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Summer 2009

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MESSAGE FROM THE CEO

Welcome to our 18th quarterly newsletter. Even while the economy has been hard hit, Ops A La Carte continues to expand in many areas. Our 2009 strategy has included expanding our services in the [Military and Aerospace Division](#). Recently we exhibited at the annual Military and Aerospace Forum. We also participated in the JPL Small Business Round Table in Pasadena, California.

The expansion of our services in 2009 has also included our [Green Reliability/Clean Tech Division](#). During this last quarter we co-hosted a Green Reliability event which boasted over 200 in attendance. Customers utilizing our HALT and HASS Labs this quarter included companies in the solar sector. You won't want to miss our Green/Clean Tech upcoming event on June 23rd.

Ops is poised to meet the market changes in assisting companies to save money by only hiring the resources they need when they need it. We have created four separate programs to meet our customers' ever changing needs: Ops "Solutions", Ops "Team Expert", Ops "A La Carte" and Ops "Training". [More>](#)

Our new Reliability Blog was introduced this quarter. We have had some very positive feedback to our blog entries along with some great questions from our readers. We encourage you to participate in our blog as we have been receiving some great questions from our readers. Click to visit our [blog](#).

We have received 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](#).

Our 3rd annual Reliability Symposium was a big success. We opened up this year's symposium to include webinar participants. Our webinar was in high demand since companies were cutting back on their travel budgets, but was still a highly effective vehicle for virtual attendees. Our participants joined us from all over the world and as far away as the UK and China.

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

- Mike Silverman, Managing Partner/CEO

COURSES

- ▶ [Certified Reliability Engineer \(CRE\) Preparation Course](#) (pdf) - **August 25 - October 6, 2009**
- ▶ To register go to: [eventsinfo](#). This course is for those who plan to take the CRE certification exam and need a preparation course, or for those who just want a refresher course in Reliability Engineering.
- ▶ For information on other course offerings go to: [Ops A La Carte Schedule](#)

SEMINARS

▶ SMP Tech "Meet the Experts" Design Forum

Topic: [Clean Technology](#)

Date: June 23, 2009, 11:30-1pm

Location: Plug and Play Center, 440 N. Wolfe Road, Sunnyvale, CA 94085

About Event: Clean Technologies Forum will spotlight product advances by Green Companies, focusing on sustainable practices and reliability issues associated with the design of product. The forum will also include information on energy monitors and electrical auditing procedures. Ops A La Carte will be one of the guest presenters talking about the Reliability Effects in the Green Industry.

▶ Product Realization Group (PRG) Lunch and Learn Series

Topic: [Bringing It Home - Reconsidering Local Manufacturing vs. Offshore](#)

Date: Sep 17, 2009, 11:30-1pm

Location: National University, 3031 Tisch Way, 100 Plaza East, San Jose, CA

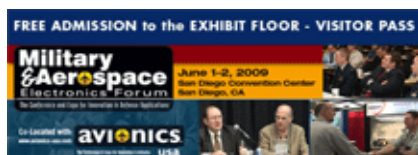
About Event: This discussion will focus on some of the quality risks in outsourcing offshore and some of the hidden benefits of staying local. It will also explore if you are set to go offshore how to reduce some of the potential risks.

- ▶ Note that we will start offering these via webinar as well starting in 2009. 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

▶ **Military/Aerospace Forum in San Diego, CA - June 1-2, 2009.**

We just finished exhibiting at this event and will be exhibiting again next year. For more details, please go to [Mil/Aero Forum](#). Email us via our [contact form](#) for more information on this event. You can also view our new [Military-Aerospace Reliability Brochure](#)



▶ **Quality & Productivity Research Conference (QPRC), Yorktown Heights, NY - June 3-5, 2009.**

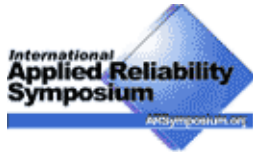
The theme of the conference is Data, Statistics & Vision lead to great decisions. Art Degenholtz of Ops will be giving a presentation on "Misuses of MTBF". For more details, please go to [QPRC](#). Email us via our [contact form](#) for more information on this event.

The conference is sponsored by the Quality & Productivity Section of American Statistical Association (ASA).



▶ **Applied Reliability Symposium (ARS) in San Diego, CA - June 9-12, 2009.**

We will be giving a presentation on "Developing a Better Reliability Test Program". We will also be exhibiting at this symposium so please come by our booth. For more details, please go to [ARS San Diego](#). Email us via our [contact form](#) for more information on this event.



▶ **Product Realization Group (PRG) Summer Barbeque - July 17, 2009.**

Date: July 17, 2009, 11:30-1pm

Location: Santana Park (S. Monroe St., and Tisch Way), San Jose, CA

About Event: This is our 2nd annual barbeque. Last year was a huge hit, bringing customers and service providers together to talk in a very relaxed atmosphere. Please [register](#) early because we are expecting over 100 people.

