



July 2012 Newsletter

[Randy Schueller Elected to SMTA Board](#) | [DfR at IPC APEX](#)

Best of the Best

Are you ready for the Best of the Best? For the next two newsletters, DfR is turning back the clock (only slightly) and bringing you the most popular and widely read articles in our newsletter from all time. Read them for the first time or read them again. Hope you enjoy!

Counterfeit Prevention and Detection Strategy

The first step in mitigating the risk of counterfeits is to develop a strategic approach. This [article](#) identifies the potential sources of counterfeit parts, the risk involved as a function of the various sources and the potential cost impact. Most importantly, it provides a tool / metric for maximizing the return on investment (ROI) on any program for detection and avoidance. For more information contact [Walt Tomczykowski](#).

Counterfeit Prevention and Detection Techniques

Once a strategic approach is defined, the next step is to identify the appropriate techniques. While a good first step would be to use authorized distributors, business situations sometimes prevent this. This [white paper](#) provides the framework for a viable testing program by identifying and detailing useful equipment and test methodologies. For more information, contact [Tom Johnston](#).

Why Perform Failure Analysis?

Read the Craig Hillman's column in the July issue of [Global SMT and Packaging](#) (you will need to register) to learn why, and how, to perform failure analysis. For more information on how the right failure analysis can save you time and money, contact [Ed Dodd](#).

Process and Design Guidelines for QFNs: Manufacturability and Compatibility

What happens when the fastest selling component package in the world is dreaded and feared by long-life, high-reliability OEMs? Its time for a DfR White Paper. In [this report](#), we discuss the quad-flat-pack-no lead (QFN),

Sherlock

[Automated Design Analysis™](#)



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2012 Medical Electronics Symposium
September 26-27, 2012
Arizona State University, Tempe Campus

MEPTEC and SMTA are again partnering to present a two-day [Medical Electronics Symposium](#) which will cover a broad spectrum of topics highlighting innovative technologies and related issues in medical electronic applications and devices.

explain the drivers for its adoption, and some of the design and process rules that must be applied to ensure a trouble-free transition. For more information, contact [Cheryl Tulkoff](#).

Industry Buzz: 0.3mm pitch is coming (and might already be here)

A number of [manufacturers](#) are starting to implement the latest reduction in package feature size. While an extensive amount of resources are often expended to ensure successful manufacturing, surprisingly little is applied to understanding how this package shrink will perform in certain environments. DfR has done a [webinar](#) on this technology to illustrate its value, its implementation and potential risk. For more information, contact [Greg Caswell](#).

My Coffee Just Killed My Computer!

A good reliability engineer makes sure product qualification considers every environment. But, how to test for the unexpected, like spills of various beverages? Answer: Rely on DfR Solutions. The [results](#) of our internal study just might surprise you. For more information on contamination and cleanliness, contact [Seth Binfield](#).

DfR News

Randy Schueller Elected to SMTA Board of Directors

Congratulations to DfR's [Randy Schueller](#) for being elected to the Surface Mount Technology Association (SMTA) Board of Directors. DfR is very pleased for Randy and wishes him a great term in office.

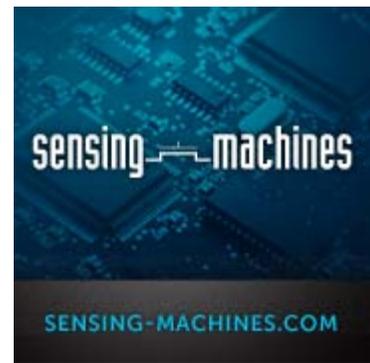
We're Taking Bets on Whether She'll Lose Her Voice

Cheryl Tulkoff will be presenting FOUR courses at the 2013 APEX Conference. The courses will be on

- Sunday, February 17, 9:00 am – 12:00 pm Design for Manufacturing: Best Practices;
- Sunday, February 17, 2:00 pm – 5:00 pm Reliability: DfR
- Monday, February 18, 9:00 am – 12:00 pm Tin Whiskers Mitigation: a New Approach
- Monday, February 18, 2:00 pm – 5:00 pm Counterfeit Protection & Detection Strategies: When To Do It & How To Do It

Contact [Cheryl](#) to find out more about her presentations.

Upcoming Events



Design and testing services for IC, ASIC, PCB and MEMS. Sensing Machines provides engineering consulting services to transition your ideas from concept to hardware. We help small and large companies perform R&D as well as bring products to market. Visit our [website](#) or send an [email](#) for an overview of our capabilities.

Google Calendar

Look for DfR at upcoming events, conferences, webinars, and sales visits that may be in your area on our new [link to Google Calendar](#). For more information on a specific activity, please contact [June Caswell](#).

