

Technical Corner

Adding More Interoperability with Version 3.4 Guidelines

The new LONMARK Interoperability Guidelines are here; and with them, a few enhancements to push us that much closer to ubiquitous interoperability. One of the most exciting advancements comes in the way of self-installation: Echelon Corporation has introduced the Interoperable Self-Installation (ISI) protocol. Already a part of the European CECED CHAIN specifications (for automation of home appliances), it allows small (less than 200 devices), simple networks to self-install and correct installation conflicts as new devices are added to the network over time. Echelon's web site describes the ISI protocol as "an application-layer protocol that allows installation of devices and connection management without the use of a network management tool [...]." Is this the only way to do self-installation, you may ask? No, however, it is the LONMARK interoperable way. If you do self-installation today, you can continue in that fashion. The goal behind ISI is to have a platform that will fit the majority of needs and allow manufacturers to add to that platform such that their devices will interoperate with other devices certified according to the LONMARK

Guidelines and incorporating the ISI protocol. The ISI is most suitable for devices without function-specific CPs, or devices that are fully functional in simple networks with their factory-set CP defaults.

The ISI documents can be found on Echelon's Web site: www.echelon.com/isi.

The first thing you'll most likely notice is the change in layout: The Guidelines have been changed to better match the layout of the document submitted through ISO channels for standardization. This new layout will assist us in keeping the versions more in sync with each other as subsequent submissions are made in the future. The Format file information is now also part of the Guidelines in an attempt to keep the documents similar.

As most developers are aware, LONMARK International's Certification Tool (LCT) (cert.lonmark.org) includes a downloadable component to test the network interface of a device, including status queries of the Node Object functional block. The version 3.4 Guidelines add a few ad-

ditional compliance requirements for timing so that each certified device's performance will be in-line with expectations of network-management tools adding to the interoperability of installation and monitoring. Along those same lines, each device that augments a standard profile in its implementation will need Device Resource Files to accompany it. The requirement for resource files is no longer restricted

to devices that have UNVTs and UCPTs but is for devices that also add SNVTs/SCPTs to a functional block. This will allow installers to more easily pre-install a network with their network-installation tools before physically assembling the network.

A few of the minor changes you'll find in the Guidelines include:

- the ability to now specify CPs as Device-Specific without also requiring them to be Constant,
- allowing a SCPTnwrkCnfg CP to apply to the entire device whenever a Node Object functional block is not implemented to reduce code size for low-memory devices,
- adding "unsigned quad" and "double-float" as standard base types, providing greater range for utility-metering and high-precision applications.

There are also clarifications on the acceptable content of self-documentation strings and a device's interface to the network. I encourage you to download the new Guidelines from the LONMARK International Web site (www.lonmark.org/products/guides.htm) to become familiar with the enhancements and clarifications. And, as always, please contact LONMARK Staff with any questions. We are always happy to help.

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