



# Wilmington Delaware Section

# The Sensor April 2010

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Due May 10th
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## Upcoming Events

April 27	Shrimp Boil
May 25	Meeting: Advanced Control
June 22	WISA Picnic

## The Famous Wilmington ISA Shrimp Boil

**Tuesday, April 27, 2010  
5:30 PM**

Applied Control Engineering, Newark, DE  
(Directions at [www.ace-net.com](http://www.ace-net.com))

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Join us for the Famous

## Wilmington ISA Shrimp Boil

**Tuesday, April 27 (5:30 PM)**

**Applied Control Engineering**  
700 Creek View Road, Newark, DE 19711-8544

**Free Food and Beverages**



See our sponsors on Back Page

Visit Wilmington ISA on the Web!

<http://www.isa.org/community/wilmi>

# President's Message

## Winding Down the Year

By Shawn Coughlan, P.E, FSE

Last month we had a new event, the Application in Automation conference. During the conference, twelve papers were presented on subjects including safety, process control, control systems upgrade and process optimization. We had a large attendance for this inaugural event and as one of the organizers I was pleased by the turnout. I would like to especially thank all of our sponsors from the control community. Without their support this and many other ISA events would not be possible.

Based on the success of this event, we have decided to hold the conference again next year. If you have a topic that you would like to present, start collecting your notes, we will be requesting abstracts in the fall.

Due to the effects of the economy on everyone's cash flow situation, we have decided to delay the biannual Wilmington ISA show from the Fall of 2010 to the Spring of 2011. We are working out dates, locations and a hundred other details. We are targeting the April/May time frame. We are currently looking into holding the Application in Automation conference in conjunction with the Wilmington ISA show. More on that in late summer as we begin the planning process for the conference.

With the summer approaching, we have three more events planned. Come join us for the Shrimp Boil which will be held at the Applied Control Engineering office in Newark, DE on Tuesday April 27<sup>th</sup>. The food is good and the company is entertaining. We will be having one more technical meeting in May with the topic being Advanced Controls. Stay tuned for more details.

Our last event for the season will be our annual picnic in June. Bring a friend or a colleague. Please note that we will be changing the location as the facilities at DuPont will no longer be available.

And finally, we will be electing new officers for the coming year. If you would like to get involved, contact any of the officers or send me an email. Your help would be appreciated.

Hope to see you at one or all of these events.

## WISA Shrimp Boil

Tuesday, April 27, 2010

Reach Automation Professionals by sponsoring this popular social event

Contact Ken Lawrence ([lawrencekr@verizon.net](mailto:lawrencekr@verizon.net))

(See back page for our current list of sponsors)

# More Than Just Pretty Pictures



## More Than Just Pretty Pictures - BBBB (Buy)

*ASM Consortium Guidelines: Effective Operator Interface Design*

By ASM Joint R&D Consortium

Reviewed by Nick Sands

One of the first organizations to address the design of control system displays was the Abnormal Situation Management Consortium (ASM). The group formed between 1992-1994, evolving from a task group of Honeywell users concerned about alarm system performance to an organization that includes user companies, technology companies and universities that also addresses other issues of user-control system interaction. ASM members developed the guidelines on Effective Operator Interface Design, but until recently the document was available only to member companies. It provides a list of 81 guidelines, grouped into 16 categories, and prioritized for relative importance.

Several categories target the organization of displays including; display types, display content, display style, display layout, and navigation. One of the important concepts is a well structured display hierarchy that provides levels of information from overview to detail. They recommend displays be designed and organized to support operator tasks. A guideline on animation and detailed drawings states they should be used by rarely, except in the case of alarm indications. A consistent layout suggested, like process flows moving left to right, increases clarity and the navigation from one display to another should be simple and clear to the operator.

The use of color, symbols and process connections, text and numbers, and the interactions with displays are categories related to display design. The guidance is to use a minimum of colors, less than seven, and use them consistently, with bright colors used only for alarms. Also, the number of symbols and line weights should also be limited and used consistently. They point out that text should be readable from the operator's position, and the meaning should be clear. Consider too that entry of data can be error checked and commands should be quickly acknowledged.

