ENABLING THE
"SMART"
IN SMART LIGHTING
FOR A TOP MAKER
OF CONNECTIVITY PRODUCTS

Powered by softdel

INTRODUCTION

*How **Softdel** enabled a leading manufacturer of connectivity products to power up and connect a smart lighting system, and became a trusted partner in the process.*

When a global supplier of connectivity products resolved to put its stamp on the Connected Lighting market, its mission was as clear as this LED bulb: to accelerate deployment of its smart lighting system in commercial buildings.

As for *why*, one stat tells the story: Equipping lighting systems to read their environments through sensors that monitor daylight and more, and then relay their data to the building's automated hub, creates efficiencies that can sustain energy savings north of 50 percent.

But that's not the whole story.

In addition to saving money, smart lighting systems contribute mightily to purposeful, dynamic work environments that enhance well-being, sharpen concentration, promote learning, and strengthen efficiencies. How? By ensuring access to natural light – *controlled, comfortable natural light* – identified by a recent Harvard study as among the top drivers of employee performance.

BEFORE LIGHTING COULD TURN SMART, A COMMUNICATIONS PROTOCOL HAD TO BE MET

For its first foray into Connected Lighting, our customer designed a system that is intelligent (light levels and color temperatures adjust automatically to optimize office environments), easily deployed, and easily integrated.

Fixtures connect through a gateway where the PoE network links to LED drivers that power the lights and feed sensor data to the **Building Management System (BMS)** – allowing the hub to control light status, real-time energy consumption, temperature and humidity, air-quality monitoring, and more. (PoE is Power over Ethernet, which carries power and data on the same secure Ethernet cable.)

This is cutting-edge stuff. But without the means to exchange data between its lighting systems and the BACnet-enabled BMS, our customer could go to market with lighting but not the connectivity to control it.

ENTER SOFTDEL:
LIGHTING MEETS "SMART"

Our internally developed BACnet stack, which maintains its own device and object databases and can be manually configured or dynamically populated from existing devices on the network, makes appreciably faster work of stack integration. This came as good news to our customer, which could now expedite the establishment of seamless communication between its lighting systems and BACnet-compliant BMS; communication that enabled what this company sought to deliver to its own customers:

The "smart" half of "smart lighting."

How to define "smart?" It is a lighting system automatically controlled by any BACnet-based BMS, capable of routing alarms and event notifications to third-party applications.

This was a satisfying engagement, to be sure – but what came next was perhaps even more gratifying.

Vishal Rathod, Softdel's Director of Digital Transformation, picks up the story from here:

"Having proved ourselves with BACnet, we earned a shot at helping this blue-chip customer pursue other segments of its PoE lighting strategy –which sought to share data collected by its lighting systems with other areas of building management, and thereby gain wider access to the BMS ecosystem."

CENTRALIZED FACILITIES MANAGEMENT AND
SMART SHADING

This work unfolded on two fronts. First, we were tapped to develop a facility management tool to centralize control of all lighting. When to light the executive floors or darken the mailrooms? Countless lighting decisions across scores of tenants and hundreds of areas, zones, and floors were automated and controlled through a Softdel-developed tool.

Then we were tasked with developing integrations for routing alarms and events notifications to third-party applications. Case in point: smart shading. Our integration sent data from the system's daylight harvesting sensors to an app that automatically adapted motorized shading to the intensity of sunlight at every time of day. The result: *comfortable* natural light, on all sides and all floors of all smart-shaded buildings.

How urgent is this work of making office buildings sufficiently "smart" to conserve energy and spur productivity? We already know that lighting and air quality are the top determinants of employee well-being. Add that office buildings account for a whopping 40% of primary energy consumption in most developed markets, and we'd say it's urgent indeed.

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