



Reliability News

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Fall 2009

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Ops A La Carte LLC
Ph: (408) 654-0499
Fax: (408) 986-8154
Website: www.opsalacarte.com

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MESSAGE FROM THE CEO

Welcome to our 19th quarterly newsletter. The economy continues to struggle and we are combatting this with a stronger emphasis on the markets we see that are remaining hot - [Medical](#), [Military/Aerospace](#), [Clean Tech](#), and [Oil and Gas](#). We have worked in over 90 different industries and this list continues to expand, but the work from these four verticals just doesn't seem to show any sign of slow-down. We just updated our [Company brochure](#) to reflect all of these new industries.

Our HALT and HASS Lab also showed no slow-down. We just came off our busiest summer in the 14 year lab history. Much of the work came from these four vertical markets, but also came from a variety of other markets as well.

We continue to receive a tremendous amount of interest in our new HALT-AFR Calculator that was launched this quarter. This tool can calculate field reliability from HALT results. You can learn more about this at [HALT Calculator](#). We have updated the information about the Reliability calculator.

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

- Mike Silverman, Managing Partner/CEO

COURSES

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

Date(s): October 6 - November 24, 2009

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

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

Length: 8 weeks

Cost: \$1295

Location: San Jose, CA (for those out of area, course is now offered via internet)

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

▶ SMP Tech "Meet the Experts" Design Forum

Topic: [Reaction Injection Molding \(RIM\)](#)

Date: Sept 23, 2009, 10:30-12:30pm

Location: San Jose, CA

▶ To register go to: [eventsinfo](#).

▶ Product Realization Group (PRG) Lunch and Learn Series

Topic: [Regulatory Considerations throughout the Product Lifecycle - Panel Discussion](#)

Date: Nov. 12, 2009, 11:30-1pm

Location: National University, 3031 Tisch Way, 100 Plaza East, San Jose, CA (*also avail via webinar*)

About Event: This discussion will focus on how reliability and regulatory are being combined to provide better products not only in the medical and defense industries, but in all markets.

▶ To register for this lunch and learn session, please go to [L&L registration form](#).

EVENTS

▶ **Hunter Technology OktoberTechFest - Ops will give a presentation on "Design for Reliability - an Overview" - Oct 2, 2009, 1:30-5pm, San Jose, CA.** Email us via our [contact form](#) for more information on this event.

▶ [Accelerated Stress Testing and Reliability Workshop](#) - Oct 7-9, New Jersey

We will be exhibiting and presenting the following papers and Tutorials

"How to Design a Better Test Program"

"Green Reliability"

"Estimating Field Failure Rate from the Results of HALT"

"IC Package Size DOE Using Various Environmental Accelerants"

For more details, please go to [ASTR](#). Email us via our [contact form](#) for more information on this event.

Attending the workshop will be Ops Managing Partner Mike Silverman, and Ops Senior Reliability Consultants Art Degenholtz and Lou Lavallee. They will be in the area all week so if you would like to set up a visit, please fill out the [contact form](#).

▶ [American Society for Quality \(ASQ\) Road to Quality Excellence](#) - Oct 23, Santa Clara, California

The following papers/presentations have been accepted into the ASQ proceedings. The ones with stars by them have been accepted for the presentation sessions. We will also be exhibiting at this event.

*"Estimating Field Failure Rate from the Results of HALT" by Harry McLean/Mike Silverman ***

*"Improving Customer and Supplier Performance via Collaboration" by Mike Gozzo ***

"Misuses of MTBF" by Fred Schenkelberg

"Sensing the Pulse of an Enterprise - Internal Quality Audits" by Mike Gozzo

▶ Ops in Florida - Oct 26, Hollywood Florida

Senior Reliability Consultants Fred Schenkelberg, Bob Mueller, and Lennox Bennett will be performing a Reliability Assessment at one of our customers. Please let us know via our [contact form](#) if you would like for them to stop by and visit your facility and talk about any particular reliability concerns or questions you may have.

▶ [Advanced Telecommunications Computing Architecture \(TCA\) Summit](#) - Oct 27-29, Santa Clara, CA

We will be exhibiting and presenting the following papers:

"A Faster, Cheaper Method for Determining Product MTBF"

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

- September 17, 2009

SJ Business Journal announces Ops A La Carte made it to this year's Fast 50 list again, making us one of the fastest growing private company in the Bay Area. Each year, the Silicon Valley/San Jose Business Journal comes out with a list of the 50 fastest growing private companies in Silicon Valley, and this year, Ops A La Carte has made the list. On October 8th, they will hold a banquet and announce which position on the list we obtained.

