



TOP EVENTS:      Print Ver

Spring 2010

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MESSAGE FROM THE CEO

Welcome to our 21st quarterly newsletter. Lucky #21 just in time for St. Patrick's Day! On March 11th, we will be part of a Green Event entitled "[New Paradigms for Green Product Development](#)". [Click for more details.](#)

My new book "[50 Ways to Improve Your Product Reliability](#)" is at the editor to be published this spring. For a sneak preview of the book, you can download the first two chapters at [Reliability Book: 50 Ways - 1st Two Chapters](#).

On April 19-23, we will be holding our [Design for Excellence \(DfX\) Symposium](#) in San Jose, CA. We will be co-teaching the symposium with our partners DfR Solution. All classes will also be available via webinar. This is the first of three symposia. The next two will be May 19-23 in Huntsville, Alabama and October 11-15 in College Park, Maryland.

We are proud to announce the opening of our new HALT and HASS Lab facility in Cambridge, Massachusetts. See our [News](#) page for more details.

Check out our new calendar of events at the bottom of this page. We wanted to make it easier for you to see what was going on in the world of reliability. All the events are shown in more detail within the website. The education courses are shown in more detail in our [Education](#) tab and our events are shown in more detail in our [News Events](#) tab.

We hope you enjoy the following newsletter. Thank you for your continued support and interest.

- Mike Silverman, Managing Partner/CEO

COURSES

► **Topic: Design for Excellence (DfX) Symposium**

Date: April 19-23

Location: San Jose, CA

About Event: Ops A La Carte and DfR Solutions are teaming up to give this Design for Excellence (DfX) Symposium. We will also be giving this two other times during the year:

- May 17-21 in Huntsville, Alabama

- October 11-15 in College Park, Maryland.

DFX TRACK ONE - DESIGN

Design for Reliability (DfR): Apr 19: [Mike Silverman](#) of Ops & [Dr. Craig Hillman](#) of DfR

Design of Environment (DfE): Apr 20 by [Dr. Randy Schueller](#) of DfR Solutions

Design for Manufacturability (DfM): Apr 21 by [Cheryl Tulkoff](#) of DfR Solutions

Design for Testability (DfT): Apr 22 by [Vaughan Carlson](#), Pres. of Value Engrafting

Software Design for Reliability: Apr 23 am by [Bob Mueller](#) of Ops A La Carte

Design for Warranty: Apr 23 pm by [Bob Mueller](#) of Ops A La Carte

DFX TRACK TWO - TESTING

Best Accelerated Life Tests: Apr 19-20 by [Mike Silverman](#) of Ops A La Carte

Root Cause Analysis (RCA): Apr 21-22: [Greg Swartz](#) of Ops & [Dr. Craig Hillman](#) of DfR

Design for Mechanical Reliability: Apr 23 by [Dr. Kim Parnell](#) of Ops A La Carte

	April 19	April 20	April 21	April 22	April 23	
DfX Track 1: Design	D F R	D F E	D F M	D F T	S D F R	D F W
DfX Track 2: Testing	Best of ALT		R C A		M D F R	

PRICING AND TERMS

Class Prices: Two day=\$1195, One day=\$695, half day=\$395

Group Discounts: Every 5th registrant is FREE

Unemployed/Employees paying themselves=25% off

Full time students=50% off

All are available via webinar for a 25% discount.

Payment: PO, Check, or Credit Card in advance



For more info or to register, please

► **Course: Certified Quality Engineer (CQE) Preparation Course**

Date(s): Apr 13 - May 25, 2010

Time: 6pm-10pm one night a week, 7 weeks

Instructor: Greg Swartz and Pat McMahon, Ops A La Carte

Length: 7 weeks

Cost: \$1295. We offer 25% discount for those taking via webinar or for unemployed or for students not getting reimbursed.

Location: San Jose, CA

Offered via webinar for out of town students.

Description: Becoming certified as a Quality Engineer (CQE) can be valuable to your employer and your career. We are offering this Exam Preparation Course. Students have found it very valuable in preparing for the exam. Even if you are not planning on taking the exam but need a good, in-depth course in Quality Engineering, this can benefit you substantially.

Course Webpage: [CQE Course by Ops A La Carte](#)

► For information on other course offerings go to: [Ops A La Carte Schedule](#)

► All our courses are offered as **in-house tailored** seminars. To view a list of all our seminars, go to [Ops A La Carte Course List](#)

SEMINARS

► **Product Realization Group (PRG) Lunch and Learn Series (all are FREE)**

Apr. 15, 2010 [Medical Product Development and Validation](#)

May 13, 2010 [Driving Product Realization with Global Collaboration](#)

And don't miss our summer barbeque on August 20th. Check the [PRG](#) website for details.

