

Once the operational aspects of end-to-end management of a small number of segments (luminaires to service center) are proven in the trial and understood, deployment on a large scale can begin.

Conclusion: LONWORKS Device Networking Opens the Market

Public Lighting Management Networks can become a high volume and high value market for photosensor, ballast and device controller manufacturers by designing LONWORKS networks into your products. The adoption of a networking standard by all the key players in the outdoor lighting market will lead to new categories of intelligent networked lighting products – a boon to all the market constituents.

Technology is no longer limiting the development of the market. In order to help industry move forward members of LONMARK International, an independent trade organization dedicated to the development of open, interoperable standards utilizing LONWORKS networks, are developing street lighting communication standards. Lead by Philips Lighting, this group is defining communication profiles for street lighting equipment. These profiles will allow disparate manufacturers to build products independently, yet support installation using standard industry network confirmation and integration tools. Companies interested in participating in this industry initiative are encouraged to join the Street Lighting Task Group. More information can be found at www.lonmark.org.

Trials of networked lighting can be supported today by a channel of trained LONWORKS Network Integrators using off the shelf products. LONMARK certified devices can quickly be set for self installation behavior and common data sharing so innovative network applications can be developed and deployed through your existing channels.

Authors: Bob Dolin and Bob Warden, Echelon Corporation

Technical Corner

Improving on a Great Thing

Since the inception of the LONMARK Interoperability Association (the former name of LONMARK International) about a decade ago, profiling device-interface functions has been at its core. It has been the goal of LONMARK members to define the interaction between every device imaginable that would reside on a LONWORKS network. The results of these efforts are called “LONMARK functional profiles,” or simply, “profiles.”

It is not without great effort that manufacturers from competing companies have sat at the same tables and participated in the same teleconferences to accomplish the same goal of interoperability. All of these efforts – some heated – culminated in what we have today: 70 profiles spanning around 10 vertical industry markets.

It is said, “If you do your job well enough, you will eventually eliminate your job.” Well, LONMARK is nearly to that point in many of those vertical markets. In building automation for example, the heating, ventilating, and air-conditioning (HVAC) profiles (with scheduling and supporting profiles) comprise nearly a quarter of our entire list of profiles. So where does an organization go from here? Further up the food chain, of course: discussion is all-abuzz about the LONMARK System Definition specification. This is a plan where we will essentially create profiles of profiles, whereby a building specification could state the use of a “system” profile for particular functions in a building. The system profile

would define the pieces and parts that are required for particular tasks, and also define the associated bindings and default settings. The system definition is a discussion unto itself. Therefore, look to read more about this in the future.

With the slowing of profile production, the casual observer may conclude a lack of interest. However, the reality is this: some markets are ready to move forward with the system definition (or system profiles), while other markets are just now beginning to ramp up to speed in profile development. Some of those markets include, but are not limited to, semiconductor fabrication, refrigeration, transportation, commercial food production, home and professional audio/video control, and whitegoods (domestic appliances). Some of these markets have long had functional profiles, and are now seeing a resurgence of activity driven by these markets embracing open technologies.

Acting on What We Have Learned

So with all those years of experience, LONMARK members have learned what works and what does not work. We are painfully aware of how a good process can be delayed for any number of reasons. To that end, we are excited about these emerging markets and their foray into certifying devices based on LONMARK functional profiles. It is imperative to us to make sure that these profiles are developed with the greatest amount of input, review, and speed. Sometimes those goals can be contradicting. It is our goal to find an ideal balance.

We have been working on ideas to improve the profile-production process based on the things we have learned during the formative years of the association. We want to have such things as a single page that will be updatable by the task group leader for their profiles, for example. This should allow anyone to see at an instant just where a profile sits in the queue. We also want to allow sorting of profiles that are in development by

status, task group, last updated, “who has the ball,” and whatever else members find helpful.

We also want to improve member editing of the paper profiles by moving away from DOC files that are prone to formatting troubles as the profile is passed from one person to the next during discussions. The present plan is to create a way for profiles to be dynamically generated based on text that is easily editable: preferably an XML solution, for portability. Ideally, when someone clicks on the link

to download a published profile it is then generated on the fly from XML files and images into a PDF file. In this way, the file is always the latest, and it is always, instantly of the same format as all of the other profile documents, should we choose to change the format in the future.

Profile voting can also be improved. We want to have reminders posted to inform companies of impending end dates for a profile’s review period, and a way for a company to verify that they’ve already voted, or need to vote.

These are just a few of the ideas that we have been kicking-around here at LONMARK. Membership is what has always driven LONMARK, so input from our members is extremely important to us. Members are encouraged to join us on the member forum, where comments and suggestions are welcome. I hope to see you (and your ideas) on the member forum soon.

Jeremy Roberts *is the Technical Director of LONMARK International.*

Integrators Perspective

Leveraging your Experience and Know-how

The shift from proprietary-based building automation systems towards open systems technology is gaining pace, and those of us who have carried the banner of open, standards-based systems since the early 90’s can expect mainstream market acceptance to continue to accelerate.

Importantly, we can now leverage the knowledge and experience we have gained to tangibly enhance the success of our businesses.

Making the Case

Let’s define the “supply” side of our business as those who provide the digital products and tools required to implement the systems we sell. Let’s call the “demand” side those who use these products and tools, then implement, deliver and service the systems. Change is occurring and accelerating on both the supply and demand sides of the business.

On the supply side, the traditional distribution paradigm of branch offices delivering factory-manufactured products is disappearing. However, it can’t be denied that the majority of manufacturers of the DDC lines we represent either rely totally on

independent distribution (us) to add the value required to deliver a system, or are actively promoting competition between a fading direct channel of branch offices and a growing independent channel. As members of this independent channel, we see the demands for exclusive representation by the manufacturers of commercial products fading away.

Open Systems ideology clearly goes against the grain of any traditional product manufacturer of commercial DDC controls. Why would any manufacturer teach his branch office network how to deliver a system that would allow a client to create a “durable competitive environment”? A manufacturer’s direct distribution channel is in business to create a captive base for service by the manufacturer, not to create performance-based relationships.

On the “demand” side, independent control contractors have become, or are becoming, “knowledge-based” businesses. We subscribe to a common ideology – “Open Systems”. This ideology includes being comfortable with performance-based relationships with our clients. We “self-brand” – we sell our company and accomplishments first, and the products we represent second. We add status to the products we choose to represent, and not the other way around, as it was in days past.

As the market continues to demand open systems, and as the five to eight year manufacturing cycle

matures for each manufacturer’s DDC product line, we see brand after brand presenting “new” LONWORKS-based systems. When was the last time a new proprietary line hit the streets? Also, importantly, our marketplace has totally accepted the products of specialty component manufacturers – sensors, valves, actuators, etc. delivered with the systems we sell. Delivering “best-of-breed” components is seen as more desirable than delivering a “homogeneous” system, with all components and DDC devices manufactured by the same company.

These changes on the supply and demand side of our business are evidence that market expectations have changed. Market expectations were that the product manufacturer and his brand name carry most of the value to the client in the systems we deliver. Market expectations today and tomorrow are, and will be, that the implementer – the Systems Integrator – (you and me) – and our ability to apply products perceived as commodities carry most of the value to the client.

The Opportunities

Knowledge has become a great differentiator. Those of us who “caught the wave” in the mid 90’s, and who are actively influencing the change that is occurring in our business today, are leveraging our experience and know-how into tangible opportunities.

There is an enormous base of proprietary systems, and disgruntled clients. Just about every one of