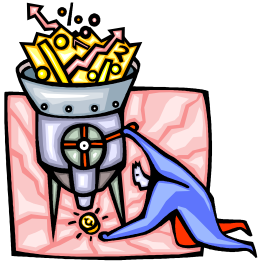
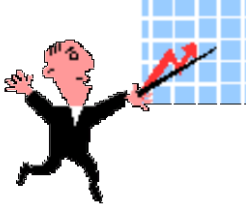


Welcome to the February 2010 issue of the Newsletter! Your local provider of information and learning opportunities related to quality professionals.

Remember:  Next month's meeting is the workshop – register now and save \$100	<b><u>MEMBERSHIP MEETING</u></b>	
	<b>LOCATION:</b> Furr's Family Buffet - 11925 Gateway Blvd W, El Paso, TX (915) 633-6107 <a href="#">Map to Furr's Family Buffet</a> (near Zaragoza)	
	<b>SCHEDULED HOUR:</b> 6:30 pm-8:30 pm	
	<b>DATE:</b> Wednesday, February 17, 2010	
	<b>SPEAKER:</b> Keith Fong	
	<b>TOPIC:</b> The Power in Properly Applying the 20/80 rule - Pareto Diagram	
	MEETING IS FREE FOR EVERYBODY (MEMBERS OR NON-MEMBERS) AND THE DISCUSSION STARTS AT 7:00 P.M. We start our social hour at 6:00p.m.	

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	<b><u>Upcoming Workshop!!!!</u></b>	
	<b>March 26 and 27, 2010</b> <b>College of Business Administration</b> <b>building, third floor, at UTEP</b>	
	<b>Douglas Montgomery</b> , author of <i>Introduction to Statistical Quality Control</i> <i>Design and Analysis of Experiments</i> <i>Engineering Statistics</i> <i>Response Surface Methodology: Process and Product Optimization Using Designed Experiments</i>	

**Early registration extended until Feb 15, 2010 Register now and save \$100**  
**Seats are limited we already have over 25 registered to attend...**

**THE CHAIR SPEAKS**  
JOE LISSBERGER

We have once again come to that time in the year when we are asked to be judges for the Sun Country Science Fair. It will be

held on the 27th of Feb. 2010 in the Memorial Gym at UTEP from 8:00 AM until finished. We are one of the largest award presenters each year and this year I hope that we will continue with this practice. But besides the awards that we give, judging is also one of the things that the people who run this fair look to the section for help. I hope that we can come through for them. This year Dorline is not there and in her place is another person whom I will pass on to the section in the coming week. The contact for the Sun Country Science Fair is Richard Mojica.

We are coming upon the nomination period for the Chair, Vice Chair, Treasurer and Secretary. So far everyone contacted has a good reason not to volunteer. Please people! We need to fill these slots!!

### **AUTOMOTIVE SECTION** HECTOR LUGO

What happen to Toyota and their massive recall and sales halt of its best-selling vehicles will overshadow an expected industry increase in U.S. auto sales for January over the deeply depressed month a year ago.

Toyota is expected to post a sharp drop in sales after it shut down sales of its most popular vehicles in the last week of January, including North American-built Camrys and Corollas, amid its recall of 2.3 million vehicles tied to faulty accelerator pedals.

Analysts expect Toyota's woes to result in sales and market share increases by its largest competitors in the U.S. market including General Motors Co , while it remains unclear how deeply the sales shutdown will run into the February sales period for Toyota, No. 2 in U.S. auto sales behind GM.

Toyota said on Monday it has found the remedy to fix potentially sticky accelerator pedals in the recalled vehicles, but it is expected to take some time to complete repairs.

"Frankly, I think this is going to impact their entire quarter," said IHS Global Insight analyst Aaron Bragman. "It means opportunity for the rest of the industry. Toyota is wounded and rivals are going to go after it as much as they can."

The issue here is what is going to be the longer term impact on their reputation and how that will affect sales going forward. What we know is that Toyota's sales are very heavily dependent on reputation for quality and safety.

See you at the meeting!

