



## March 2012 Newsletter

[DfR Open House](#) | [Petri Savolainen Joins DfR](#)

### DfR Open House

DfR will be hosting an [open house](#) at our facility on March 19. Come and find out about leading edge super hydrophobic coatings sweeping through the electronics industry and the latest features of Sherlock Automated Design Analysis software, including [Bed of Nails](#) and [DFMEA](#). For more information, contact [Tammy Smittenaar](#).

### Sherlock Eliminates Pad Cratering

Tired of breaking components during [Bed of Nails](#) In-Circuit Testing (ICT)? DfR's Automated Design Analysis Tool, Sherlock, now provides an elegant solution to this consistent design for manufacturability (DfM) problem. Within a matter of minutes, test points, components, and supports can be arranged and located to minimize board flexure and effectively eliminate pad cratering or solder joint cracking. For more information, contact [Tom O'Connor](#).

### Design for Manufacturability (DfM)

Speaking of DfM, Cheryl Tulkoff's course on DfM at IPC APEX was another smashing success with over fifty attendees. Cheryl detailed the key methodologies and resources for designing a robust product for a manufacturing environment. If you would like the course ([a portion provided here](#)) presented at your facility, please contact [Cheryl Tulkoff](#).

### How Hot is Too Hot?

While thermal analysis tools have improved their ability to predict component temperatures, they have failed to answer the most important question: How Hot is Too Hot? In [this informative article](#) (warning: ad before article), DfR Solutions explains how classic derating is insufficient and true understanding of component degradation is necessary to optimize product design and performance. For more information, contact [Greg Caswell](#).

### Physics of Failure

How important is Physics-of-Failure (PoF)? Important enough for over eight

## Sherlock

[Automated Design Analysis™](#)



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**The Heat Is On 2012**

**March 19, 2012**

**Doubletree Hotel, San Jose, CA**

MEPTEC is pleased to announce the continuation of their "[Heat is On](#)" symposiums, which for the second year will be co-located with the 28th Annual [SEMI-THERM](#) conference and exposition.

hundred (8-0-0!) people to view Jim McLeish's recent joint webinar with the American Society of Quality (ASQ) on PoF Reliability Methods. If you missed the opportunity to learn about this ground-breaking approach to design assurance, you can still [download the entire presentation](#). For more information, contact [Jim McLeish](#).

## **Do You Have The Knack?**

Have you ever felt a strong need to repair your neighbor's washing machine? Or add Wi-Fi to your toaster? Do you have nine computers in various states of assembly on your living room floor? If the answer is yes to any of these questions, you just might have the [KNACK](#). While not curable, the KNACK could lead to a rewarding career in engineering. Just ask our most recent hire, electrical/mechanical/software engineering guru, [Justin Wilkins](#).

## **DfR News**

### **DfR Welcomes Dr. Petri Savolainen**

DfR is proud to announce a new appointment to its world-renowned team of deep subject matter experts, Dr. Petri Savolainen. Dr. Savolainen has more than 20 years of experience in mobile electronics and packaging design including touch screen displays, chip scale packaging, high density printed board technology, Pb-free solders, and conductive adhesives. Most recently with Nokia Corporation, Dr. Savolainen led display strategy creation and technology development. Dr. Savolainen holds MS and PhD degrees from the Helsinki University of Technology. He holds two patents in mobile electronics design, and speaks Finnish, English, Japanese, Swedish, and German. Dr. Savolainen is the current President of IMAPS Nordic and a member of the IEEE Components, Packaging, and Manufacturing Technology (CMT) Society and The Society of Information Displays. For more information, contact [Petri](#).

## **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](#).

### **DfR Solutions in Chicago (March 5-7)**

[Craig Hillman](#) visited several companies in the Chicago area and discussed DfR, DfM, DFMEA and our Automated Design Analysis™ software. If you and your associates are interested in an onsite visit and/or presentation, please contact [June Caswell](#).

