



ISA 104 success at ISA EXPO 2007

Both ISA's SP100 (wireless) and SP104 (EDDL) committees had plenty of activities in the form of meetings, show floor booth, tutorial sessions, presentations, and briefings at the ISA EXPO 2007 conference and exhibition, 2-4 October at the Reliant Center in Houston, Texas, USA.

SP104 is the committee behind the successful adoption of the international standard IEC 61804-3 as a US national standard ANSI/ISA-61804-3 (104.00.01)-2007. These are the only international and US national standards for device integration respectively. The ISA104 standard is being extended as a family of standards, designed to support all phases of the plant life-cycle and many protocols through a single device integration technology. The technology has existed for 15 years before standardization, incorporated as an integral part of HART, FOUNDATION fieldbus and PROFIBUS protocols, but until it was standardized was never discussed as a technology in its own right. Therefore, and because it does not cause trouble, it has remained largely unknown for so long. The effort at this year's show is to make users aware how they can improve results with the new graphical enhancements to the technology.

Show Floor Booth

ISA104 hosted a demonstration booth in the Bus Station area of the show floor. The exhibit contained information and demo for both end-users and device developers. Several experts from the SP104 committee were on hand to give an introduction and answer questions.



Live Demo

The multi-vendor technology interoperability demonstration showcased the major principles of operation of the committee's EDDL standard including process control devices such as simple pressure and temperature transmitters and sophisticated devices such as radar level transmitters and machinery health transmitter. Integration with electrical equipment in the form of an advanced variable speed drive was also demonstrated. Devices were connected using a mix of HART, FOUNDATION fieldbus, and PROFIBUS protocols reflecting the reality in many plants today. The visitors to the booth had the opportunity to see two different Windows-based device management software applications side-by-side and see that using EDDL with enhancements full access to all device features was given by these software applications. A configuration and diagnostics software was also shown.

A handheld field communicator was used to demonstrate that EDDL with enhancements can also be used on a small portable tool suitable for field work where a laptop cannot go, for example, for commissioning and troubleshooting tasks.

Visitors to the booth got to see new graphical device displays including waveform graphs such as the echo curve when setting up a radar level transmitter. Diagnostics from simple thermocouple burnout to pump health was shown. In all, EDDL-based tools for the tasks associated with all phases of the plant life-cycle were shown with a particular emphasis on maintenance and operation. Another highlight of the demo was how help text from the device vendor's experts appear identical in all the different hosts. The ability of device management software to access documentation such as manuals and drawings was also shown.

The interoperability demo also illustrated backwards compatibility, how new device management software supporting the new EDDL with enhancements at the same time can also support the original EDDL without enhancements. That is, demonstrating how devices and their EDDL file from more than 15 years ago remain functional today. This ability to stave off

obsolescence is one of the most valued characteristics of EDDL. This will help users protect their installed base investment of existing devices.

Other highlights of the demo included display consistency for ease of use. That is, how functions like context sensitive help, pan/zoom of graphs and charts, changed value indication, and read-only value indication work the exact same way for all devices regardless of protocol, manufacturer, and device type.

The response was very positive from the users that got to see EDDL with enhancements for the first time. They were not aware of how far beyond the old handheld EDDL has come.

EPC

Great interest was also shown from EPC contractors that welcomed the ease of use which will speed up their setup and commissioning time, particularly for advanced devices like radar level transmitters and variable speed drives.

Manufacturers

On the same demo, device vendors which have not yet added the graphical enhancements to their existing EDDL files for their devices could see how the latest edition of this standard ensures that the display content for a device is the same in all three computer software, as designed by the device manufacturer. That is, all features of their device become accessible regardless of which system it is connected to. And all of this is possible without making any changes to the device itself, so even the installed base can benefit, adding value for their customers. That is, this standard graphics result in a new level of interoperability as there is no longer any need to create and test special graphics files for each control system. EDDL technology is therefore likely to lead to development of new innovative devices and software.

Development Tools

The show floor booth had a developer corner where device manufacturers could see some development tools that other developers have used to create support for EDDL for their products. These Integrated Development Environments (IDE) are similar to VisualStudio in that they contain editors, checkers, and debuggers etc.

Conference Tutorial Session

As part of paid conference program a 1-1/2 hour tutorial entitled "***Keeping Systems and Communicators Up-to-date using EDDL***" was conducted by members of the SP104 committee.

Presentation

The first part of the presentation covered the history of development, starting with how EDDL solved the problem of interoperability and keeping systems up to date with new devices as they come into the plant. Next, how the graphical enhancements to EDDL solve the problem of managing sophisticated devices.

The second part of the presentation explained how EDDL technology works, illustrated by the analogy with HTML for simple information and JavaScript-like methods to handle dependencies and provide interactive Wizards to make complex tasks easy.

The third part of the presentations showcased the new graphical enhancements and how easy it is to keep the system up to date by simply copying EDDL files for new devices, without the need to install software or disclose administrator passwords while at the same time eliminating device version conflicts by supporting every version of the device through separate files.



ISA member that did not have time to attend can access the material by logging in to the online technical library www.isa.org/members/techpapers and select ISA EXPO 2007.

Live Demo

A live demonstration of how EDDL with enhancements unleashes device capabilities was given at the end of tutorial. This included display of graphical enhancements such as trend charts, waveform graphs, images, and gauges. Backward compatibility with old EDDL files. The demo included multiple devices and multiple tools.

Free Briefings

Several free 30 min updates were also given in the theaters on the show floor. These short briefings stressed users should chose EDDL because of the benefits that can be derived and the solutions it provide to earlier system problems such as making information externally accessible, maintaining robustness, not compromising security, smooth transitions through Windows upgrades, reduce the hassles of license key cost or management logistics, as well as enabling large scale client-server architectures for multi-users.

Standards Committee Meeting

The ISA SP104 standards committee met for a face to face working session. Work items included the status of the ANSI/ISA adoption of IEC/TR 61804-4 interoperability guideline for EDDL, the www.eddl.org web site, liaison with IEC 65E WG7, initiative to educate users on EDDL, proposal for a book or guide for developers, as well as cooperation with NAMUR NE 105.



Daniel Grossman of ITM participated in the meeting and provided an update on FDI.

More information available on the committee website:

[SP104](#)

Elsewhere

Increased awareness in interest in EDDL could also be noticed elsewhere on the show floor. For example, EDDL was showcased in the HART booth in conjunction with WirelessHART devices.

EDDL also got coverage in the show daily. Another piece of good news during the show was that the committee received notification on 1 October 2007 that the ISA technical report supporting Electronic Device Description (EDD) interoperability had received final approval from the American National Standards Institute (ANSI), that is for ANSI/ISA-TR61804-4 (104.00.02)-2007,

For more information go to www.eddl.org