



Wilmington Section ISA
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Wilmington Section ISA

ISA—The Instrumentation, Systems, and Automation Society



Check out our web page at <http://www.isa.org/community/wilmi>

Wilmington ISA - Section Event

"Annual Shrimp Boil"

5:00 pm Tuesday, April 27, 2004
at

Applied Control Engineering

Directions: www.ace-net.com

RSVP to: Joe Baker or Mike Morkun

ISA SENSOR

Published By
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The Sensor

April 2004

April Meeting Event

ISA Wilmington Annual "Shrimp Boil"

Tuesday, April 27th - 5:00 PM
at
Applied Control Engineering

It's time again for our ISA Wilmington Section "World Famous Shrimp Boil". For those of you not aware of what a shrimp boil is let me describe it. First a very large pot of water is brought to a boil and sausage, potatoes, corn, onions, carrots and of course lots of shrimp are thrown into it. The cooked contents are then poured onto a table for a grab fest. Wash it all down with ice-cold beer or a soda and you have a shrimp boil.

Guaranteed to be a lot of fun!

This is a great opportunity to socialize with our ISA Wilmington members and meet with the company sponsors that are supporting the event. **Friends of the Shrimp** will have tables setup with literature and products to show.

Please let our Program Chairs Joe Baker at joe.baker@us.endress.com or Michael Morkun at michael.b.morkun@usa.dupont.com know if you plan to come.

Once again the call is going out to our local vendors to help sponsor this event. There is still time to help support this event with one of the following sponsorships:

FUTUREEVENTs

May 13-14, 2004
Fieldbus Foundation End User Council

www.fieldbus.org for more information & registration forms

May 25th, 2004
Section Meeting

June 22nd, 2004
Annual Picnic

Please update your email!

Friends of the Shrimp: **\$125.00**

This provides recognition in two issues of the Sensor as well as at the Boil itself. It also entitles the sponsor to setup a table top at the Shrimp Boil to display your company's products.

Boil Buddy: \$50

This level of sponsorship provides recognition in two issues of the Sensor as well as the Shrimp Boil festival.

Please consider being a sponsor for this year's biggest Wilmington ISA social event. Please indicate your interest for sponsorship by sending an e-mail to **Dan Roarty "Shrimp Master" at droarty@tycoint.com.**

WISA Officer Bio: **Mike Morkun, Program Chair**

Mike is a Project Engineer with DuPont's Engineering Department in Wilmington Delaware. He received his BSME from Villanova University.

His career with DuPont started in 1974 at Louviers in the old Design Division Instrumentation group. In 1977 he was assigned to project work for the government's Savannah River Plant doing varied projects under the auspices of the Atomic Energy Commission. In 1981 he was given a field assignment as design liaison for the Victoria Texas site ADN plant construction and startup. That was followed in 1984 with a similar assignment in Corpus Christi for a new chloroform plant. Construction was halted at 98% mechanical completion. Over the many years Mike has worked on projects for most of DuPont's business units. His favorite was doing an Iron Oxide project in 1996 for the White Pigments business at their Altamira plant in Mexico. In fact, that is where he met his wife. They have been happily married now for three years. Mike is currently doing projects in the DuPont Project Engineering Center.

Outside of work Mike enjoys working on his cars keeping them running and out of the shop. Someday he hopes to invest some time, effort and money on a classic car.

Passing of ISA Member and Friend:

Charles Arthur Prior Age 86 of Fort Myers, FL passed away Wednesday, October 29, 2003. He was born April 9, 1917 in Cleveland, OH and had lived in Fort Myers since moving there from Newark, DE in 1991.

March 23rd Meeting Notes:

**ISA Speaker Mark Fondl
Ethernet in Network
Management
by Jennifer Slivka**

Mark Fondl started with an overview of network communication, in its many forms, over the last thirty years. The original Ethernet was developed from a variety of communication networks. In the 1970s RS232, ModBus and DF1 were very popular. These networks developed into Modbus Plus and Data Highway Plus in the 1980s. In the late 80's Ethernet appeared. Ethernet and most other bus topologies used Carries Sense, Multiple Access with Collision Detect (CSMA/CD) to coordinate communication. CSMA/CD allows all stations on a network to have equal access to the network. All the stations are listening to all of the network traffic waiting for a turn to talk. CSMA/CD detects when two or more stations are trying to talk at the same time. When this collision of data happens CSMA/CD forces the stations to back off and wait before retransmitting. The data that was transmitted is destroyed and removed. If the network was large many of these collisions could occur. This made the Ethernet networks slow and unpredictable.

To combat these deficiencies, industries such as General Motors developed MAP Manufacturing Automation Protocol. MAP was a deterministic Token passing architecture. Map was complex and deployment expensive. Industries started to develop a more interoperable standard that was good for discrete and process industries.

This movement spawned the Interoperable Systems Project (ISP) and World FIP and a few other types of buses. By the early to mid 1990 all of these standards started to merge to Fieldbus ProfiBus and Devicenet as the major Protocols.