► Note that we have started offering these lunch and learns via webinar as well. If you cannot attend in person and would like to attend via webinar, please note that on your registration form. To register for any of these lunch and learn sessions, please go to [L&L registration form](#)

EVENTS

► Topic: [New Paradigms for Designing Green Products](#)

Date: March 11

Location: San Jose, CA

Price: Free

About Event: *Product Realization Group (PRG) Lunch and Learn Series: [New Paradigms for Designing Green Products](#), San Jose, CA (also available via webinar).* Ops A La Carte's Mike Silverman and Fusion Design's Mark Brinkerhoff will be giving the presentations.



To sign up for live seminar, please click



To sign up for webinar, please click

► Topic: [Design for Excellence Symposium \(DfX\)](#)

Date: April 19-23

Location: San Jose, CA

About Event: See [Education Schedule](#) for more details



For more info or to register, please

► Topic: [International Conference on Solder and Reliability \(ICSR\)](#)

Date: May 17-20

Location: Toronto, Canada

About Event: We will be presenting the follow paper at this event.

"ZIF Connector Failure Analysis", by Peter Arrowsmith of Ops A La Carte



For more info, please

► Topic: [Applied Reliability Symposium \(ARS\)](#)

Date: June 15-18

Location: Reno, Nevada

About Event: We will be presenting the follow paper at this event.

"HALT Calculator - New Fast Method for Determining Product MTBF", by Mike Silverman and Harry McLean



For more info, please

SPECIAL OFFERS

► **\$1000 off** your next service or seminar or one free pass to any of our upcoming events or seminars *to any individual who introduces us to a new customer with whom we engage.*

Email us via our [Special Offers Contact Form](#)

NEWS



BELOW ARE NEWS HIGHLIGHTS FOR THE PAST QUARTER. MORE DETAILS FOR EACH ITEM CAN BE FOUND AT [NEWS](#).

All presentations that we gave can be found on the technical download section of our website at [Technical Papers](#).

- March 1, 2010: [Ops A La Carte opens East Coast HALT and HASS facility.](#)

In addition to our west coast HALT Lab in Santa Clara California, now we have an east coast Lab in Cambridge Massachusetts. In conjunction with this, Ops announces a strategic alliance with east coast reliability consulting firm [System Effectiveness Associates \(SEA\)](#). SEA is a 20 year old reliability consulting firm run by Peter Bachant. We are very excited to start working with Peter's firm. We have heard so much about SEA for years and are glad we now have the chance to partner with them because of their talent as

well as their proximity to our east coast customers. And this is going to really help service our east coast HALT customers at our lab in Cambridge.

- February 15, 2010: Ops adds two new consultants to our company:

▶ **Jim McLinn, MS, CRE/CQE (Minnesota)** has over 35 years experience in the area of reliability and quality. His specialties include product and process improvement using techniques such as DfR for Electronics and Mechanical systems as well as statistics. Jim served as chair of the Reliability Division of ASQ in 1993-1995 and 2006-2008. See the [Ops Team](#) for more details.

▶ **Bob Baker, MBA, PE (Texas)** has over 40 years experience in quality, reliability, and program management. Bob is an expert in business process improvement and quality management system implementation with an emphasis on continuous improvement, cost reduction, and performance excellence for clients in diverse businesses and industries. See the [Ops Team](#) for more details.

- February 11, 2010: 1/2 Day Free DfR Symposium

Ops A La Carte and Wyle Labs hosted a free 1/2 day Design for Reliability seminar. Ops A La Carte's Mike Silverman was the presenter. Over 200 people attended the seminar both live and via webinar. See [DFR Seminar](#) for a copy of the presentation.

- February 10, 2010: CMSE Presentation

Ops A La Carte's Mike Silverman gave a presentation at the annual Components for Military and Space Electronics (CMSE) Symposium. See presentation at [New Fast Method for Determining Product MTBF](#)

- February 8, 2010: MD&M Presentation

Ops A La Carte's Mike Silverman gave a presentation at the annual Medical Design and Manufacturing Show. The title of Mike's presentation was: [Integrating HALT with the Medical Product Life Cycle](#)

- January 25-28, 2010: RAMS Presentations

- Ops presents 4 papers and 2 tutorials at the annual Reliability and Maintainability Symposium (RAMS):