## **EDUCATION SECTION**

KIM PRIES

### **Compliance versus Characterization Testing**

Characterization goes beyond compliance testing. Often, our test plans for characterization are supersets of compliance testing; in other words, we contain the compliance testing within the larger test plan. This approach allows us to meet customer expectations with the compliance testing and to exceed customer expectations with the characterization testing.

### **Compliance testing**

By definition, we perform compliance testing against a standard. In the automotive and commercial vehicle businesses in North America, we will most commonly use standards like SAE J1455 and SAE J1113 for environmental/mechanical and electromagnetic compliance testing, respectively. The rest of the world usually uses ISO standards and other documents based on national standards committees. Additionally, we can be required to use military test standards, for example:

- MIL-STD-810G{environmental and mechanical testing
- MIL-STD-202G{environmental and mechanical testing
- MIL-STD-461E{conducted/radiated emissions and conduct/radiated susceptibility

I am not suggesting that test teams throw out their compliance testing! What I am recommending is that the test teams consider other possibilities for liberating defects than just simple standards-based testing. I am fond of saying 'the real testing starts when the compliance testing stops.' I am making a plea for opening our communal minds and going beyond the go-through-the-motions testing I have seen on myriad projects with different enterprises.

### **Compliance—Typically OFAT**

To date (2010), few standards, if any, exist that specifically describe designed experiments, multiple-environmental testing, and other multi-modal approaches for attacking the product. That means most of the standards only support one factor at a time (OFAT) testing which we have already indicated means we only discover an interaction effect by fortuitous circumstance. Another issue with OFAT testing is that it is incredibly inefficient, particularly when we desire to test a multitude of actors. (Note: Rudy Kittlitz knows of a standard that is in-process!).

## **Compliance—Interaction visibility minimal**

In order to detect interactions among or between factors in an experiment, we need a recipe that is capable of causing enough variation that our analysis of variance can 'see' the interaction. This need also means that our experimental arrays cannot be saturated with main factors—they need to allocate columns for the interaction effects. In this regard, the Taguchi approach is somewhat weaker than either classical designed experiments or response surface methodologies. It is possible to detect interactions in non-saturated Taguchi arrays, but the standard Taguchi approach does not account for the interactions.

## **Characterization**

Don't we want to know how our products perform in adverse conditions? When testing, our goal is never to 'find out where the product works' but, rather, to discover when and where the product or service doesn't work.

With the first attitude, we stop testing when the parts all 'pass' the test suite. With the second attitude, we only stop testing when the product disintegrates. If we must progress to extreme testing to yield a product failure, we increase our confidence that the product is robust.

## **Characterization—We can test for control and noise factor interactions**

During product or service characterization, we recommend the use of designed experiments to assess the impact of control and noise factors as well as the interaction of these. Once we know which factors are significant, we can proceed to optimization of the product if desired. If we are going to optimize, we will most likely use a response surface approach or a sequential simplex algorithm. The response surface approach is elegant and will most likely require some kind of genetic algorithm or some other search heuristic (e.g., particle swarm optimization) to find the sweet spot. The sequential simplex is a search algorithm to begin with; it is possible to use a sequential simplex approach using a simple spreadsheet and rigorous bookkeeping.

## **Characterization—More realistic**

We consider characterization testing to be more realistic because products will fail—in fact, we drive them to failure. Since all products receive wear, this approach makes a great deal of sense. The only quantitative difficulty occurs when we attempt to estimate the life behavior of the product.

## **Conclusion**

- I think the best approach is
- Compliance testing (meet customer requirements AND
  - Characterization studies (to really understand the product

## **MANAGEMENT SYSTEMS**

ALFONSO ENRIQUEZ

Yohi Akao the pioneer of the Quality Function Deployment (QFD) has been named honorary member of ASQ (1). The house of quality is part of QFD. This article attempts to explain the relation to the Quality Management System.

ISO 9001:2008 clause 5.2 Customer Focus states; “Top management shall ensure that customer requirements are determined and are met with the aim of enhancing customer satisfaction (see 7.2.1 and 8.2.1)”.