▶ **Accelerated Stress Test and Reliability Workshop, Jersey City, New Jersey - October 7-9, 2009.**

The theme of this workshop is "Renewable Reliability".

OPS will be exhibiting at the event, giving a 2 hour seminar, and giving several presentations:

SEMINAR: "Reliability Effects in a Green Industry"

PRESENTATIONS: We will be giving 3 different presentations in the area of Accelerated Reliability Testing

"How to Design a Better Test Program"

"IC Package Size DOE Using Various Environmental Accelerants"

"Estimating Field Failure Rate from the Results of HALT - The HALT-AFR Calculator".

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



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



- June 3, 2009

Ops A La Carte exhibited at the Military and Aerospace Forum in San Diego. We highlighted our new military program to over 800 attendees. Click here to see our new [Military and Aerospace](#) page. Congratulations to Para Tech Coatng for winning our grand prize - a remote control Helicopter. [See pictures](#)

- May 26, 2009

National Semiconductor released a press release highlighted the work that Ops A La Carte performed for them on their new Solar Magic product. Here is an excerpt of the press release:

"In addition to rigorous internal testing, Santa Clara, Calif.- based Ops a La Carte LLC provided reliability testing of National's SolarMagic power optimizer at its HALT and HASS Labs in Santa Clara. Ops a La Carte has had a long-term presence in the reliability field, conducting extensive reliability testing for the aerospace, automotive, medical, telecom, defense and energy (including fuel cell, oil and solar) industries."

[Click here](#) to download the entire press release or go to the yahoo web version [yahoo finance](#))

- May 15, 2009

We have added two new consultants to our company in several different regions of the US:

▶ **Alexander Parkhomovsky** (*Northern California - Bay Area*) is an expert in design for reliability and cost optimization, operational and business excellence, advanced fabrication methods, technology assessments and acquisitions.

▶ **Art Degenholtz** (*Eastern US - New Jersey*) has over 45 years of experience. Prior to joining Ops A La Carte Art was a consultant at Curtiss-Wright Controls in the areas of Reliability, Maintainability and Safety.

- May 8, 2009

Ops A La Carte, IEEE Reliability Society and ASQ teamed up and put on a seminar on Green Reliability. Over 75 people attended live and over 125 people attended via webinar. Go to [Green Reliability](#) for more details on the event and services we offer in this area.

- April 10, 2009

We held our 3rd annual Reliability Symposium in San Jose California. We opened it up for webconference participants. Over half the attendees were via webconference. That gave us a strong indication that people are still interested in training but limited travel budgets have required more on-line training.

See pictures of our symposium at: [2009 Reliability Symposium](#)

- Mar 20, 2009

Between our existing customers plus a few new large projects in both HALT and HASS, our HALT and HASS Labs group was very busy through spring and see it continuing through the summer. We just added several new Solar, Medical, and Defense companies to our list of customers. See our page [HALT and HASS Labs](#) for more details.

- Mar 1, 2009

We have completed and released our HALT Calculator for public use. It can be used to calculate MTBF from HALT and Field Data. The model was created by a distinguished member of the reliability community, Harry McLean and is being offered exclusively through Ops A La Carte. See the following write-up [HALT Calculator](#) for more information on the calculator and how to use.

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

FEATURED SERVICE



Military and Aerospace Reliability

Contributing Authors: Mike Silverman and Vijay Prasad

Our 2009 strategy has included expanding our services in the [Military and Aerospace Division](#). Recently we exhibited at the annual Military and Aerospace Forum. We also participated in the JPL Small Business Round Table in Pasadena, California.

Our Military and Aerospace Division offers a flexible method of engagement: full reliability solutions, solving specific problems, or providing individual RAM 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 Lab.

MISSION CRITICAL VALUES

- ▶ We are committed to Highly-Reliable Systems to save human lives.
- ▶ 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.

OPS DELIVERS SUCCESS IN THE AEROSPACE AND DEFENSE INDUSTRY

Below are a few of the different projects we have worked on in the military/aerospace industries:

- ▶ HALT and HASS on Bradley Tank Electronics
- ▶ HALT on collision avoidance systems avionics
- ▶ HALT on head-up display, ALT for Joint Strike Fighter
- ▶ HALT on missile components
- ▶ Parts Stress Analysis, R&M Allocations Assessments, FMECA, LSA, and Equipment Parts List for the C-17A Drogue Parachute Video System Monitor
- ▶ RAM, FMECA, and Worst Case Analysis on power supply for sidewinder missile
- ▶ Reliability Assessment for Future Combat Systems
- ▶ Reliability Prediction & HALT for satellite electronics
- ▶ Reliability Prediction, Stress Analysis, and Component Engineering on Airborne SIGINT System
- ▶ Reliability Prediction, Stress Analysis, HALT, FMECA, and EMI/EMC on munitions equipment
- ▶ Seminar on Design for Reliability and FMEA for airplane manufacturer
- ▶ Seminar on HALT for submarine munitions manufacturer
- ▶ Seminar on HALT and ALT for Joint Strike Fighter
- ▶ Seminar on Root Cause Analysis for aerospace electronics manufacturer
- ▶ Seminar on Hardware & Software Design for Reliability for Future Combat System
- ▶ Worst Case Analysis, Radiation Hardness Analysis on space system components

