



## **Wireless – the new normal in lighting control for the commercial real estate industry - by Joe Massott**

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When the world traded their downtown offices for dining room desks, facilities managers everywhere watched their lighting systems illuminate the empty buildings left behind. Now, as people trickle back into Midtown, as new developments ramp up and as tenants clamor for “healthy buildings,” lighting designers and engineers are evolving their approach to meet the demands of a post-COVID world.

Standards organizations and industry alliances (DALI, IEEE, Bluetooth, ZigBee, IEC, etc.) are increasingly going wireless, and in the process, lines between lighting control and building control are blurring. Building automation systems, built on decades of similar networking standards and governed by many of the same organizations (IEEE, ASHRAE, IEC), are becoming thoroughly interconnected, wirelessly.

At the building scale level, most new buildings are reaping the benefits of this interconnectedness – using occupancy sensors to assist HVAC systems, taking inputs from fire alarm systems to turn on emergency lights, all the while constantly tracking energy end uses. Due to stricter energy codes and LEED requirements, networked lighting controls are a practical solution for most new construction. Wireless controls add the next level of value, flexibility and energy savings to a building.

The way people use commercial spaces is changing drastically. Where hundreds of people once gathered in an office daily, a space may now only see a couple dozen, spread out sporadically over the course of a week. Current systems, tethered by numerous cables and conduits, are ill-suited for this type of program change. Wireless systems with embedded sensors, individualized controls and robust security protocols allow facilities personnel to troubleshoot, control and monitor lighting remotely. Facilities personnel – not electricians – can add controls for new technology, like UV-C disinfecting lamps, and leverage wireless occupancy sensors to fine-tune the controls of HVAC systems employing new, airborne pathogen minimizing airflows and operating modes.

With the modularity inherent in wireless systems, owners can test these technologies at a scale that meets their needs. System architectures range from single device applications all the way through municipality-wide integration. End-users are getting more comfortable with, and expecting more from, technology. Replacing line voltage controls with wireless switches and multi-function touchscreens is a simple way to upgrade a space, a building or an entire campus.

With the economic uncertainty surrounding the recovery, it is crucial that designers employ controls solutions that meet bottom line needs. Gone are the days of cheap copper. Per pound, the price of copper has doubled from pre-pandemic levels and sentiment says it will not stop there. Wireless lighting systems combine a huge savings in raw materials with the ability to reprogram and reuse devices without an electrician or additional wiring. With wired systems, more connected devices mean more cost in cables and conduits. With wireless, more devices create more savings. After the upfront savings, one can expect to see similar value to that achieved when phone systems, internet and audio/visual systems went wireless.

At AKF, engineers, lighting designers and lighting control manufacturers are collaborating to provide right sized solutions – connecting lights, sensors and data in a way that maximizes value for owners and end users. There is no one system architecture, no one manufacturer that suits every need, but with wireless controls, any building can be outfitted to stand the test of the new normal. The world is well on its way to going wireless and real estate professionals everywhere can be excited for lighting controls to join the wireless revolution.

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