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# More Than Just Pretty Pictures

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Alarming is always a topic of concern in HMI design and several guideline categories address it, including; alarm configuration schemes, audible and visual annunciation of alarms. In addition to reserving bright colors for alarms, it is recommended to use symbols for alarm and to ensure they are visible at all times. Also, the operator should be able to see the alarms that are disabled or inhibited if needed. There is also guidance on the relative volume for audible alarms.

Several categories briefly address some of the work process aspects of HMIs with topics like training, online user assistance, design methodology, and management of change. The guidance includes getting user involvement in the development of displays and including task analysis, and then training on the product HMI. Also, when changes are made, the users should receive notice. A recommendation is to have some level of help screens or other online assistance for the users.

These guidelines will help many users to develop or improve their HMI. There is a very good introductory section on abnormal situations and a final chapter on determining conformance to the guidelines. A salute to the ASM Consortium for sharing their Effective Operator Display Design guidelines with the world. While it is Honeywell-centric at times, there is plenty of excellent guidance to make it worth buying (BBB) for any automation professional that works on control system. It is available from Amazon.com for ~\$115US.

## ISA Applications in Automation Conference

By Jeff Arbogast

On Wednesday, March 25th, the Mid-Atlantic Sections of the ISA hosted the first Mid-Atlantic ISA Applications in Automation Technical Conference at the DuPont Barley Mill Conference Center in Wilmington. The conference was well-attended and offered an excellent opportunity to learn about the interesting technical activities of ISA members from throughout the Mid-Atlantic region.

The conference featured four sessions: Maximizing Controller Performance, Process Optimization, Control System Upgrades, and Safety & Security. These four sessions provided a sampling of the wide range of interests and expertise within our society.

Several WISA members presented their work at the conference. Jeff Arbogast of Air Liquide presented "Demystifying PID Controller Tuning for Desired Performance and Robust Stability." Arshad Jamil of DuPont presented "Is your control loop better than my loop? Performance monitoring at five similar TiO2 plants." Phillip Schnelle, Jr. of DuPont and Paul Fruehauf of Fruehauf Engineering Services presented "Simulation of Model Predictive Control for a Coal Fired Power Plant."

The conference ended with a networking event at Twin Lakes Brewery in Greenville, DE. In addition to further conversations with the conference participants, we learned about the interesting operations of this local brewery.

The Mid-Atlantic ISA Applications in Automation conference provided an excellent opportunity to network and share expertise. Thank you to all who organized and sponsored the conference, presented, and attended. We plan to build upon the success of this year's event.

Please see a WISA officer for more information.

## Encourage colleagues to join ISA!

Benefits include:

- Membership in Local Section
- Membership in 2 Divisions
- Free access to ISA Standards
- Free access to ISA Technical papers
- Free access to ISA Webinars

## WISA Trivia Question?

What does ASM stand for?

Email your answer to  
WISA newsletter editor by May 15, 2010  
at [jeffrey.arbogast@airliquide.com](mailto:jeffrey.arbogast@airliquide.com)

**Win an ISA shirt.**

## WISA thanks our Shrimp Boil Sponsors

Meet our Friends of the Shrimp at their Table Top Displays

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P O Box 9245  
Newark, DE 19714-9254

## Apply Now for the 2010 Ralph L. Moore Scholarship

By George C. Bentinck

Each year the Wilmington Section ISA extends a \$1,000 scholarship to a high school senior who is planning to attend a 4-year college, university or technical training school. An ISA member of our section must sponsor the candidate and applicants pursuing a technical or science degree will be given higher preference.

The scholarship committee will select the successful candidate. **The application deadline is May 10, 2010.** The check written to the college of the candidate's choosing will be presented at the Wilmington ISA annual picnic in June. The application may be found on the Wilmington Section ISA website ([www.isa.org/community/wilmi](http://www.isa.org/community/wilmi)).

Mark your calendar  
**ISA Automation Week 2010**

October 4-7, 2010  
Houston, TX