



September 2012 Newsletter

[DfR in INC 5000](#) | [Seaport-e Contract Award](#)

Tin Whiskers Course at SMTAI

Don't miss Cheryl Tulkoff's new class "[A New and Better Approach to Tin Whisker Mitigation](#)" at SMTAI. [Register now](#).

How to Create an Approved Vendor List

The formation of an approved vendor list (AVL) is a critical activity, but it can be a complex process. One way forward is to thoroughly benchmark your approach to industry best practices. In this [key survey](#) performed by DfR, industry leaders were asked key questions regarding how reliability requirements were used in establishing an AVL. For more information on how benchmarking by DfR can help improve your processes, please contact [Greg Caswell](#).

Would You Like Fries With That?

The future of servers may have more in common with McDonald's than motherboards. Intel [recently announced the results](#) of a year-long test involving the submersion of servers in mineral oil. While the submersion is nothing new, several companies, including [Midas Green Tech](#) and [Green Revolution Cooling](#) are ramping up in response to increasing power demands. While the focus tends to be on reduced energy costs, what's really missing is the improvement in reliability (some servers have failure rates of 6% per year). Want to understand if immersion makes sense for you? Contact [Randy Schueller](#).

Having Problems With Stainless Steel?

Stainless steel is used in the electronics industry as a cost-effective, corrosion resistant enclosure. However, it can be susceptible to stress corrosion cracking (SCC) in certain environments. Protect yourself by reading our insightful [white paper](#) which provides key information on the drivers for SCC and the tests that can be performed to determine susceptibility. For more information, please contact [Steph Gulbrandsen](#).

RoHS 2 - Be Prepared

Sherlock

[Automated Design Analysis™](#)



In This Issue

[Sn Whiskers at SMTAI](#)
[Approved Vendor List](#)
[Fries With That?](#)
[Stress Corrosion Cracking](#)
[RoHS 2](#)
[Water Everywhere!](#)
[Low Bidder Issues](#)
[Upcoming Events](#)



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.

The [RoHS 2 FAQ guidance document](#) has been released and member states have until January 2, 2013 to transpose Directive 2011/65/EU into law. Some of the more significant changes include changes in definitions, expanded scope, CE marking, Declaration of Conformity, and the requirement to keep documentation for ten years. Want to avoid having your products subject to recall and you loseing your CE mark? Contact [Cheryl Tulkoff](#) for assistance.

Water, Water, Everywhere

Read Craig Hillman's column in the August issue of [Global SMT and Packaging](#) (you will need to register) to learn when the air in hermetic devices is 'good', when it is 'bad', and how moisture plays a critical and typically misunderstood role in hermeticity. For more information on how to select and qualify the right hermetic packages, contact [Gregg Kittlesen](#).

Show Me the Money

If you want to spark an argument, bring up government spending. Next time you do, however, you may want to read this [fascinating article](#) on the cost of mass transit. The most interesting observation was that the strict reliance, at all levels of government, on lowest-price bidder is potentially the biggest driver for waste and abuse. Like to add your thoughts? Be a part of the conversation by posting your opinion at our [LinkedIn page](#).

DfR News

DfR INC 5000

DfR is very proud to be ranked number 3154 in the INC 5000 list of fastest growing companies in the US. We are also number 32 of 74 in the engineering category and the only failure analysis / testing facility listed. Contact Craig Hillman to learn how DfR grew so fast and what are rapidly expanding capability can do for you!

Seaport Enhanced Multiple Award Contract (Seaport-e)

DfR is pleased to announce that we have been selected as one of the suppliers to the Navy's Seaport-e program. NAVSEA and other Navy activities, including the Military Sealift Command, Strategic Systems Programs, and the United States Marine Corps have chosen to use SeaPort-e. Additionally, activities may provide limited support under this contract to other Department of Defense (DoD), non-DoD, or Joint agencies for work that is integrally related to product areas and mission. DfR Solutions may respond to task orders in Zones 1 (Northeast), 2 (National Capital), and 4 (Gulf Coast). For more information, please contact [Walt Tomczykowski](#).

Printed Circuit Boards - Always a Critical Commodity

Be on the lookout for this exciting article in Circuits Assembly's September

issue. For more information on qualifying and controlling the PCB supply chain, contact [Cheryl Tulkoff](#).

Printed Circuit Design & Fabrication Magazine

Cheryl Tulkoff and Craig Hillman will have an article entitled "Procurement-Best Practices for Improving the PCB Supply Chain" in the September issue. For more information please contact [Cheryl Tulkoff](#).

Upcoming Events

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](#).

IMAPS Nordic (Denmark: September 2-4)

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

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

[Greg Caswell](#) presented two papers at the symposium, "Predicting the Reliability of Zero Level TSVs" and "Obsolescence Management and the Impact on Reliability." For more information, contact [Greg Caswell](#).

