



Wilmington Section ISA  
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Newark, DE 19714-9254

Wilmington Section ISA

ISA—The Instrumentation, Systems, and Automation Society



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

## Wilmington ISA

**Cyber Security of Process Control Systems**  
“A view from the inside”

**Presented By**  
**Tom Good**  
**E.I.DuPont**

**5:30 PM, Tuesday September 28, 2004**  
**Applied Control Engineering**  
Directions at [www.ace-net.com](http://www.ace-net.com)

**RSVP to: Mike Morkun or Matt Murphy**

## ISA SENSOR

Published By  
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Newark, DE 19714

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# The Sensor

September 2004

**September 28th Meeting  
5:30 PM at ACE**

**Cyber Security of Process  
Control Systems**

**“A view from the inside”  
by Tom Good,  
Process Control Engineer  
DuPont**

You see many headlines in the news about security at our chemical manufacturing sites and nuclear plants. The threat of terrorism through cyber attacks of our computer systems is constantly being publicized. One needs to ask, “Is the threat real, and what is being done about it?”

The cyber risks are real and need attention. There are many activities underway to address the physical and cyber vulnerabilities of our nation’s critical infrastructures. The more we look under the covers, the more we realize how interdependent the various commercial and industrial sectors are and how we depend on our computer systems to maintain that level of stability.

This presentation will primarily focus on cyber security initiatives underway in the commercial and industrial sectors, and in the Department of Homeland Security. ISA is one organization that is stepping up to address the issues. SP99 is the new standards activity underway to provide guidance on Manufacturing and Control System Security.

## FUTURE EVENTS

**Sept 9th - Golf Outing**  
[www.isa.org/community/wilmi](http://www.isa.org/community/wilmi)

**Sept 28th- Cyber Security**

**Oct 26th - Safety Systems**

**Oct 5th - ISA Expo  
Houston, TX**

**Nov 11th - ISA Wilmington  
Show**

The presenter will present a view from the inside having worked for two years with the cyber security activities associated with the Department of Homeland Security, National Institute of Standards and Technology, ISA SP99, American Chemistry Council, and the Chemical Sector Cybersecurity Program.

## Speaker Bio

Tom Good is a process control engineer working in the E. I. DuPont Electrical, Instrument, and Control Systems group working in system integration. For the past four years he has played a key role in orchestrating a step change within DuPont in cyber security practices to reduce the potential risk to manufacturing and process control systems. For the last two years Tom has worked closely with the Chemical Sector Cybersecurity Program to bring DuPont’s practical experience to the rest of industry.

Tom graduated from Lehigh University with a BSChE in 1974.

## President's Corner by Ken Lawrence

As you will read in the play-by-play action presented by Matt Murphy, we were treated to a great game and good food at our annual Blue Rocks baseball game.

We are discussing an ISA tailgate party before the game next year to reduce the ticket price for seating only. Hopefully that will encourage more participation with the members and their families.

Without a Membership Chair, we have been remiss in acknowledging our new members. We are still looking for an ISA Wilmington member that would volunteer for this role to help with membership planning.

Since September is the first Section Meeting for our 2004/2005 year, I would like to recognize the following new members:

Charles Chris Augustynowicz – Instrumentation & Controls  
Daniel Lessen – Invista  
Kuel-Chin Lien - Invista  
Stephen Benard Smith, II – Invista  
Anthony Boyle – W. L. Gore  
Arshad Jamil – DuPont  
Dale Goltare – AstraZeneca  
Mark McCollum – AstraZeneca  
Thomas Dugan – AstraZeneca

We will be recognizing new members at our monthly section meetings. Please welcome these new ISA Wilmington Section members.

**2004 Industrial Measurement and Control Exhibit and Technical Seminars**

**Thursday, November 11, 2004  
Holiday Inn Select-Wilmington  
off I-95 and Naamans Road,  
Claymont, Delaware just below  
the Pennsylvania State line  
10:00 AM – 5:00PM**

This Show Offers One-Stop Shopping, Providing . . .

- Access to new and innovative instrumentation products and technology
- One-on-one interaction with vendors to discuss the most appropriate products and equipment to meet their facility's needs
- Free Admission
- Easy to get to Location (off I-95 and Naamans Road in Claymont, DE)
- Free on-site parking

ISA Training Seminar  
(Registration required)  
Safety Instrumented Systems:  
The Must Know for  
Implementation (EC505)  
Course: 8:00 am – 4:00 pm Sign-  
in: 7:30am \$395 for Members,  
\$445 for non-Members

FREE Technical Seminars (Pre-  
registration not required)

- 1) Level Measurement
- 2) Batch Control (S88)
- 3) Fieldbus Instruments
- 4) Network Security
- 5) Enterprise Connections (S95)
- 6) RFID Wireless

**For more information contact  
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**Blue Rocks Baseball  
Play-by-Play Action  
By Matt Murphy**

STODOLKA, COSTA LEAD  
ROCKS OVER PELICANS  
WHILE WISA FANS ENJOY  
FOOD, FUN, AND BOBBLE  
HEAD DOLLS

Collision At Home Plate Ends  
Game, Tupman Holds On For  
Win!