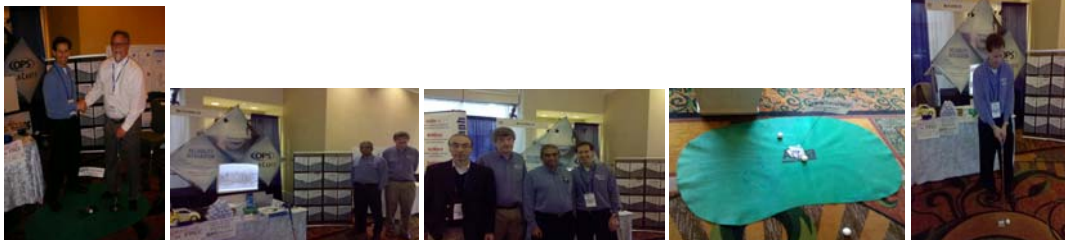
- [How to Design a Better Reliability Test Program](#) by Mike Silverman
- [Using Electronic Design Automation throughout the Product Life Cycle](#) by Bryan Stallard
- [Estimating Field Failure Rate from the Results of HALT](#) by Harry McLean and Mike Silverman
- [Design for Reliability in Medical Devices](#) by Dev Raheja and Vaishali Hegde of Philips Respironics

TUTORIALS:

- [Reliability Demonstration Theory and Application](#) by Andre Kleyner
- [System Safety in a Variety of Industries](#) by Dev Raheja

Also congratulations to Ed Flower for winning our "closest to the hole" putting contest. Ed putted the 50 foot shot to within 2 inches of the hole. Ed won a brand new Ping putter.

The left picture below is Ops A La Carte's Managing Partner Mike Silverman congratulating Ed for winning. Next to it is a picture of Jay Pisharodi and Peter Arrowsmith. In the center is a picture of Ops consultants left to right Andre Kleyner, Peter Arrowsmith, and Jay Pisharodi with managing partner Mike Silverman on the right.. Second from the right is Ed's winning put 2 inches from the pin. On the far right is managing partner Mike Silverman having a go at the putting.



- January 14, 2010: Ops quoted in Wall Street Journal

- Ops A La Carte was quoted in the Wall Street Journal on Thursday, January 14th. We were interviewed by the Wall Street Journal in an article on "Three Best Ways to Win a New Client." To see the full article, go to [WallStreetJournal Article](#).

- December 11, 2009: Ops Medical Open House

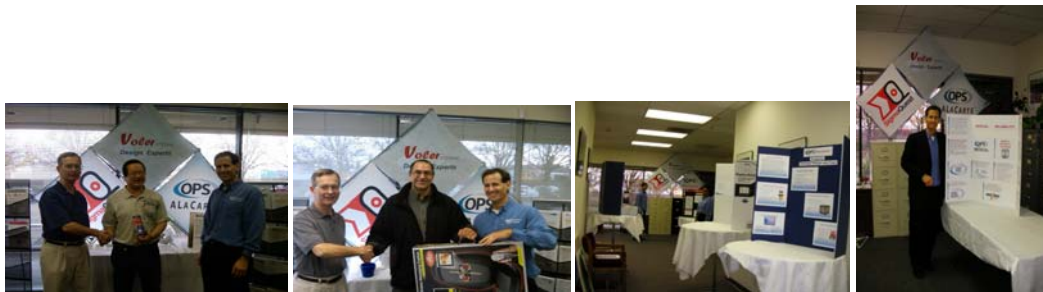
- Ops A La Carte holds an open house at their test lab HALT and HASS Labs in Santa Clara, CA. The open house was by invitation only specifically targeted to the medical market, piggybacking on the BIOMEDevice expo the day before. [Voler Systems](#) (a design firm) and [SigmaQuest](#) (a quality database solutions provider) co-sponsored the event. We had over 20 partners and 60 customers attend the open house. Seven of the 20 partners set up booths and had poster sessions about their business. We also had 3 customer demonstrations set up. All in all, it was a great success.

Also congratulations to the three prize winners at the open house.

Juan Adames won the grand prize with 5 correct answers to our Medical trivia quiz. Here are the quiz questions. See how many you can get:

- 1) In the US, the error rate for doctors prescribing the wrong medicine for their patient's ailment is ____
- 2) The longest anyone has ever gone without sleeping is ____
- 3) In the USA, the chances your doctor is a fake are ____
- 4) Who blinks more - women or men? ____
- 5) The average person takes how long to fall asleep? ____
- 6) The Statue of Liberty in New York's index finger is how long? ____
- 7) How much sugar does the average American intake a day? ____
- 8) The heart pumps about how much blood a day? ____
- 9) Per capita, US was highest in health costs. Which country was second? ____
- 10) The chance of contracting an infection during a hospital stay in the US is ____

Robert Chow won the contest "how many Q-Tips are in the jar" game. Robert is pictured on the left and Juan is second to the left. Right of them are pictures of our open house.



