January 2015

All the news you need to know!

the SOLUTIONS report

DfR Solutions
reliability designed, reliability delivered
Visit our website now!

2015 Reliability Resolutions

Every year folks define a set of resolutions that they plan to complete during the upcoming months. DfR Solutions has thought about this and come up with a list of reliability resolutions and how we can help you accomplish them.

- **Lose weight:** We'll perform a design review of your product to assure that it has the best reliability while still being lean and mean!
- **Stop smoking:** Let us perform thermal analyses of your designs to reduce the potential for smoking!!
- **Exercise more/Get healthy:** DfR Solutions innate understanding of Physics of Failure can point you to the things you need to do to get better life expectancy!
- **End bad relationship:** Let DfR Solutions assess your BOMs to ascertain supplier performance. Or let us examine your suspect components for counterfeit detection.
- **Save money:** Assess your product's reliability quicker by using DfR Solutions Sherlock Automated Design Analysis™ tool. Catch issues early in the process and save lots of money.
- **Eliminate stress:** Let us reduce your stress by either finding the root cause of a failure quickly or by helping to assure your design is robust before entering the field.
- **Drink less:** Have fewer headaches knowing your product is designed to meet your customers reliability requirements!
- **Get better educated:** Attend DfR Solutions webinars/training programs each month to better understand the intricacies of reliability.

Model PCBs with Greater Detail

Sherlock Automated Design Analysis™ software continues to improve and evolve, enabling designers and engineers to model and predict the reliability of even more complex boards. In this webinar you will learn about the newest Sherlock features, including:

- Increased suite of FEA integration tools to allow for more detailed modeling of printed circuit boards. This includes trace modeling and geometric export capabilities for traces
- Lead modeling of surface mount and thru-hole components, allows the user to specify the lead structures for their components and model their vibration and mechanical response
- Expanded cutout editor allows Sherlock to read router files and generate complex shaped cutouts in the PCB
- Heatsink Editor, allows the user to mount heatsinks to their components to accurately account for their added mass during simulation

For more information and a demo of version 4.0 of Sherlock, contact Tom O'Connor.

Annual Open House

Save the Date
Monday, March 16, 2015
8:15am to 3:30pm
Attend high level technical presentations, meet with DfR Solutions experts, and participate in a free Sherlock Automated Design Analysis™ Software demonstration.
RSVP

Sherlock Technical Training

Reserve your spot now!
Intermediate: Monday, March 16, 2015
1:30pm to 5:30pm
Advanced: Monday, March 16, 2015
9:00am to 4:30pm
Learn More and Register.

Upcoming Webinars

Design Review Analysis

Presented by Greg Caswell

Thursday, January 29, 2015

11am and 2pm sessions available

Register

Try Sherlock Free

Sign Up Now for a Free Trial!

Sherlock Automated Design Analysis™ software

See You There!

2015

Jan 26-29: RAMS, Palm Harbor, FL
Feb 19: ASQ Greater Detroit General Meeting

Visit our website to review a recording of the webinar or for a free Sherlock Trial.

Reballing Process Controls and Cleanliness

Many times it may be necessary to remove and replace a Ball Grid Array (BGA) from a PCB. Salvaging the IC due to its cost may be an issue. Understanding how to get the part properly reballed and assure its cleanliness is not as trivial as it sounds. This presentation from last month's webinar delineates the issues in the process and provides insight into what needs to be done to assure that the reballed parts are reliable. For more information please contact Greg Caswell.

Improving UAV Reliability

Some forms of UAVs are already being used for border patrol, firefighting, disaster relief, search and rescue missions, training, and research and development. In addition, there is an entirely separate market for UAVs that will be used for recreation not to mention the recent commercial sector excitement over the potential to use them for logistics and package delivery. Failures of these systems, which are not expected to be as rigorously tested or as well-manufactured as military systems, present a potential for danger and safety risk should they fail. This white paper addresses the issue. For more information please contact Ed Dodd.

Other Interesting Items

Cheryl Tulkoff, Senior Technical Staff for DfR Solutions, is receiving a Committee Leadership Award from IPC at IPC APEX EXPO 2015 in February in recognition and appreciation of her contribution to the IPC DFX Guideline document, IPC-2231, Design for Excellence (DFX) Guideline During the Product Lifecycle. Cheryl will also be teaching a course on *Design for Excellence*. And Jim McLeish and Cheryl will be presenting a paper entitled Specification & Qualification of Automotive Grade Rigid Printed Boards. Stop by the DfR Solutions booth #2326 or attend one of thise informative sessions.
Both Cheryl Tulkoff and Ed Wyrwas had articles published in the Turkish publication, *Elektronik Turkiye*. Cheryl's article is on Temperature Cycling in Electronics, and Ed's article is entitled Integrated Circuit Reliability Prediction Based on Physics-of-Failure Models in Conjunction With Field Study.

We're Even Easier to Find

The last section of MD-200 (aka the Intercounty Connector) has opened. Visitors traveling eastbound on MD-200 should take exit 20, Konterra Drive, and turn right (south) at the end of the ramp. Turn right at the next light onto Muirkirk Rd. Turn left in the first driveway and our office will be on your right.
Notes:

- Konterra Drive is a newly re-named section of road and some GPS/mapping systems may not reflect this change until the next update.
- There is no exit from westbound MD-200 onto Konterra Drive.

For point to point directions please visit our website.

Sherlock User Forum

To better accommodate the users of Sherlock Automated Design Analysis™ software, DfR Solutions has established a User Forum which will provide insight in FAQs, discussions on Sherlock releases, Feature requests, Tips and Tricks, and also where you, the user, can input your experiences.
Please go to Sherlock User Forum. Once you enter your information you will need to wait for DfR confirmation.

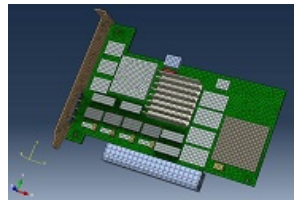
Feb 22-26: IPC APEX, San Diego, CA
March 5-6:
IoT Summit, Santa Clara, CA
March 16:
DfR Solutions Open House
March 16:

Sherlock Intermediate Training

March 17:
Sherlock Advanced Training

Sherlock Spotlight

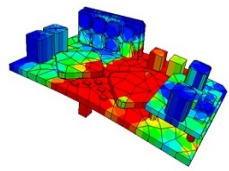
See how Sherlock seamlessly integrates with Abaqus.



For more information please contact **Tom O'Connor**.

SHERLOCK in 3D!

Click the image below to view a short video about
Sherlock's New 3D Capabilities.



View short video

SHERLOCK Demo

sherlock
AUTOMATED DESIGN ANALYSIS™
Take the Sherlock Demo

On Location

At DfR Solutions we still believe that personal relationships are best. Our Senior Staff spend a lot of time visiting clients in order to personally ensure that their projects are going well and discussing their overall reliability needs. If you would like a personal visit from DfR Solutions, please Contact Us.

Reach Your Colleagues

Learn how your business can reach more than 12,000 electronics professionals.
Contact Us.