This requirement creates a conflict between the agendas of different departments; sometimes the operations area wants to increase efficiency of the plant, and to that effect the products which are less efficient to produce receive less priority than the products that the customer require.

A good tool for solving these conflicts is the House of Quality; the customer requirements are translated into design requirements, and then the conflicts between the design requirements are analyzed in the correlation matrix-the roof of the house.

Clause 7.2.1 states “ The organization shall determine requirements for delivery and post delivery activities” . The House of Quality may be used to include the delivery requirements, and pay attention to this important aspect of a business. For example, in a customer survey; the feedback was that customers rated the quality of the product as high quality, however delivery should be improved. Therefore the Quality System should address the aspects related to delivery of the product and set targets for the internal metrics related to the issue at hand.

Using QFD can help to satisfy the ISO 9001 Customer Focus requirement.

- 1) Quality Progress, January 2010, page 17

## RE-CERTIFYING AND ASQ CERTIFICATIONS

STEVEN SCHAFER

Out of a total of 8 member(s) whose certifications expired June 2009, 0 will lose their certifications if they do not re-certify by the end of December 2009, 0 member(s) re-certifications are being processed and 8 member(s) completed their re-certifications. **100% re-certification, congratulations all!**

Out of a total of 8 member(s) whose certifications will expire December 2009, 5 will lose their certifications if they do not re-certify by the end of June 2010, 0 member(s) re-certifications are being processed and 3 member(s) completed their re-certifications.

Out of a total of 11 member(s) whose certifications will expire June 2010, 11 will lose their certifications if they do not re-certify by the end of December 2010, 0 member(s) re-certifications are being processed and 0 member(s) completed their re-certifications.

**Members can re-certify early!** As long as you have enough points to re-certify early, you can. Your Certifications will be extended 3 years beyond the certification expiration date you currently have for your certification. So you don't lose anything by re-certifying early. Out of a total of 8 member(s) whose certifications will expire December 2010, 8 will lose their certifications if they do not re-certify by the end of June 2011, 0 member(s) re-certifications are being processed and 0 member(s) completed their re-certifications.

If anyone has questions on how to re-certify to extend their ASQ Certifications and/or how to synchronize them if they have more than one, please let me know. Re-certifying by exam now costs more money, since the prices went up January 2005 and is a lot more difficult than re-certifying. You can reach me, the Re-Certification Chair, at 915-584-0033. Please leave a message on the answering machine if no one answers and I will call back you as soon as I can. You can also reach me via the Internet at [spikeguate@sbcglobal.net](mailto:spikeguate@sbcglobal.net).

I am ready to help with any questions you might have about Re-Certifying or about any ASQ Certifications you might have, call me. The Re-Certification Journal is at the following link and will guide you in the re-certification process

<http://www.asq.org/certification/recertification/rucredits/index.html>

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## Potential meeting and dinner schedule

YEAR	MONTH	DAY	TOPIC	SPEAKER	LOCATION
2010	March	26, 27	Design of Experiments (Doug Montgomery)	Doug Montgomery	UTEP
2010	April	21	Lean Manufacturing	Lonnie Wilson	Furr's *
2010	May	19	Lean Toyota Production System (also, Sun Country Science Fair Winners presentations)	Tom Nieman	Furr's *
2010	June	16	ISO Registrars (also, Sun Country Science Fair Winners presentations)	Rajesh Tahiliani	Furr's *
2010	July	17	Section Training and Planning Session (Saturday)	Section Chair	Furr's *
2010	August	21	Section Training and Planning Session (Saturday)	Section Chair	Furr's *

\* Furr's Family Buffet - 11925 Gateway Blvd W, El Paso, TX (915) 633-6107 [Map to Furr's Family Buffet](#) (near Zaragoza)

\*\*\* Cactus Rose Grill 6655 Gateway West El Paso, TX 79925 [Map to Holiday Inn Airport - Cactus Rose Grill](#)

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Our Section is on-line! Make a suggestion – win a FREE meal! <http://asq1401.org>