- December 9-10, 2009: Ops at BIOMEDevice Expo

- Ops A La Carte teams up with [Voler Systems](#) (a design engineering firm) and [SigmaQuest](#) (a quality database solutions provider) to co-exhibit at the BIOMEDevice Expo. Walt Maclay, CEO of Voler, also gave a presentation on Data Acquisition for Medical Devices, as part of the Innovation Briefs portion of the conference. Also attending the booth and meeting customers were Ops A La Carte's managing partner Mike Silverman as well as SigmaQuest's CEO Nader Fathi.

Also congratulations to Paul Russell of Life Technologies for winning our drawing - an RC Solar Car.

Pictured below to the left are Walt and Mike in front of their booth. To the right, Walt and Mike are congratulating Paul for winning.



► **For more information** on news, please visit our [News Page](#) or call (408) 654-0499.

FEATURED SERVICE

**RELIABILITY MATTERS: The Toyota Take-Away****Author: Mike Silverman**

In a blog posting on our blog site [blog site](#) from February 15th, Edward Smith from Ops A La Carte wrote "Toyota Problem 'Unforeseeable'". The blog highlights a Design News article from Jan 28, 2010: "*Toyota's sticking gas pedal was an almost-unforeseeable problem, experts say, and the best course of action now is for engineers to ensure that drivers can handle the failure if it happens again.*" Edward goes on in the blog to question the concept of "unforeseeable". For a link to this blog, go to [Toyota Blog](#).

Ever since this incident happened, I have had dozens of people come up to me and ask me the question – "so Mike, what do you think of this?" Perhaps they believe since I run a reliability consulting firm and the public is viewing this as a reliability issue, that I would have some sort of magic answer to this.

I have resisted commenting on this up until now because all of the evidence is not yet in so it is not clear if it even was a "reliability issue". So could I honestly say that if Toyota was a customer of ours, they would have avoided this issue? It is difficult to answer that question until we know what the exact root cause is.

In Edward's blog, he points to the fact that other manufacturers of automobiles did foresee this particular problem and put in software that overrides the gas pedal in situations like this.

Could Toyota have avoided this issue? Maybe. Maybe not. Will they find the next big issue before it gets into the field? We don't know? One thing we know for certain is that given our current design and manufacturing practices as well as our current customer/vendor relationships, we will see this type of problem again, maybe not with the gas pedal. Maybe next time it will be the steering wheel, or the brakes, or the transmission. But it will happen again. Will the next victim be BMW or Mercedes? Maybe.

But this is not the point I would like to make here. What I'd like for people to come away with from this article is that RELIABILITY MATTERS. The consumer does care about reliability! Imagine that. All these years we have been lecturing how consumers like the *concept* of reliability but the end it usually takes a backseat (no pun intended) to price and time to market. But here we have proof that consumers really do care about reliability after all. When Toyota was "perceived" as a more reliable company, their sales went up and they soared to #1. Now that Toyota is "perceived" as less reliable, their sales are dropping. I put quotes around the word "perceived" because it is a tricky thing with reliability. For most people, perception is made up of what they hear about and what they experience personally. Perception is linked to reputation which you build over time. The funny thing is that this same perception can work against you in the case of Toyota right now.

Why is the media giving this so much attention? Is it that this is such a huge safety issue? I think the media is giving this so much attention not to place blame on Toyota but rather to show that this type of thing can happen to any car manufacturer or really any manufacturer at all. It is time for all manufacturers of all products to take a step back and ask themselves 'do I have complete control over the quality/reliability/safety of my product?' It is time to take a bigger picture view of reliability. The question should not be "do I have the budget in my program to do this extra amount of reliability work?" The question should be "can I afford not to do it?" The question should be "can my reputation withstand it if I do have a reliability problem?"

Where I'm going with all these is that you manufacturers out there need to take note of all this because you may be next. You need to look at your own reliability programs and determine if there are any areas where you are vulnerable.

The whole situation though very unfortunate, will be addressed during our Design for Excellence (DfX) Symposium coming up the week of Apr 19-23. The thrust of the symposium is that if you want to develop a reputation for high reliability, you must develop a longer term approach to reliability. You must take a Design for Excellence approach.

