE injector.



A Ubiquiti Rocket (top right) had been set up to communicate with just one Ubiquiti NanoBeam. This is overkill, to say the least. The Rocket has a 120-degree range; it's designed specifically for use with multiple NanoBeams.

Bottom right: the round device is the NanoBeam. The top and bottom rectangular devices are antennas. The one on the middle is the access point.

Each of these devices needs to be configured to ensure that it's working properly. When we arrived on site, none had been configured. We did that, in addition to re-terminating all of the cables, and planning out the wireless channels, radio power, and positioning of broadcasting and receiving devices. We essentially started from scratch.

After about 50 man-hours over several days, Ashton and Neletech brought the entire installation up to professional standards. Today the public WiFi at Crocker Park is fully functioning.





The Crocker Park WiFi network uses a proximity marketing system by We Build Apps LLC, which gives retail centers the power to interact directly with shoppers via WiFi or Bluetooth. When they opt in, shoppers receive real-time information about navigation, product availability, limited-time special offers, loyalty programs and, if necessary, security alerts. The retailers can gather data about returning shoppers' purchases, preferences (through surveys) and visit frequency. They also can start and stop promotions instantly, depending on sales that day. WBA calls it *Multiscreen as a Service™* (MaaS), and Crocker Park is the first shopping center to use it. For more information, visit webuildappsllc.com.



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