



ASQ
AMERICAN SOCIETY
FOR QUALITY™

Quality Currents

NEWSLETTER OF HARRISBURG SECTION 503

Serving the Quality Profession Since 1953

January 2008

**Executive Committee
2007-2008**

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www.asq.org

Harrisburg Section Home Page:

www.asq-harrisburg.org
Section Officers can be e-mailed
from our home page

Hello everyone,

It seems that Christmas is just a few days away as evidenced by the increasing excitement of my children and the ever increasing amount of time it takes us to check out of most grocery and department stores. By the time you read this, Christmas will have come and gone so let me say that I hope you had a wonderful holiday.

As we have been reviewing some of the processes associated with one of our artificial heart designs, I began to think about the multitude of processes that have to work correctly in order for us to be able to buy something as simple as a newspaper or a cup of coffee. From building maintenance to computerized cash registers to personnel arriving on time, everything works so well here in the United States that we often take these things for granted. Much of this came to a screeching halt in south-central Pa due to the ice storm that developed over this past weekend. Fortunately for me, we had minimal storm damage, but that was not the case for many of you. One of my coworkers saw several electric transformers explode. Several others mentioned that trees had fallen down on their property. Amazingly, in just a few days, almost all of the power lines have been restored and life is back to normal.

On a much smaller, but also very important scale, I find myself in the position of apologizing for most of you receiving your monthly newsletter after the date of our last meeting. It seems that one of our mail processing contractors suffered from a malfunction of one of their processes and the newsletter was mailed much later than we had requested. This has caused the executive committee no end of consternation and will hopefully result in an improvement in the way we provide you with pertinent information.

I would also like to remind everyone that Steve Cronkrite posts the monthly meeting information on our website www.asq-harrisburg.org a few weeks prior to our meeting. These meetings are scheduled for the second Wednesday of the month so please look at our website if you have any questions about the upcoming meetings.

Thanks also to Jim Pasquali for his presentation on the **ASQ Ideas to Action Gathering**. Jim is an excellent speaker and always does a great job.

Hope to see you at our next meeting on January 9th in Harrisburg.

John

COMMITTEES

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DBS QUALITY MANAGEMENT INT'L

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ISO 9000/TS-16949/AS-9100/ISO 13485 Quality System Assessments, Development & Training
Visit our Website @ www.dbsqualitymgmt.com

2008 Training Programs

Dates	Course Description	Cost/Person
3 Sessions: January 24 & 25 April 17 & 18 June 5 & 6	<p align="center">2 DAY ISO 9001:2000 INTERNAL AUDITOR COURSE</p> <p>Day 1 – ISO 9001:2000 Training</p> <ul style="list-style-type: none"> Quality system principles and the process model Examination/interpretation of ISO9001:2000 elements Continual effectiveness improvement focus <p>Day 2 – Applying the Standard & Auditing Techniques</p> <ul style="list-style-type: none"> Corrective action implementation, follow-up/closure Quality system performance effectiveness evaluation Skill development through individual/team workshops <ul style="list-style-type: none"> Audit mechanics: <ul style="list-style-type: none"> -The documented quality system audit -Audit sampling & development of the audit checklist -Conducting the audit, investigation, and psychology -Audit management - development of the activity process based audit plan and schedule -Writing non-conformity statements and audit reports 	<p align="center">\$525</p> <p>NOTE: Cost for those who want to attend only the first day of training: \$325</p>
2 Sessions: February 15 May 16	<p align="center">1 Day AS-9100 - Aerospace Standard Training</p> <p>This course concentrates on the AS-9100 revision "B" aerospace supplements over and above the requirements of the ISO 9001:2000 Standard, and implementation strategies for certification preparation. This course also includes review of the requirements of SAE AIR 5359 revision "B" & AS-9104 Revision A. Use of the AS-9100 Checklist will be reviewed.</p> <p>Prerequisite: Understanding of ISO 9001:1994, ISO 9001:2000 or AS-9000</p>	\$325
1 Session: March 14	<p align="center">1 Day ISO 13485:2003 - Medical Device Training</p> <p>This course concentrates on the ISO 13485:2003 Medical Device regulation supplements over and above the requirements of the ISO 9001:2000 Standard, and implementation strategies for certification preparation. Also included is an overview of the essential requirements to meet the Canadian Medical Device Regulations, European Medical Device Regulations for CE mark, as well as FDA's 21 CFR 820.</p> <p>Prerequisite: Understanding of ISO 9001:2000 Standard</p>	\$325
<p>Principal Instructor: Michael J. Dougherty, RABQSA/IRCA QMSLA, IAQG, CMDCAS, & AIAG Certified. ISO 9000, QS-9000, AS-9100, ISO 13485 Registrar Lead Auditor.</p> <p>Courses Include: Training materials & continental breakfast. Lunch is on your own. Courses run 8:30AM - 4:30PM. Please bring a copy of the appropriate Standard for reference.</p> <p>Location: Best Western Inn At Towamencin, 1750 Summeytown Pike, Kulpsville, PA 19443. Ph. (215)368-3800. At Exit #31 (Lansdale) Northeast Extension of the PA Turnpike. Left at light off ramp. Hotel on immediate right. Please reserve your overnight room early if needed.</p> <p align="center">Contact Deidra to register. Phone: (215) 368-6266 Fax: (215) 393-4873 E-mail: deidradoc@aol.com</p>		

Process Capability (Contributed by Keith M. Bower, a statistician and webmaster of www.KeithBower.com)

You can use a process-capability study to assess the ability of a process to meet specifications.

