

# Technical Corner

## Technical Update for 2007, Q1

In the first quarter of this year, LONMARK technical efforts have been focused on several of our usual activities of participation: profile creation, LONMARK Resource Files updating, standards advancement, and LONMARK Certification Tool enhancements. Additionally, we had a role in launching our new LONMARK program for the certification of people (helping to get the test ready), and we lent a hand with the new Web site through optimisation of some dynamic content and features, to keep the technical content up-to-date for our visitors and members.

Though our usual course of action is to keep members-only activities in the eyes of members only (until they're ready for public sharing), I couldn't resist the opportunity to share a bit of what is happening – for both members and non-members alike. After all: what fun is a secret unless you get to share it? And who knows – perhaps we will entice a few of you non-members to join us, and to help us mold the future of LONMARK with your membership. See? My motives are not too altruistic. So, allow me a few minutes of your time and I'll show you around:

### Profile Creation

Of our 16 technical Task Groups (TGs), I wanted to share a bit of information with you about three of them – two relatively young, and a third that has just been granted life by the Board of Directors: The Connectivity TG and the Home TG are both nascent groups,

with the Connectivity TG being one of the most-recent task groups to be formed and with the Home TG undergoing a major resurgence and focus.

The Connectivity TG has recently created several profiles for monitoring: a Channel Monitor, a Channel Continuity Monitor, and a Device Monitor – all of which are slated for the beta release of the version 13.01 LONMARK Resource Files (LMRFs), which should be available by the time you read this. This group is presently working on how to define a way to certify routers, network interfaces, and generic gateways (i.e., those with the ability to translate entire protocols). For these generic gateways, the concept of a functional block for this need is being considered. Additionally, the group is looking at ways to make it easier for end users to select network interfaces from any manufacturer and have them work seamlessly with their chosen software, without additional changes and drivers.

The Home TG is focussed entirely on creating Interoperable Self-Installation (ISI) protocol profiles to allow the domestic-products industry to finally blossom. The profiles are simple-enough at this point: Keypad, Lamp, Point Monitor, Security Sensor,

Thermostat; but they contain a larger set of mandatory NVs/CPs and a method by which they are bound to other ISI devices. Some of these profiles too will be in the beta 13.01 LMRFs. The key to the ISI auto-binding is a set of well-defined application cases with binding scenarios put into a machine-readable form.

The third for this article's focus is the new Safety TG. This group will define both safety-related profiles for human-life/property preservation as well as safe ways to ensure redundancy and accuracy in message content. Look for a more-detailed description of this new Task Group on our Web site as the group forms – including information about when the first meeting or teleconference will be held.

### Standards Advancement

Efforts in the standards arena have been aimed at achieving the ISO designation for the protocol, and in parallel: finishing the CEN set of EN standards with incorporation of many of the LONMARK guidelines, and advancing the CEA's efforts toward the next version of the IP 852 tunnelling standard: IP 852.1. For more IP 852.1 information, view the previous Technical Corner article, "Standards Update



2007” (Vol. 3, Issue 1): [www.lonmark.org/technical\\_resources/faqs.shtml](http://www.lonmark.org/technical_resources/faqs.shtml). Additionally, work continues within the ASHRAE guide-specification task group, GPC-13, to adopt both BACnet and LONWORKS as viable choices for specifying control systems. We will provide more information on all of these efforts as things progress.

## LONMARK Certification Tool (LCT) Enhancements

The LCT has been an incredible benefit to the speed and cost of certifying devices since its launch just a couple of years ago. It brought the speed of certifications from several days/weeks, down to several hours in most cases. The now-historic price plan of USD 2000 per device certification has become a USD 2000 annual license fee, with only USD 200 per certification. This makes, for example, the cost to certify five devices today only USD 3000, instead of USD 10,000. It also encourages companies to certify as many devices as they can – to take advantage of the license fee before it expires. And there is no need for a company to license the LCT annually, unless that company intends to certify; so there is no penalty for allowing the license to lapse. Additionally, the LCT does physical communications testing of the device within a developer’s own labs: it tests each device’s Node Object functional block, and tests device-response timing – a requirement of the version 3.4 LONMARK Guidelines.

So, what are we changing? We are improving the LCT’s handling of the requirements of the version 3.4 Guidelines, making it provide better test reporting to the LONMARK staff, having it handle more user languages, giving it a new UI that is easier to navigate, and increasing the tool’s interoperability with a wider-variety of ever-tightening corporate firewalls. Some of these changes are occurring now. On the back end, the LCT requires more seamless integration with our other databases, an online payment-system interface (which is in development), and a set of database-maintenance pages that will allow access for all

LONMARK staff (not just our technical staff). These changes will be rolled-out as we complete them so users get the benefits immediately the moment we have them ready.

## LONMARK Certification of People

Certification of integrators and LONWORKS professionals is now a reality. At the recent AHR Expo in Dallas, TX US, LONMARK launched the first of many tests to allow end users to determine who really knows LONWORKS technology and who is simply presenting empty claims of their knowledge. It is an exciting new set of certification programs and further details are available on our Web site: [www.lonmark.org/testing](http://www.lonmark.org/testing).

## Website Optimisation and Features

The LONMARK International website has been moved to a more powerful server and has been given an entire re-working from the ground upward. We started with a brand-new multi-processor server with mirroring drives and full backup. We then switched from MS Access to MS SQL; and from a Cold-Fusion engine to an ASP engine. The website face itself was professionally designed and integrated by two separate teams, and the entire project was headed by LONMARK International’s Account Manager, Derek Takegami – integrating a multitude of suggestions and ideas from our members culminating in what you see today: a much brighter and better-organized site for today and for future growth.

The technical staff has also been busy on the new site, creating dynamic content for areas that let LONMARK members see at a glance which projects are underway, see the status for profiles and types in development, find a list of upcoming meetings for the many task groups (with vCalendar-event files downloadable in ICS and VCS formats), and be able to download meeting minutes in any combination of written and/or recorded (audio/video) formats, as determined by each TG Leader. Further, each TG Leader

has the ability to upload those minutes, add new meetings, and maintain the status of his/her task group efforts from their own private Web portal. As of writing, the areas are in beta; so please bear with us as we smooth-out the road.

## LONMARK Stencil Library

Though there are several more new things underway, I just couldn’t detail them all here. So choosing one, a new project is in the forming stages to create a standard set of stencils and templates for LONMARK system components to be used by system specifiers and engineers. We plan to offer a complete set of standard drawing stencils, initially for Visio, for all elements of a standard system design. The stencils will be created in 3 groups:

1. Infrastructure – including channel, routers, repeaters, wiring types, and network interfaces;
2. Devices – including all device profiles, programmable devices, network user interfaces, and gateways; and
3. Host Interfaces – including “Session Oriented” GUIs (PC applications), Web interfaces, oBIX/XML/Web Services, LNS Clients.

We also plan to offer sample system architectures using these drawing templates for simple-to-complex applications. When complete, all of these tools will be made available on our Web site. If you are interested in supporting this project or have ideas, please email us at [tech@lonmark.org](mailto:tech@lonmark.org). Our goal is to have a first-pass ready before the “LONMARK Sessions Seminar Tour” begins.

I hope this update helps you members get a feel for what is happening and where you may wish to participate. For you non-members, I hope it was an insightful peek into the types of things that are underway within LONMARK – shaping our collective LONWORKS community.

**Jeremy J. Roberts**

*Technical Director  
of LONMARK International*