### **IMAPS Device Packaging Conference (Scottsdale, AZ: March 6-8)**

[Greg Caswell](#) presented on "Predicting the Reliability of Zero-Level TSVs."

This presentation on leading edge packaging technology generated a significant amount of interest and is resulting in an even deeper understanding of TSV degradation. For more information contact [Greg Caswell](#).

### **DfR Solutions in Arizona (March 6-8)**

[Greg Caswell](#) visited several companies in Arizona and discussed TSV technology, LEDs, MEMS packaging, and benchmarking your supply chain. If you and your associates are interested in an onsite visit and/or presentation, please contact [June Caswell](#).

### **SMTA Philadelphia Chapter Meeting (March 15)**

Tom O'Connor will be making a presentation entitled "Counterfeit Detection and Preventative Strategies." For more information regarding this event please contact [Tom O'Connor](#).

### **DfR Open House (College Park, MD: March 19)**

DfR will be hosting another [open house](#) at our facility on the 19th. We will have two technical presentations by deep subject matter experts, a tour of DfR's facility and a demonstration of DfR's Automated Design Analysis™ software-Sherlock. For more information, contact [Tammy Smittenaar](#).

### **DfR Solutions in Bay Area (March 20-23)**

[Cheryl Tulkoff](#) will be visiting companies in the Bay Area and is available to discuss DfM, root-cause analysis, and product qualification testing. If you and your associates are interested in an onsite visit and/or presentation, please contact [June Caswell](#).

### **SMTA Solar Reliability Conference (San Jose, CA: March 21-23)**

[Cheryl Tulkoff](#) will be making a presentation entitled "Reliability Modeling of Electronics for Solar Inverters" at this new conference. For more information, contact [Cheryl Tulkoff](#).

### **Airworthiness Conference (Baltimore, MD: April 2)**

[Walt Tomczykowski](#) will be presenting [Using Physics of Failure Based Software to Predict Remaining Avionics PCBA Life](#). In addition, Walt and [Tom O'Connor](#) will be manning the DfR booth in the exhibit area. Be sure to stop by and visit with them. For more information contact [Walt Tomczykowski](#).

### **DfR in Huntsville (Huntsville, AL: April 2-4 and May 21-23)**

[Craig Hillman](#) and [Cheryl Tulkoff](#) will be visiting companies in the Huntsville area and are available to discuss DfR, component packaging, DFM, Root-Cause Analysis, Product Qualification Testing and Pb-free reliability. If you and your associates are interested in an onsite visit and/or presentation, please contact [June Caswell](#).

### **SMTA Webinar (April 12 & 19)**

[Cheryl Tulkoff](#) will be presenting "Pad Cratering and Pb-Free" during these webinars. For more [information](#) or to [register](#), please visit the [SMTA website](#).

### **DfR Webtorial (April 19, 1:00 EDT)**

Walt Tomczykowski will be conducting a webtorial entitled "What Can Sherlock Do For You-Planned Maintenance? For more information on this informative event please contact [Walt Tomczykowski](#).

### **Avionics Maintenance Conference (Anchorage, AK: April 30-May3)**

[Walt Tomczykowski](#) and [Craig Hillman](#) will be attending this critical industry conference and presenting case studies on how DfR's Sherlock software could have been used to avoid or mitigate many of the issues identified and discussed by the conference attendees.

### **DfR Solutions in Germany (May 7-11)**

[Cheryl Tulkoff](#) will be visiting companies in Germany and is available to discuss DfM, root-cause analysis, and product qualification testing. If you and your associates are interested in an onsite visit and/or presentation, please contact [June Caswell](#) or [Petri Savolainen](#).

### **SMT Hybrid Packaging Conference (Frankfurt, Germany: May 8 & 10)**

[Cheryl Tulkoff](#) will be presenting two half-day tutorials at this conference. The first will be "Design for Reliability" on May 8. The second tutorial will be "Sourcing of Printed Circuit Boards" on May 10. For more information, please contact [June Caswell](#).