- September 17, 2009

We presented a paper on [Reliability Challenges in the Medical Industry](#) at the [Medical Electronics Symposia](#) on Sept 16-17 in Phoenix, Arizona.

- September 13, 2009

Ops' Annual Consultants Pool Party . Each year, we host a pool party for all of our consultants and consulting partners to help say thank you as well as to increase the strength of our consulting network. This year was the biggest ever with over 80 guests attending. Please go to [Ops Pool Party](#) for a few pictures of the event.

- September 1, 2009

Ops releases 4 new industry-targeted brochures, including

- ▶ [Clean Tech/Green Industries](#)
- ▶ [Medical/Biomed](#)
- ▶ [Military/Aerospace](#)
- ▶ [Oil and Gas](#)

We have been working in each of these industries for years and we have decided to dedicate extra resources in growing each of these vertical markets. We have added new services to each and have been presenting papers at various conferences in each specific industry, including the CMSE event in February 2009 in San Diego where we presented a paper on "Evaluating and Overcoming the risks of moving to Lead Free", the medical symposium MEDTEC in September, 2009 in Phoenix where we will be presenting a paper on "How to Develop a Better Reliability Test Plan", the ASTRÅ Workshop in October, 2009 where we will be presenting a paper on "Green Reliability", and we participated in British Petroleum's Quality Conference.

- August 28, 2009

Ops expands its business India by adding an office in Bangalore, to go along with our established office in Delhi. This will allow us to capitalize on the expanding high tech sector in Southern India. It will also allow us to be more competitive with pricing in the US by using resources from our overseas offices with their attractive labor rates.

To find out more about these offices, please visit our [Bangalore](#) web page.

- August 25, 2009

Ops starts our 11th annual Certified Reliability Engineer (**CRE**) certification course. Attendance for the course was the best in 3 years, indicating a possible shift in emphasis back to the fundamentals.

Becoming certified as a Reliability Engineer can be valuable to your employer and your career. The certification is being offered through ASQ and IEEE jointly. Ops has offered the Exam Preparation Course for 11 years running. Students have found it very valuable in preparing for the exam. The success rate in passing is several times higher for students that have taken the course compared to those that have not! Even if you

are not planning on taking the exam but need a good, in-depth course in reliability, this can benefit you substantially.

To find out more about the course or to sign up for the next offering in January 2010, please visit our [CRE Course Page](#) or email us at our [contact form](#)

- August 14, 2009

Ops Issues the following press release:

"NeoVista has been granted CE Mark approval for the VIDION ANV Therapy System! Ops A La Carte was a key contributor to the success of this project, helping in the area of reliability and statistics in developing life tests to prove the longevity of the product.

Ops A La Carte is the leader in **reliability and quality solutions for the medical industry**.

Ops provides the Medical Industry with Mission Critical Values:

- ▶ Committed to High-Reliable Systems to save human lives
- ▶ Successfully analyze and test critical medical products with confidence
- ▶ Deliver accuracy and precision to extend product life for each application
- ▶ Deliver customized solutions & consultancy to address program risks

In addition to medical products, Ops A La Carte has reliability expertise in Clean Energy, Military, Oil and Gas, Telecom, and many other industries.

Ops A La Carte is a Professional Reliability Engineering firm focused on providing companies confidence in reliability throughout your product life cycle. They offer a flexible method of engagement from end-to-end reliability solutions to solving specific problems to providing individual targeted reliability services. They do this through reliability assessment, consultation, testing, and training. They have our own Reliability Lab "HALT & HASS Labs" where they have successfully helped customers improve the reliability on over 500 different products in over 90 different industries. So whether you are having field failures or developing your next product and cannot take any chances on reliability, they will develop a reliability solution that is right for every customer."

- July 15, 2009

Ops adds two new consultant to our company:

▶ **Lou LaVallee** (*Eastern US - Rochester, NY*) has over 20 years of experience. Prior to joining Ops A La Carte Lou worked at Xerox as a Quality/Reliability/Maintainability/Cost engineer for the Printing Systems Group.

▶ **Anirban Roy** (*Southern India - Bangalore*) got his bachelor's degree in EE from Burdwan University and his master's degree in Reliability Engineering from **IIT Kharagpur**. He has worked at HCL and Goodrich Aerospace, including an assignment in Germany on the **Boeing 787 Dreamliner**.