BEST RELIABILITY SERVICES FOR THE MILITARY-AEROSPACE INDUSTRIES

PROGRAM MANAGEMENT SERVICES

- ▶ End to end Complete Reliability Program Management
- ▶ Reliability Assessment/Set Goals/Write RAM Plans

RELIABILITY ANALYSIS SERVICES

- ▶ Reliability Modeling/Reliability Predictions (MIL217)
- ▶ Reliability, Availability, and Maintainability (RAM)

- ▶ Worst Case Analysis
- ▶ Component Engineering
- ▶ Radiation Hardening Analysis
- ▶ Derating Analysis
- ▶ Parts Stress Analysis (PSA)
- ▶ Electromagnetic Interfer./Compatibility (EMI/EMC) Analysis
- ▶ Failure Modes Effects and Criticality Analysis (FMECA)
- ▶ Logistics Support Analysis (LSA)
- ▶ Materials Selection Analysis
- ▶ Preventive Maintenance
- ▶ Root Cause Analysis (RCA)
- ▶ Sneak Circuit Analysis
- ▶ Software Reliability
- ▶ Thermal Analysis

RELIABILITY TESTING SERVICES

- ▶ Accelerated Life Testing (ALT) for Aerospace
- ▶ Highly Accelerated Life Testing (HALT)

RELIABILITY IN MANUFACTURING SERVICES

- ▶ Highly Accelerated Stress Screening (HASS)
- ▶ Failure Reporting, Analysis & Corrective Action (FRACAS)

RELIABILITY SEMINARS

- ▶ Aerospace Design for Reliability
- ▶ FMECA-Assessing Mission Criticality
- ▶ Components Engineering for Space Applications
- ▶ Software Reliability for Low Earth Orbit
- ▶ Derating Analysis for Radiation

RELEVANT PAPERS FROM OPS

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

Mention this article and receive \$1K off your next service in Military/Aerospace Reliability.

RELIABILITY BLOG

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

- ▶ [Difference Between G and Grms?](#)
- ▶ [Why Is Humidity Not Used During HALT?](#)
- ▶ [FMEA - What is the Difference Between a Design FMEA vs. a Process FMEA?](#)
- ▶ [Is there value in ORT if a process is under control?](#)
- ▶ [How to deal with electromechanical components that don't have published MTBF's but have rated values.](#)
- ▶ [What are the best Reliability Best Practices](#)
- ▶ [Fundamentals of Climatic Testing](#)
- ▶ [New HALT and HASS Book](#)
- ▶ [Do any HALT chambers use Swept Sine/Different HALT Chamber Manufacturers](#)

PROBLEM SOLVER**MIL-STD-810G**

MIL-STD-810G is now out and it not only consolidates the basic -810F with its three change notices to result in one comprehensive document, but also includes a number of corrections, significant changes, and additions to the comprehensive -810F, to include five new test methods. Perhaps the biggest change in this revision is that it requires much more tailoring of tests rather than the old approach where you pick a test out of the standard that most closely matches your environment.

Name three other distinct differences between MIL-STD-810G and MIL-STD-810F.

The best response within the next 30 days will receive one free pass to our next Certified Reliability Engineer (CRE) course.

Footnote: Because 810G requires much more tailoring of test plans, we have been consulting with companies in the area of test plan writing. Please let us know if you need help in this area.

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DfR Solutions has world-renowned expertise in applying the science of Reliability Physics to electrical and electronics technologies, and is a leading provider of quality, reliability, and durability (QRD) research and consulting for the electronics industry. The company's integrated use of Physics of Failure (PoF) and Best Practices provides crucial insights and solutions early in product design and development and throughout the product life cycle. DfR Solutions specializes in providing knowledge- and science-based solutions to maximize and accelerate the product integrity assurance activities of their clients in every marketplace for electronic technologies (consumer, industrial, automotive, medical, military, telecom, oil drilling, and throughout the electronic component and material supply chain). For more information visit www.dfrsolutions.com.

Ops A La Carte's newsletter goes out to over 17,000 subscribers. If you would like to advertise in next quarter's "Reliability News", email us via our [Advertise Contact Form](#) or call at (408) 654-0499.

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.



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.

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