



**WE'RE DRIVING
THE NEXT PHASE OF THE INTERNET OF THINGS
NOW...**

Strategies for Connected Lighting Control

Enhancing the Customer Experience

As the connected world around us continues to expand, lighting has become a popular application to automate, both for home use as well as in commercial and industrial settings. People value the ability to control their lighting wherever they are, to reduce energy, create atmosphere or simply deliver less light. The growth of wireless technology has opened up the door for lighting manufacturers to create innovative, cost effective solutions that provide increased flexibility in how users can control their lights, leading to a better product experience.

Reducing Energy Demands

Lighting is one of the major uses of electrical power on a daily basis around the world. Statistically, between 20 and 50 percent of the total energy consumed in homes and offices on a global basis is for lighting. What many people don't realize is that over 90 percent of the lighting energy expense used for many buildings is wasted due to over-illumination.

Real World Example

Take for example the scenario of a popular chain restaurant in the US. In any location they have a combination of dinner seating along with a casual bar area. To support this layout, they have several lighting zones within the restaurant, each with ten or more lights including spotlights and highlights. They require the ability to control the brightness in individual zones and implement timed operation in these zones.

The challenges they faced were that the dimmers by themselves could not control all the lighting in a single zone because of the wattage requirements. In addition, as each dimmer was individually controlled, they were often adjusted differently from zone to zone, which created an unbalanced look. They also faced issues with burned bulbs creating unbalanced lighting until maintenance could be called out to replace the burned out bulbs.

Benefits

- Rules-based operation enables users to define how and when they want lights to operate to best suit their needs
- Ability to dynamically adjust brightness based on ambient light and presence to reduce energy usage
- Flexible platform and pre integration with networking hardware reduces time to market for lighting solutions

Lighting Control

Some of the key ways in which automation in general can help minimize energy usage when it comes to lighting are:

- Understand and specify the individual illumination requirements for a specific area
- Implement automated time-of-day usage templates as to not expend unnecessary energy
- Monitor and alert on outages on lighting systems
- Monitor and adjust load to reduce demand during peak periods

To remedy this situation, they implemented an automated solution connected through an IoT platform. This solution enabled them to not only control the operation of all the lights in all the zones automatically depending on the day, time, or special event needs, but the system was also able to read lighting levels from sensors and adjust the brightness to compensate for burned out lighting and maintain the correct ambient lighting.

Advantages of Connecting Lighting Through an IoT Platform

In the scenario we described, this was made possible by integrating the lighting through an IoT platform. This platform eliminates the need for the end user and even the lighting manufacturer to understand and manage things such as network connectivity and security. The key is to select an IoT platform that provides lighting manufactures with a “Black Box” type of solution that support the solution from end-to-end. By this we mean from the device, to the cloud and finally to the mobile application for the end user to control.

At Ayla Networks, we can do just that. Ayla has partnered with the leading networking hardware manufactures to provide solutions that are pre-integrated to work with our software so all of the networking and enterprise grade security has been pre-loaded into the chipset. This enables an encrypted, secure connection to the Ayla Cloud so that lighting manufactures can concentrate on defining and implementing the operation of their lighting solution and not on networking and security. Within the Ayla cloud, manufacturers are provided simple to use APIs to virtualize their product for control and operation, and they can take advantage of rules engines, business intelligence and system dashboards to monitor the usage and operation of their products. Finally, Ayla provides a library of API calls for simple, straightforward application development on iOS or Android platforms, as well as a selection of rich pre-built mobile applications that are ready for branding.

Lighting Control

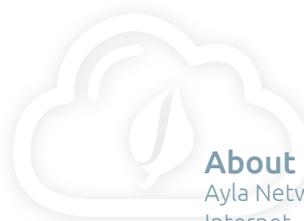
As a leading provider in IoT platforms, Ayla Networks enables manufacturers to quickly create and deploy connected devices in a secure and scalable manner, enabling them to provide superior customer experiences.

We can assist you in creating connected lighting solutions that are a competitive differentiator in the market and a platform for a successful growth strategy.

Ayla Networks

607 W. California Ave
Sunnyvale, CA 94086
USA

Tel 408 830-9844
Fax 408 716-2621
marketing@aylanetworks.com
www.aylanetworks.com



About Us

Ayla Networks is a leader in software and solutions that enable the Internet of Everything. Based on the premise that any device should be accessible from any location, the company has developed an end-to-end platform that allows any device to be managed remotely. Headquartered in Sunnyvale, Calif., the company has partnered with major electronics manufacturers, leading venture capital firms and investors who share this vision.

For more information, contact Ayla Networks at www.aylanetworks.com.