Reliability Simulation Council (San Jose, CA: July 10-11)

[Craig Hillman](#) and [Ed Wyrwas](#) will be participating in the introductory of this industry-wide meeting focused on ensuring reliability of next generation integrated circuits. Craig and Ed will be discussing DfR's approach of developing an infrastructure to allow the transmission of key non-IP information that will allow OEMs to make independent reliability evaluations. For more information, contact [Ed Wyrwas](#).

DfR/ASQ Reliability Webinar (July 12, 12:00 noon EDT)

[Cheryl Tulkoff](#) will be presenting "Obsolescence Management and the Impact on Reliability." For more information on this special presentation contact [Cheryl Tulkoff](#).

CORPE Workshop (Aalborg, Denmark: August 21)

[Petri Savolainen](#) will be giving a presentation on the successful reliability modeling and simulation of power supply electronics. For more information, please contact [Petri Savolainen](#).

DMSMS (New Orleans, LA: August 27-30)

[Walt Tomczykowski](#) will be attending this key conference as the lead for System Supportability. Walt will have time to visit with customers at the conference. To arrange a time to meet with Walt, contact [June Caswell](#).

IMAPS Nordic (Denmark: September 2-4)

[Petri Savolainen](#) will be presenting two papers at this conference. The first will be on "Harsh Environments and Electronics" and the 2nd will be on "Predicting the Reliability of Zero Level TSVs" at this local event. For more information please contact [Petri Savolainen](#).

DfR in Australia (September 2-17)

[Craig Hillman](#) will be visiting companies and clients in Sydney, Australia, and is available to discuss a wide range of topics, including system-level reliability assurance, reliability management, and customer satisfaction. If you are interested in having Craig visit your facility, contact [June Caswell](#).

ISO 26262 Webinar (September 6: 1pm Eastern)

[Jim McLeish](#) will be presenting on this hot topic that addresses the needs for an automotive-specific international standard that focuses on safety critical components. For more information, contact [Jim McLeish](#).

IMAPS Symposium (San Diego, CA: September 9-13)

[Greg Caswell](#) will be teaching a ½ day course on "Understanding Failure and Root Cause Analysis in Pb-free Electronics" and will be presenting a paper on "Predicting the Reliability of Zero Level TSVs" at the symposium. For more information, or to arrange a meeting with Greg at the symposium, contact [Greg Caswell](#).

DfR in Southern California (September 10-13)

[Greg Caswell](#) will be visiting customers in the San Diego area. He will be available to discuss, Pb-free issues, circuit board materials, DfM, and DfR's Sherlock software. If you would like to have Greg visit please contact [June Caswell](#).

Solar Power International (Orlando, FL: September 11)

[Cheryl Tulkoff](#) will be presenting "Reliability Modeling of Electronics for Solar Inverters" at the SPI Conference. For more information or to arrange a meeting with Cheryl at the Conference, please contact Cheryl or [June Caswell](#).

MET Labs (Baltimore, MD: September 13)

[Ed Dodd](#) will be presenting on ISO-26262 and its impact on the reliability and safety of automotive electronics. For more information or to register for the meeting please contact [Ed Dodd](#).

ESTC Conference (Amsterdam, Netherlands: September 16-19)

[Petri Savolainen](#) will be attending this conference. If you would like to meet with Petri, please [contact him](#) directly to arrange a meeting.

DfR Solutions in Benelux Area (September 16-19)

[Petri Savolainen](#) will be visiting companies in the Belgium and the Netherlands. If you would like to arrange for Petri to visit your company and make a presentation there, contact either [Petri](#) or [June Caswell](#).

DfR in New England (September 17-21)

[Nathan Blattau](#) and [Ed Dodd](#) will be visiting companies and clients throughout the New England area and will be available to discuss a wide range of topics, including failure analysis, simulation and modeling, and component selection. For more information or to arrange a visit to your facility, please contact [June Caswell](#).

Design East 2012 (Boston, MA: September 19)

[Nathan Blattau](#) will be presenting on Common Hardware Mistakes by Embedded System Designers. For more information on this presentation,

please contact [Nathan Blattau](#).

Darnell's Power Forum (San Jose, CA: September 19-21)

[Craig Hillman](#) will be making a presentation entitled "Using Physics and Industry Best Practices to Predict the Lifetime of LED Power Supplies" at this special conference on Power Electronics.

DfR Solutions in Bay Area (Northern CA: September 24-26)

[Jim McLeish](#) and [Ed Dodd](#) will be visiting companies in the Bay Area. If you would like to arrange a visit to your facility contact [June Caswell](#).

PCB West (San Francisco, CA: September 25)

DfR Solutions will have a booth at this important conference. Visit with [Jim McLeish](#) and Ed Dodd while at the conference. or contact us for a visit to your facility. Contact either [Jim McLeish](#) or [Ed Dodd](#).