- July 5, 2009

Ops publishes our Government Capabilities Statement, including our Cage Code (5H0D6) and our NAICS Codes (541690, 541380, 541990) and our SIC Codes (8711, 8734, 8742). "We have performed a number of government/military projects in the past, and now we are ready to start taking on larger projects" says Managing Partner Mike Silverman.

- June 25, 2009

Ops wins best paper award at annual Applied Reliability Symposium. Ops' Managing Partner Mike Silverman won 3rd place for his presentation on "How to Develop a Better Reliability Test Plan". The award was a \$500 cash prize. See article http://www.arsymposium.org/2009/ars2009_awards.htm.

In addition, Ops gave away a drawing at the ARS - a free RC Helicopter. [Picture 1](#), [Picture 2](#)

- June 10, 2009

Harry McLean's book [HALT, HASS, and HASA Explained](#) is now out and can be purchased through ASQ or Amazon.com.

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

FEATURED SERVICE



WHICH MARKETS ARE HOT?

Author: Mike Silverman

Silicon Valley, California is a pretty good barameter of which high technology industries are hot around the world. And the feedback we are getting from all our test lab partners is that, like us, they are still quite busy. So this tells us the design/development world is still cranking along, and it is the manufacturing sector that seems to be suffering the most, waiting for some sort of sign of consumer confidence to start building products again. In these current challenging economic times, four industries that seem to be impervious to this downturn, even in the manufacturing sector, are:

- ▶ [Clean Tech/Green Industries](#)
- ▶ [Medical/Biomed](#)
- ▶ [Military/Aerospace](#)
- ▶ [Oil and Gas](#)

Below are highlights of our business in these four vertical markets. In each market, we have developed unique services and solutions to lead the industry.

- ▶ We provide Confidence in Reliability.
- ▶ We offer a flexible method of engagement: End-to-end reliability solutions, solving specific problems, or providing individual services.
- ▶ We consult in every life cycle phase, train in every aspect of reliability, and test in our state-of-the-art HALT and HASS Labs.



OPS GREEN RELIABILITY

We are committed to Highly Reliability Systems to save our planet

WHAT IS "GREEN RELIABILITY"

- ▶ Today, the topic of Green is being discussed everywhere. But what does it mean to be green?
- ▶ The problem is there are no common definitions of what "Green" is and if we treat it this way, then the "Green Revolution" will come and go and there won't have been much of an impact on our environment.
- ▶ "Going Green" has many implications from the materials being used to the type of energy being used and the quantity being consumed. There is a new EPEAT standard that regulates materials, but it does not address reliability.
- ▶ And each aspect of "Going Green" has reliability implications.
- ▶ Any time we change material properties, there are inherent reliability risks we must address.

MARKETS WE SERVE

There are many different industries involved in Going Green. Here are a few we have worked with to date on Green Projects:

- ▶ Solar
- ▶ Water Purification
- ▶ Wind
- ▶ Telecomm./Server Farms
- ▶ Battery
- ▶ Hydrogen
- ▶ Electric/Gas Meters
- ▶ Electric Vehicles
- ▶ Generators (methane)
- ▶ Fuel Cell
- ▶ Nuclear
- ▶ Cooling Solutions
- ▶ All Industries converting to RoHS/WEEE/Reach

RELEVANT PAPERS FROM OPS IN THS MARKET

Over the past several years, we have written a number of different white papers and presented a number of different presentations, papers for the Clean Tech Market. Here is a partial list. For a full list of our papers, please go to [Ops Technical Papers](#).

- ▶ [Green Reliability Webinar Intro by Mike Silverman](#)
- ▶ [Green Agile Solutions by Dr. Cheemin Bo-Linn](#)
- ▶ [End of Redundancy by Dr. Alan Wood](#)
- ▶ [EDA Usage in Green Technology by Bryan Stallard](#)



OPS MEDICAL

We are committed to Highly Reliability Systems that save human lives

- ▶ We successfully analyze and test critical medical products with confidence
- ▶ We deliver accuracy and precision to extend product and human life for each application
- ▶ We deliver customized solutions & consultancy to address all program risks

We have worked with over 70 different customers in the medical industry from implantables to large robotic systems and everything in between.

Along with our standard set of reliability services, we offer the following unique services within the medical market:

- ▶ Requirements Analysis/Review of FDA Regulations
- ▶ Corrective and Preventive Action (CAPA) System development
- ▶ Verification and Validation (V&V) Testing
- ▶ Risk Management / Risk Analysis
- ▶ Package Design and Testing

RELEVANT PAPERS FROM OPS IN THIS MARKET

Over the past several years, we have written a number of different white papers and presented a number of different presentations, papers for the Medical Market. Here is a partial list. For a full list of our papers, please go to [Ops Technical Papers](#).