During a quality improvement initiative, such as Six Sigma, a capability estimate is typically obtained at the start and end of the study to reflect the level of improvement that occurred.

Several capability estimates are in widespread use, including:

- **C_p** and **C_{pk}** are process capability estimates. They show how capable a process is of meeting its specification limits, used with continuous data.
- **"Sigma"** is a capability estimate typically used with attribute data (i.e., with defect rates).

Capability estimates like these essentially reflect the nonconformance rate of a process by expressing this performance in the form of a single number. Typically this involves calculating some ratio of the specification limits to process spread.

Practical Concerns when Conducting Capability Studies

There are both positive and negative aspects to capability estimates. For example, C_p and C_{pk} estimates are highly sensitive to the assumption that you are sampling from a normal distribution—that is, most of the data points would be concentrated around the average (mean), forming a bell-shaped curve.

Furthermore, sampling from a stable system is essential to obtaining meaningful estimates of process performance for future production.

Many quality practitioners report solely the numerical values of the capability estimates. Others, however, note that the capability estimates are themselves merely statistics, or point estimates of the true capability of a process. As such, the use of confidence intervals for the true capability values may also be reported.

When sampling from stable, but non-Normal distributions, other strategies to obtain meaningful capability estimates may be appropriate, including:

- Transforming the data to be approximately well modeled by a Normal distribution.
- Using an alternative probability distribution, such as Weibull or Lognormal distributions.

(...from ASQ Weekly...)

ASQ Harrisburg Section 503

JANUARY DINNER MEETING / PRESENTATION

When: Wednesday, January 9, 2008

Registration: 6:00 - 6:30 p.m.
Dinner: 6:30 - 7:15 p.m.
Program: 7:15 - 8:30 p.m.

**Where: Harrisburg East Holiday Inn 4751 Lindle Road, Harrisburg, PA 17111
PH: (717) 939-7841**

Buffet Dinner: Soup, Antipasto Bar, Sautéed Chicken Breast with Artichokes and Mushrooms, Veal Piccata, Shrimp Scampi with Olive Oil and Lemon Linguine, Tortellini Alfredo, Chef's Seasonal Vegetables, Garlic Bread, Breadsticks, Cannolis, Rum Cake and Biscotti Cookies

From York:

Take I83 North to Route 283 South (follow signs for Harrisburg airport). Take Route 441 exit from Route 283, at the light turn left and cross over Route 283. The entrance to the Holiday Inn will be on the right.

From Lancaster:

Take Route 283 West to Route 283 North (follow signs to Harrisburg). Take the Route 441 exit from Route 283 North. At the light turn right, the entrance to the Holiday Inn will be on the right.

Cost: \$20.00

What: Cutting-Edge Metrology Demonstration.

There are many difficulties facing the manufacturing industry today – reducing time-to-market production, improving accuracy, reducing scrap, producing the highest quality products – to name just a few. FARO Technologies believes improving metrology can help address these issues. FARO's products allow manufacturers to perform 3-D inspections of parts and assemblies on the shop floor. The presentation will include demonstrations of several pieces of FARO equipment; the Platinum FAROArm portable CMM, the FARO Laser ScanArm, the first 7-axis contact/non-contact measurement device and FARO Gage software. FARO has 12,500 installations and 5,500 customers globally. Along with its international subsidiaries it designs, develops and markets portable, computerized measurement devices and software. FARO is ISO 9001 certified and ISO-17025 laboratory registered. This month's presentation will:

- reveal what is available in portable dimensional measurement
- how this technology can eliminate the need for hand gaging
- how tough dimensional measurements can be accomplished in minutes

Who: Luke Yoder, FARO Regional Manager

Luke Yoder is the Regional Manager for FARO Technologies covering the states of Ohio and Pennsylvania. He specializes in part inspection and reverse-engineering. Luke has a BS in Welding Engineering from The Ohio State University and an MBA from the University of Dayton. He has been with FARO Technologies for six years.

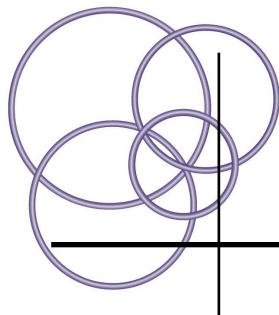
I first saw a FARO portable CMM when I worked for Volvo Powertrain in Hagerstown. It played an important role in Receiving Inspection for large parts such as castings that would not fit on the table of our stationary CMM. I am looking forward to an exciting evening and I asked for and received permission to bring along a few "challenges" for Luke to measure. For all of that I suppose having to hear about that team from Ohio in the BCS title game will be a small price to pay!