DfR in Southern California (San Diego, CA: 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 presented "Reliability Modeling of Electronics for Solar Inverters" at the SPI Conference. For more information, contact [Cheryl](#).

Electronex Conference (Australia: September 12-13)

Craig Hillman taught three (3) courses at this conference: "A Pathway to Reliability and the Physics of Failure," "Next Generation Technologies in Electronics Packaging and Production," and "Contamination and Cleanliness: Developing Practical Responses to a Challenging Problem." For more information on these presentations, contact [Craig Hillman](#).

MET Labs (Baltimore, MD: September 13)

Ed Dodd presented on ISO-26262 and its impact on the reliability and safety of automotive electronics. For more information, please contact [Ed Dodd](#).

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

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

Design East 2012 (Boston, MA: September 19)

[Nathan Blattau](#) presented 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](#) made 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)

[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 [Ed Dodd](#) while at the conference, or if you would like us to visit your facility, please contact [June Caswell](#).

DfR in Arizona (September 25-28)

[Randy Schueller](#) will be visiting companies and clients in the Phoenix and Tucson areas and will be available to discuss a wide range of topics, including copper wire bonds, electronic materials, PCB manufacturing and failure modes, and best practices in component selection. For more information or to arrange a visit to your facility, please contact [June Caswell](#).

Design for Reliability Seminar (Sunnyvale, CA: September 27)

DfR Solutions, in collaboration with EDA Direct, will be presenting this insightful presentation on the key tools and methodologies necessary to design in reliability in today's electronics. To learn more about this free seminar or register, please go the [EDA Direct website](#).

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](#).

Webtorial - 25 Year Life Solar (Virtual: September 27)

Cheryl Tulkoff and Greg Caswell will be presenting this webinar on solar life issues. For more information, please contact [Cheryl Tulkoff](#) or [Greg Caswell](#). [Click here to register](#) for this webinar.

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](#).

DfR in Central Florida (October 15-18)

[Cheryl Tulkoff](#) and [Randy Schueller](#) will be visiting companies in Central Florida (from the Gulf to the Atlantic) and are available to present a brief technical presentation on a variety of topics, including copper wire bonding, root-cause analysis, sulfur corrosion, PCB platings, and DfM. If you and your associates are interested in an onsite visit and/or presentation, please contact [June Caswell](#).

Webinar – What Can Sherlock Do for You? CAF (October 22)

[Craig Hillman](#) will be presenting this enlightening webinar on how DfR's Sherlock software can help reduce the potential for CAF failures in your circuit board designs. For more information, please contact [Craig Hillman](#).

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](#).

DfR Solutions in Detroit (Detroit, MI: October 22-26)

[Ed Dodd](#) will be visiting companies in the Detroit area. If you would like to arrange a visit to your facility, 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](#).

DfR in Boston (Boston, MA: November 4-7)

[Craig Hillman](#) will be visiting companies in the Boston area and is available to present a brief technical presentation on a variety of topics, including 3D packaging, copper wire bonding, next generation conformal coatings, and physics of failure. If you and your associates are interested in an onsite visit and/or presentation, 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](#).

SMTA - Wisconsin Chapter (Milwaukee, WI: November 7)

Randy Schueller will be presenting on "Leveraging Existing market Knowledge to Ensure a Successful Transition to Pb-free Medical Products" at this regional event. For more information or to meet with Randy at the event, please contact [Randy Schueller](#).

Webinar - What Can Sherlock Do For You/DFMEA (November 8)

[Jim McLeish](#) will be presenting this webinar on how DfR's Sherlock software can now help to significantly reduce the time it takes to perform a formal DFMEA. For more information on this webinar, please contact [Jim McLeish](#).

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](#).

DfR in Chicago (November 12-16)

[Craig Hillman](#) will be visiting companies in the Chicago area and is available to present a brief technical presentation on a variety of topics, including 3D packaging, copper wire bonding, next generation conformal coatings, and physics of failure. If you and your associates are interested in an onsite visit and/or presentation, please contact [June 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](#).

DfR Solutions in The Netherlands (November 20-23)

Greg Caswell will be making customer visits while in the Netherlands. If you would like for Greg to visit your facility, and maybe you can feed him some turkey, please contact [June Caswell](#).

European Center for Power Electronics Workshop (ECPE) (The Netherlands: November 21-22)

[Greg Caswell](#) will be making a presentation entitled "Automating Lifetime Simulation of Power PCBs." For more information or to meet with Greg at the workshop, please contact [Greg Caswell](#).

Defense Manufacturing and DMSMS Conferences (Orlando, FL: November 26-29)

Walt Tomczykowski will be chairing the session on "Systems Engineering Approach to Designing for Supportability" and will be presenting a paper entitled "System Engineering Reliability Design Considerations for DMSMS." For more information or to meet with Walt at the conference, please contact [Walt Tomczykowski](#).

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](#).