- ▶ [Reliability Challenges in the Medical Industry - How Regulatory and Reliability Come Together](#)



OPS MILITARY/AEROSPACE/GOVERNMENT

We are committed to Highly Reliability Systems that save human lives and minimize collateral damage

- ▶ We successfully design and test critical military scenarios with confidence
- ▶ We deliver accuracy and precision to extend product life for each mission
- ▶ We deliver customized solutions & consultancy to address Program RAM reqts.

We have worked with over 25 different customers in the military and aerospace market.

Along with our standard set of reliability services, we offer the following unique services within the military/aerospace market:

- ▶ Reliability Assessment/Set Goals/Write RAM Plans
- ▶ Reliability Modeling/Reliability Predictions (MIL217)
- ▶ Reliability, Availability, and Maintainability (RAM)
- ▶ Worst Case Analysis
- ▶ Radiation Hardening Analysis
- ▶ Logistics Support Analysis (LSA)
- ▶ Maintainability Analysis
- ▶ Sneak Analysis
- ▶ Failure Reporting, Analysis & Corrective Action (FRACAS)

RELEVANT PAPERS FROM OPS IN THIS MARKET

Over the past several years, we have written a number of different white papers and presented a number of different presentations, papers for the Military/Aerospace Market. Here is a partial list. For a full list of our papers, please go to [Ops Technical Papers](#).

- ▶ [RoHS in a High Reliability/Military Environment](#)
- ▶ [Using EDA Throughout Product Lifecycle Part I](#)

- ▶ [Using EDA Throughout Product Lifecycle Part II: A Review of the Issues](#)
- ▶ [RCA Webinar by Ops A La Carte](#)
- ▶ [Timely Resolution to Parts Obsolescence - Presentation \(pdf\)](#)
- ▶ [Climatic Testing and How to Write a Good Test Plan \(pdf\)](#)

Ops A La Carte LLC
Military/Aerospace Division

DUNS#: 089458686
NAICS: 541690, 541380, 541990
CAGE/NCAGE: 5H0D6



OPS OIL AND GAS

We are committed to Highly Reliable Systems for oil exploration and production to ensure equipment, tool, and production availability.

- ▶ We successfully design and test critical production scenarios.
- ▶ We deliver customized solutions & consultancy to address RCM requirements

We have worked with over 15 different customers in the oil and gas markets.

Along with our standard set of reliability services, we offer the following unique services within the oil and gas markets

- ▶ Reliability Assessment/Set Goals/Write RAM and RCM Plans
- ▶ Component Uprating
- ▶ Pyro-technic Modeling
- ▶ Statistical Analysis Modeling of Field Data

Mention this article and receive \$1K off your next service in either of these four vertical markets

RELIABILITY BLOG



Below is a summary of the Best of our Blog for last quarter - highlights of the best blog topics we had.

- ▶ [FMECA or FTA?](#)
- ▶ [Reliability vs. Durability](#)
- ▶ [The Challenge: How to survive the economic downturn](#)
- ▶ [Chi Squared Distribution for RDT](#)
- ▶ [High Availability Systems](#)
- ▶ [Clean Tech Forum](#)
- ▶ [Newsletter - Summer 2009](#)

PROBLEM SOLVER

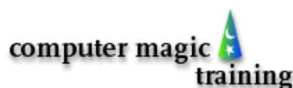


MEDICAL RELIABILITY: REGULATORY vs. RELIABILITY

Name three reliability tools that are used during regulatory submissions to the FDA.

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.

ADVERTISEMENTS



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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.



Reliability Engineer

Advanced Energy is a global leader in innovative power and control technologies for high-growth, thin-film manufacturing and solar power generation. Specifically, AE targets semiconductors, solar cells, flat panel displays, data storage products, architectural glass, solar grid-tie inverters and other advanced applications.

We have an excellent opportunity for a Reliability Engineer who will be a member of the Product Development Core Team. As a member of this team you will lead the reliability effort for your assigned products. This includes creating and executing a Reliability Assurance Plan which enables the product to meet customer expectations, program cost and schedule targets as well as corporate goals for quality and reliability.

If interested, Please apply at [AdvancedEnergyReliabilityPosition](#).



Senior Reliability Consultant

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 17,500 subscribers. If you would like to put a 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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