Fred Hammond – Program Chair

Please register with one of the following by Friday, January 4th:

Area	Name	E-mail	Phone	Fax
YORK	Jules Pinto	jpinto@archtest.com	717-764-7700	717-764-4129
LANCASTER	Greg Buchko	gregbuchko@berryplastics.com	717-390-8455	717-390-8465
HARRISBURG	Dave Fisher	david.fisher@tycoelectronics.com	717-986-5501	717-986-5965

WORKSHOP OPPORTUNITY



J.M. INGRAM & ASSOCIATES

505 Wadhams Street, Ogdensburg, New York 13669
Ph: 315-393-0229 ♦ Email: jingram@twcny.rr.com

Understanding the World of Measurement Uncertainty

This workshop is designed to develop an understanding of Measurement Uncertainty without getting buried in statistics. Still, the students will learn what measurement uncertainty is and how it can be used to better understand their measurement process. We begin with a review of statistics and how this relates to measurements. We will then develop the methods for estimating measurement uncertainty. Various tools will be presented that will allow the user to make the calculations without more than a basic understanding of statistics and math. By the end of the workshop each student will have learned the theories and have had an opportunity to practice these skills. Quizzes and a final exam will measure the student's learning progress.

Some of the topics to be covered.

Statistical Distributions	Mean, Standard Deviation and Variance
Evaluating Uncertainty Components	Repeatability & Reproducibility
Combining Uncertainty Components	Reading Scopes of Accreditation
Sensitivity Coefficients	Reading Manufacturer's Specifications
Expanded Uncertainty & Coverage Factor	Best Uncertainty vs. Measurement Uncertainty
Nominal, Measured and True Value	Type A and Type B Uncertainties
Offset, Error and Bias	Test Uncertainty Ratio (TUR), Why 4:1?
Measurement Decision Rules	Test Accuracy Ratio (TAR)

This is just a sample of what is included in the workshop. In addition, each student will receive a CD full of resources including some software for use in estimating measurement uncertainties. This is a workshop and each participant will get in the act through discussion and preparing their own measurement uncertainty budgets.

Each student should bring a calculator along with note taking materials. A lap top is also a good tool, but not required, as some of the CD files may be easily loaded and used in preparing budgets. Each student should also bring at least two measurement situations for which they want to develop measurement uncertainty budgets.

The workshop covers two days.



The workshop leader will be James M. Ingram Jr. Mr. Ingram has over thirty-five years experience in Metrology with an additional 10 years working in both microwave and digital equipment. His undergraduate education was in Electrical Engineering and Physics with graduate work leading to a Masters in Business Management. An experienced educator he has over ten years teaching technical and business courses with over six years at the university level. Mr. Ingram is a Lead Assessor for A2LA in the field of calibration. He is also the Principal Consultant for J.M. Ingram & Associates, an organization of twelve experts providing services in both Metrology and Management Consulting. Mr. Ingram's experience runs the gamut from having his own calibration lab to working for Lockheed Martin, Guildline Instruments, British Aerospace and US Instrument Rentals. He has worked as Chief Metrologist, Technician, Chief Engineer, VP of Manufacturing and Engineering, Metrology Manager, Quality Manager, National Service Manager and President (Guildline Instruments).

Course Information:

- Available Dates
 - 9-10 April 2008 (Wednesday-Thursday)
 - 15-16 April 2008 (Tuesday-Wednesday)
- Cost per student: \$630 Includes continental breakfast, lunch, afternoon breaks and all course materials. Checks to be made payable to J.M. Ingram & Associates. Registration payments should be made by 29 February 2008. In the event you must cancel, and do not have a substitute attendee, \$500 will be refunded up to the day prior to the class.
- Workshop to be held at the Residence Inn by Marriott. Just off US 22 near the Lehigh Valley International Airport (North side of Allentown-Bethlehem just off of US-22, Airport road exit)
- Maximum number of students is 25 for this facility.
- The 9-10 April 2008 dates will filled first. If demand is sufficient, the 15-16 April 2008 dates will be set as a second workshop.
- Contact: Barb Blythe, (Lehigh Valley Balances) office: 610-298-8880 or email: Labcal2000@AOL.com, by **18 January 2008** if you plan to attend.

ASQ HARRISBURG 2007-08 MEETING SCHEDULE

DATE	SPEAKER	TOPIC	LOCATION
2/13/2008		TBD	Lancaster
3/12/2008	John Bloomfield	Reducing your system's dependency on the auditor or developing systems development competencies	York
4/9/2008		TBD	Harrisburg
5/14/2008		TBD	Lancaster
6/11/2008		TBD	