



## Smart Streetlights – Why Choose “Open”?

In a world where everything seems to be smart, open and connected, we still discuss the value of choosing an open and Interoperable systems versus a proprietary one.

APANET, a leading provider of smart outdoor lighting solutions that saves energy and improves streetlight maintenance processes, was recently involved in a project to install 800 light poles for the A1 highway in Poland. The project claimed to be based on the



standardized LonWorks® power line communication technology which communicates with and remotely controls, commands and monitors each light pole, however after reviewing the program in greater detail the selected supplier of the system did not supply devices that were certified by the Lonmark Organization, in fact all the characteristics were of a proprietary system. Furthermore it had a proprietary repeating communication algorithm as well as proprietary gateways/concentrators with GPRS modems without any information about the protocol involved.

The customer tried very hard to get that solution to work but didn't succeed because communication and control were not working nor documented properly. Despite involving other suppliers and technical universities, no solution was found.

After months of lost time, the customer finally launched a request to replace the initially selected “not so open” solution with a truly open and interoperable system including LonMark certified devices and at least two different type of controllers from different suppliers to prove openness.

APANET won the business and is now replacing the proprietary light point controllers with the GLC1xx and Echelon Outdoor Lighting Controllers. These two types of light controllers are designed, manufactured and commercialized by two competing companies. Thanks to LonWorks, both controllers are interoperable and can be designed into the same outdoor lighting network. The GLC1xx light controller allows control, command and monitoring of any luminaire (LED or conventional HPS): on, off, stepless dimming, as well as reading active power, current, voltage, power factor and cumulated energy consumption (kWh). APANET's open and interoperable solution, allows the customer to reduce energy consumption by adjusting light levels based on activity and time. They can also save on maintenance costs with the automatic failure identification feature.

All the light controllers will be installed by the end of December 2015. APANET will then provide the customer with the Central Management System from Streetlight.Vision to manage each light point and to do the photometric tests.

### **Conclusion**

An interoperable solution creates a durable competitive environment whereby any part of the system can be sourced from a different supplier. This prevents vendor lock-in, since no single component will force owners into a proprietary, single-vendor solution, with a risky single source strategy for replacement parts and a single source for maintenance and support. With a well-structured standards-based system, all of the proprietary hooks are removed, leaving the customer with a wide variety of options.

In the outdoor lighting control industry, it is estimated that there are about 50 different proprietary control systems. Selecting any of them is very expensive and risky given all of the elements and the complexity required to create a complete well-performing outdoor lighting control system. Fortunately, there are about 20 companies, like APANET and Streetlight.Vision, that provide open and interoperable solutions. By using standards-based systems every manufacturer benefits from multiple sources of supply for their components, standardized tools and common software.

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For more information about LonMark and the LonMark Outdoor Lighting Committee:  
<http://lonmark.org/connection/solutions/lighting/outdoor/street/>