MEPTEC / SMTA Medical Electronics Conference (Tempe, AZ: September 26-27)

[Randy Schueller](#) will be making a presentation entitled "Leveraging Existing Market Knowledge to Ensure a Successful Transition to Pb-free," at this conference. For more information contact Randy Schueller. For arranging a visit to your company while Randy is in the area, contact [June Caswell](#).

SMTAI Conference (Orlando, FL: October 14)

[Cheryl Tulkoff](#) will be teaching two courses at SMTAI this year. Pad Cratering-Prevention, Mitigation and Detection Strategies will be presented on the morning of Monday, October 15. A New and Better Approach to Tin Whisker Mitigation will be presented the afternoon of Monday, October 15. In addition, [Randy Schueller](#) will be making a presentation entitled "Reliability of Copper Wire Bonding." For more information, please contact [Cheryl Tulkoff](#) or [Randy Schueller](#).

NDIA Conference (San Diego, CA: October 22-25)

[Walt Tomczykowski](#) will be attending the NDIA event. If you would like to arrange a meeting with Walt at the conference, contact [June Caswell](#).

NEBS Conference (Las Vegas, NV: October 23-24)

DfR will be attending this critical conference on qualifying product for the Verizon supply chain. If you would like to meet with us during the conference, please contact [June Caswell](#).

Automotive Test Expo (Detroit, MI: October 23-25)

[Jim McLeish](#) and [Tom O'Connor](#) will be manning the DfR booth at this event. Please stop by and see what DfR is up to with respect to automotive

reliability. For more information or to arrange a meeting with Jim and Tom please contact [June Caswell](#).

IPC Medical Sector Conference (Andover, MA: November 6-8)

At this ground-breaking conference, [Craig Hillman](#) will speak on the upcoming challenges of RoHS and Medical Devices. For more information, please contact [Craig Hillman](#).

International Symposium for Testing and Failure

Analysis (Phoenix, AZ: November 11-15)

[Greg Caswell](#) will be making a presentation entitled "Counterfeit Detection: When to do it? How to do it?" at the ISTFA conference. For more information or to meet with Greg at the Conference please contact [Greg Caswell](#).

IPC SMTA Cleaning and Conformal Coating Conference (Chicago, IL: November 13-15)

Don't miss a technical session for the ages. DfR Solutions has put together all the heavyweights of nanocoating technology into one room, including Ross Technology, Semblant, P2I, GVD, and HzO. Watch in awe as they throw down the gauntlet to see whose technology deserves to be called 'Best of the Best.' Who will come out the winner? You decide, but only if you are there! For more information, contact [Craig Hillman](#).

Employment

Manufacturing Quality Engineer (full-time)

Manufacturing quality subject matter experts (SME) are needed to support the Department of Defense (DoD) in the area of systems engineering. This position will be onsite at government locations in the Washington, DC, and Northern VA area. US Citizenship is required. Must have an active security clearance (within the past two years). Travel is required 25% to 50% of the time. The SME develops, modifies, applies and maintains manufacturing and quality guidance and policy applicable to DoD weapon systems; incorporates design for affordability concepts into the manufacturing process; collaborates with reliability and logistics organizations within the DoD to ensure manufacturing guidance supports the objectives of DoD Instruction 5000.02, Operation of the Defense Acquisition System; and conducts manufacturing readiness assessments at prime contractor locations.

For more information, including how to apply, please visit our [website](#).

Reliability and Maintainability Engineer (full-time)

DfR Solutions is looking for a full-time system engineers with 10+ years of DoD acquisition experience and a strong reliability and maintainability background to work in the DC/VA area. Must have 10+ program/project management experience. US Citizenship is required. Must have an active security clearance (within the past two years).

Reliability and Maintainability (R&M) subject matter experts (SME) are needed to support the Department of Defense (DoD) in the area of systems engineering for land and sea systems. This position will be onsite at government locations in the Washington, DC, and Northern VA area. Travel is required 25% to 50% of the time. The SME develops, modifies, applies and maintains reliability guidance and policy (DTM 11-003) applicable to DoD weapon systems; incorporates design for reliability in the acquisition life cycle; collaborates with reliability and logistics organizations within the DoD to ensure reliability guidance supports the objectives of DoD Instruction 5000.02, Operation of the Defense Acquisition System; and conducts program support reviews (focused on reliability and maintainability) at prime contractor locations.

For more information, including how to apply, please visit our [website](#).

Advertisement

Advertise here and reach more than 12,000 electronics professionals. DfR Solutions is now accepting advertisements in the DfR newsletter. For more information, contact [Tammy Smittenaar](#).