### **Minnesota Reliability Consortium (May 15)**

[Randy Schueller](#) will be giving a presentation on DfR's Sherlock Automated Design Analysis Tool to the Minnesota Reliability Consortium. For more information please contact [Randy Schueller](#).

### **PERM (Marseilles, France: May 15-16)**

Petri Savolainen will be attending the PERM meeting at Eurocopter in Marseilles, France. He will be available for customer visits. If you would like to discuss a topic with Petri, please email [June Caswell](#) or [Petri Savolainen](#).

### **IPC Test and Inspection Conference (May 15-17)**

Nathan Blattau will be teaching a course on "Design for Reliability & Physics of Failure (PoF) Based Automated Design Analysis" at the conference. The course will cover a full range of true Design for Reliability topics with new sections on fatigue and on the use of Physics of Failure based Automated Design Analysis (ADA) Software. He will also be available to visit with customers. For more information please contact [June Caswell](#) or [Nathan Blattau](#).

### **Int. Conf. Soldering and Reliability (Toronto, ON: May 15-19)**

Greg Caswell will be presenting "The Effect of Coating and Potting on the Reliability of QFN Devices." For more information, please contact [June Caswell](#). Greg will also be available for customer visits in the area. To arrange a visit please contact [Greg Caswell](#).

### **DfR in Huntsville (Huntsville, AL: May 21-23)**

[Craig Hillman](#) and [Cheryl Tulkoff](#) will be visiting companies in the Huntsville area and are available to discuss DfR, component packaging, DFM, Root-Cause Analysis, Product Qualification Testing and Pb-free reliability. If you and your associates are interested in an onsite visit and/or presentation, please contact [June Caswell](#).

### **Applied Reliability Symposium (New Orleans, LA: June 13-15)**

[Jim McLeish](#) will present "The Transition from MTTF Reliability Predictions into Physics of Failure Reliability Assessments" at the [2012 Applied Reliability Symposium, North America](#). For more information, contact [Jim McLeish](#).

## **Employment**

### **Reliability Manager**

Full-time onsite at customer location in Washington, DC, metro area.

Individual will utilize a thorough knowledge of the DoD 5000 acquisition process to draft policy and guidance documents and to review DoD major weapons systems reliability and maintainability documentation. Individual will supervise a team of reliability engineers and analysts. This is a fast-paced, high-visibility position that requires the applicant to be highly engaged, capable of managing multiple tasks, writing comprehensive reports and meeting critical deadlines. Position includes travel up to 25% of the time.

Required:

- Highly skilled in presenting to senior leadership in both industry and government
- Thorough knowledge of reliability improvement, growth theory and practice, and the DoD 5000 acquisition process to include the Defense Acquisition Guide
- 20 years experience working in the DoD system program office
- Minimum M.S. degree in engineering
- Secret clearance and US citizenship

Preferred:

- Cross-domain experience (air, land, sea, space) is a plus

Qualified individuals should [e-mail](#) their resume along with a cover letter.

## **Reliability Analyst / Engineer**

Full-time onsite at customer location in Washington, DC, metro area.

Required:

- DoD 5000 acquisition directives and regulations
- DoD major weapons systems development timeline with an emphasis on reliability and maintainability activities
- Reliability design principles and practices including part selection, physics of failure, R&M math models, etc.
- Best practices in test development and execution including HALT/HASS, reliability growth tests, accelerated life testing, etc.

Required Experience/Education:

- Minimum 10 years of experience including direct experience with system-level technical reviews
- Minimum B.S. degree in engineering
- Secret clearance and US citizenship

Preferred:

- Cross-domain experience (air, land, sea, space) a plus
- Certified Reliability Engineer (CRE)
- Green Belt Six Sigma

Qualified individuals should [e-mail](#) their resume along with a cover letter.

## **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](#).