Today technology improvements have revived Ethernet Networks. Coax moved to Two pair cabling. Network switches and hubs become available and network speed improves to 1,000 Mbit/sec. Switches provide isolation of the devices on the network. The switch bridges a device to the device it would like to communicate with. This brought stability and speed to the network. Ethernet is compatible with office system for business data acquisition. Ethernet can be used for quite a variety of communication needs for process control and data historization. Conversion programs allow different type of Field buses to communicate with each other.

The flexibility Ethernet gives process and data systems make it desirable. With Ethernet, network security is a large issue. Ethernet's compatibility with many systems could allow vulnerability to control system without network security. Also IP addressing must be carefully thought through. Now that Ethernet is bringing many systems together, public verse private addressing must be carefully managed.

Mark sees the worlds of IT and control coming together to provide greater opportunities for data sharing. With the good come the problems associated with data sharing, such as the need for security and reliability. Planning and cooperation will be the key to successful Ethernet networks.

**President's corner
Nick Sands**

It's April, and I can already smell the shrimp boiling. Dan Roarty, the master of the shrimp boil, was recently awarded the Old Shoe award at the District II leadership conference. The Old Shoe award has a long and glorious history in District II. The chain of recipients is linked through stories and tall tales back to the days of hazy days of yesteryear. Please congratulate Dan on his award in recognition of long service to the industry and to the Wilmington Section. (Don't worry, the Old Shoe does not go in with the shrimp.)

Also at the District II leadership conference, we discussed the need to find new section leaders. An appropriate discussion since it is that time of year to nominate new section officers. If you would like to be more involved in ISA, we can find a role for you.

The section president leads the executive committee, aided by the president elect/ secretary, who also takes the notes for the meetings. The treasurer writes the checks and receipts, keeps the sections books, generates the financial reports and files the tax statement. The program chairs are the very important people who setup each section meeting, locating speakers, arranging for vendor sponsors, and providing the food.

Rounding out the executive committee are the newsletter editor, the web master, the membership chair, the education chair, the Standards & Practices chair, and the honors and awards chair. All important positions to the section. The past president also participates to aid in continuity.

Traditionally there is a progression from program chair to treasurer to president elect to president and then on to another chair. This cycle trains the leaders in each key role so they can provide guidance to others. At times this progression is interrupted when people find they cannot complete the cycle for personal reasons, which has happened recently.

For the 2004-2005 ISA year, June to June, there are several positions available: president elect/secretary, program chair, and education chair. There are other opportunities as well, planning and assisting for the November WISA Show, speaking at a section meetings, or assisting with the newsletter or website. If you enjoy the ISA section meetings, please consider spending some time helping us with them. Please contact Ken Lawrence if you are interested.

**Book Review
Validation: Step by Step (B)
GAMP Good Practice Guide:
Validation of Process Control
Systems from ISPE
reviewed by Nick Sands**

A committee of the GAMP Forum Process Control Special Interest Group wrote this good practice guide on validation of process control systems (VPCS) to expand on the principles of validation in GAMP 4 (Good Automated Manufacturing Practices). I divide the book into three parts, the main text, the first 7 appendices which are sample documents by the writers, and the last two appendices which are sample documents from GMA/NAMUR and JETT.

The VPCS text is mostly an outline of the validation process. It covers key concepts like critical components of a system, GxP critical parameters, direct and indirect impact on product quality, the types of control systems, and the types of configuration or programming. Control systems can be configurable, like single loop controllers or weighers, embedded, like packaging machine controls, or stand-alone, like PLC-SCADA or DCS systems. The GAMP category and validation requirements are different for each system type. The GAMP "V" model is used to outline the lifecycle and how validation confirms performance against the specifications such as the user requirements, functional requirements and design requirements. One interesting concept is a traceability matrix used to track a requirement from stage to stage through design and validation.

The first set of appendices give some examples of forms used for inventories, supplier audits, validation review, and further guidance on control systems. The forms and guidance are limited in depth, more outlines than details really.

The last two appendices are very detailed. The first is really the GMA/NAMUR validation guide, complete with the validation checklist, and procedural outlines for management of change, calibration, system failures, and training. GMA is the German association of Engineers and Electrical Engineers Society for Measurement and Automatic Control and NAMUR is the Standardization Association for Measurement and Control in Process Industries. The procedures are simple outlines.

The final appendix contains examples provided by JETT, the Joint Equipment Transition Team, another GAMP special interest group. A template for and an example of a user requirement specification, the key to the entire GAMP cycle.

The 43 pages of text and 175 pages of appendices in the VPCS, available to non-members for a mere \$215, do provide some good guidance on validation, but the same advice can be gathered from a few magazine articles at almost no cost. For that reason I rate this book less than a borrow and more like bologna (B).

Ralph L. Moore

\$1000 ISA Scholarship

Application Requirements:

Applicants must be sponsored by a Wilmington Section ISA member. Students must be a high school senior planning to attend a 4 year college/university or technical training school.

Supporting Information:

Short written essay including: Sponsor & Achievements (both scholastic & personal)

*Extra curricular activities

*Leadership roles

Recommendations:

*Teachers (2) & Personal (1)

High school transcript including GPA, SAT and class rank.

Deadline for receipt of information by the committee is May 15th.

Submit to:

**Dan Roarty
Scholarship Chairman
319 Palomino Drive
Newark, DE 19711**

Home Telephone # 302-292-8866
e-mail: droarty@tycoint.com