The Wilmington Blue Rocks used stellar starting pitching, a long home run and a final defensive play at the plate to defeat the Myrtle Beach Pelicans, 3-2, at Frawley Stadium. The Rocks took two of three in the series and finished the seven-game home stand 5-2.

WISA members enjoyed food and fun from the comfort of the fan zone. Wayne Kuehl of JBEK pocketed a foul ball and all who attended took home their own Blue Rocks bobble head doll.

On the field, Wilmington starter Mike Stodolka (3-2) retired the first 11 batters he faced, pitching a perfect game into the fourth inning. With two outs, Wesley Timmons walked and Isaac Lorg singled to break up the lefty's perfect game and no-hitter.

Stodolka went a season-high seven innings of shutout baseball, allowing two hits and one walk while striking out a season-high six batters.

The Rocks got to Myrtle Beach starter Paul Bush (3-3) in the fourth when Donnie Murphy led off the frame with a single and Shane Costa followed, smashing a two-run homer to right.

In the sixth, Wilmington added an insurance tally off back-to-back doubles by Mitch Maier and Mike Aviles for a 3-0 lead. Aviles collected an RBI and his team-record 36th double of the season with his extra-base hit just inside the third base bag.

Myrtle Beach brought the game close on an RBI groundout by Onil Joseph in the eighth. In the ninth, Wilmington's Barry Armitage faced Luis Hernandez with the bases loaded and two outs. Hernandez singled to second, scoring Gregor Blanco from third to make it a one-run game, 3-2.

On the same play, catcher Brian McCann, who collected a pinch-hit single to get on base, came home well behind the throw by Wilmington second baseman Donnie Murphy. With little other choice, McCann slammed into catcher Matt Tupman who crashed to the dirt but held on for the final out and a 3-2 victory. Armitage worked his 11th save of the season.

I look forward to doing this again next year.

**Dan Roarty Memorial Fund**

A trust fund has been set up for all those who wish to contribute: Contributions can be sent to:

Daniel R. Roarty Memorial Fund  
c/o WSFS  
PO Box 1889  
Wilmington, DE 19899-9713

The Mass of Christian Burial services was held on September 6th at Resurrection Parish.

Continue to offer support and prayers to the Roarty family.

**Design by the Numbers -  
BBBB (Buy)  
Successful Instrumentation  
and Control Systems Design by  
Michael D Whitt  
Reviewed by Nick Sands**

This book, by Raytheon project engineer and manager Michael Whitt, covers the basics of instrumentation and control (I&C) design for projects in a way unlike any other. Only a truly experienced project leader could reveal the secrets that Whitt shares. Even after a half dozen major DCS projects, I found new insights in Successful Instrumentation and Control Systems Design. If you want to excel in I&C project work, this is a must read.

The book, like many projects, is divided into three parts, each more detailed than the one before. The first part gives an overview of the project process. In the second part, Whitt shares design basics, from background information to good design practices for instrumentation and control systems. Part three is about execution of design. Using an example problem, Whitt completes the engineering documentation for the project, highlighting the connections to good project management and good design covered in the earlier chapters.

Projects 101 is the first part, giving an overview of the organization and process of a project. Whitt explains the different types of projects and why the old adage is true: a project can meet any two of three objectives; cheap, good, or fast. Project structure, flow, and deliverables are outlined. The roles and the responsibilities for the team are defined.

The basics of project management, scope, estimate, and schedule, are discussed, along with why they are important to the project.

Design 101 is the second part, giving many practical tips. Whitt starts with some background on ranges and scaling, then covers wiring practices, with some good information on electrical classification. A whole chapter is dedicated to control systems, including background on PLCs, typical system functionality, I/O count and arrangement, networking, and HMIs. While this is a very good section there is no comment about ensuring the right upstream and downstream diameters for flowmeters.

Documentation 101 is the third part, using an example to apply the design practices in part II and the management practices in part I. These chapters are full of the design documents generated as instruments are added, cables and conduits are selected and sized, I/O blocks are specified, and construction design package is assembled. Whitt uses the project tools to coordinate information and generate estimates and bill of materials. Its clearly a project design book since construction, checkout and startup are covered in less than three pages at the very end.

Whitt filled a void in the library of control books by writing Successful Instrumentation and Control Systems Design. Too often designers, engineers, and project managers learn good project practices the hard way, by first doing it wrong. Whitt shows the project as a product in itself, and how the many parts are connected.

Even project management is critical to the success of a project despite what you may read about project managers (see G K McMillan's early books). There is an optional CD of project tools. This is a book definitely worth buying (BBBB), and it's available from ISA for \$79 (member price) or with the toolkit CD for \$89.

My system is a five B system:

|———+———|  
|BBBB|Bonus |  
|———+———|  
|BBBB|Buy |  
|———+———|  
|BBB|Borrow |  
|———+———|  
|BB|Booring |  
|———+———|  
|B|Bologna |  
|———+———|

**Leadership Need for WISA**

For the 2004-2005 ISA year, June to June, there are still positions available: Two key positions we would like to fill this year are Education Chair and Membership 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.

Please contact Ken Lawrence if you are interested in any of these positions or to discuss ideas and ways you can contribute to our Wilmington Section.

**Mark your calendars!  
November 11th  
ISA Wilmington Show**

**Please set aside time to attend  
and take advantage of the  
training and seminars offered.**