We will be co-teaching this class with DfR Solutions. In the symposium, we will cover many of the key aspects of DfX in two tracks:

DFX TRACK ONE - DESIGN

Design for Reliability (DfR): Apr 19: [Mike Silverman](#) of Ops & [Dr. Craig Hillman](#) of DfR

Design of Environment (DfE): Apr 20 by [Dr. Randy Schueller](#) of DfR Solutions

Design for Manufacturability (DfM): Apr 21 by [Cheryl Tulkoff](#) of DfR Solutions

Design for Testability (DfT): Apr 22 by [Vaughan Carlson](#), Pres. of Value Engrafting

Software Design for Reliability: Apr 23 am by [Bob Mueller](#) of Ops A La Carte

Design for Warranty: Apr 23 pm by [Bob Mueller](#) of Ops A La Carte

DFX TRACK TWO - TESTING

Best Accelerated Life Tests: Apr 19-20 by [Mike Silverman](#) of Ops A La Carte

Root Cause Analysis (RCA): Apr 21-22: [Greg Swartz](#) of Ops & [Dr. Craig Hillman](#) of DfR

Design for Mechanical Reliability: Apr 23 by [Dr. Kim Parnell](#) of Ops A La Carte

The ALT course is basically the “proof is in the pudding” course. First you must *design for excellence*. Then test to make sure your design was correct. In fact, do one step better than this. Use your design knowledge to then design a more appropriate test.

The RCA course is the feedback mechanism to the design process. It is what gives us our fully integrated program. No matter how good we design the product, we are still going to have failures during testing (and our testing program is designed so that we find these failures before our customers do). It is only with a robust RCA process that we can quickly and effectively deal with these failures so that we ensure the problem is fixed and does not recur and does not show up in the field.

This comprehensive symposium provides the basis for a solid reliability program to help combat these types of issues so that you can avoid being the next Toyota. *Don't take a Chance. Use a Design for Excellence Approach !!*

Mention this article and receive \$1K off your next service or a free day at our DfX Symposium.

RELIABILITY BLOG



Below is a summary of the Best of our Blog for last quarter - highlights of the best blog topics we had. If you would like to contribute to our blog, please either



or go to



- ▶ [Twilight Zone of Humidity Testing](#), by Andre Kleyner
- ▶ [Toyota Problem "Unforeseeable"?](#), by Edward Smith
- ▶ [Design Space Effective Reliability](#), by Vijay Prasad

PROBLEM SOLVER



WHAT SHOULD TOYOTA DO DIFFERENTLY GOING FORWARD?

We've heard a lot of stories about what went wrong at Toyota. Some say that the issue was unforeseeable and some say that they should have been able to find. Some think it was a reliability issue, others contest that it was a vendor/supplier quality issue, and still others think it was a design issue. Clearly there were holes in their process somewhere. What do you think they should do differently going forward to prevent another embarrassing error? And how do you see your company reacting and changing so that you don't become the next Toyota story?

The best response within the next 5 days will receive one free pass to our next Certified Reliability Engineer (CRE) or Certified Quality Engineer (CQE) course or one free day at our upcoming DfX Symposium.

Congratulations to Mark Turner of Flextronics for answering last quarter's quiz: Name In medical devices, we must abide by the rules set out in 21 CFR. What does CFR mean and what is the title for Code 21?

Mark's winning answer was: "This refers to the Code of Federal Regulations, which covers all food and drugs within the USA for the FDA, DEA and ONDCP. It is divided into three chapters, Chapter I, Food and Drug Administration, Chapter II, Drug Enforcement Administration and Chapter III, Office of National Drug Control Policy. The title for code 21 is "Food and Drugs," which consists of parts 1 to 1499"

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Your Benefits

- Our integrated solutions will save you time, streamlining bringing your product to market.
- Our proven partnerships will eliminate guesswork and prevent breakdowns in communication.
- Our partners will educate you on current best practices.

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JOB OPENINGS

Given the current economic climate, we know of many talented individuals that are currently looking for work. Therefore, if you are an employer and have a need for any position within reliability, engineering, or operations, we are offering to advertise in our newsletter at no cost. Just doing our part to help stimulate the economy! Below are a few positions that we do know about.



Ops A La Carte is looking for Senior Reliability Consultants *around the world* to join our team of consultants and work on some of the most exciting and challenging projects in the industry. Whether you have an existing consulting practice or are interested in developing one, please contact us.

If interested, email us via our [OPS Job Search Contact Form](#) or call (408) 654-0499.

Ops A La Carte's newsletter goes out to over 18,000 subscribers. If you would like to put an ad or job opening in next quarter's "Reliability News", email us via our [Job Openings Contact Form](#) or call at (408) 654-0499.

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To remove yourself from this email, send an email with the word REMOVE in the subject line.

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