FOR IMMEDIATE RELEASE
Contact: Amy McGrath, Marketing Director
DfR Solutions
amcgrath@dfrsolutions.com
267-337-2495

DfR Solutions Releases Sherlock Version 4.2 with Advanced Modeling Capabilities

Flexibility to model all physical geometry in semiconductor packaging and electronic hardware

Beltsville, MD – March 23, 2016 – DfR Solutions, leader in quality, reliability, and durability (QRD) solutions for the electronics industry, today announced the release of the newest version of Sherlock Automated Design Analysis™ software, Version 4.2. The newest version includes advanced features that provide faster, easier, and more precise thermal and mechanical modeling of semiconductor packaging and electronic hardware. Now Sherlock includes modeling of potting materials, wire bonds, housing elements (such as stiffeners), and BGA solder balls. Combined, these sophisticated modeling capabilities enable electronics designers perform rapid tradeoff analysis, predict failures earlier in the design process and make changes to mitigate the causes of potential product failures in test or in the field.

Sherlock is the only tool on the market that is exclusively focused on electronics and based on Physics of Failure. Sherlock extracts information from industry standard design files and creates intelligent and accurate 3D FEA models of semiconductor packaging and electronic hardware in just minutes. This acceleration of model development, compared to the traditional time period of 4 to 6 weeks, allows design and engineering management to more effectively integrate simulation and modeling into the new product development (NPD) process. Numerous case studies have repeatedly demonstrated that Sherlock helps get products to market faster, with higher reliability and at lower cost.

About the Advanced Features:

Polymers, including potting, coating, underfills, encapsulants and staking materials, are often used to protect electronics from environmental, chemical, mechanical, thermal, and electrical conditions that could damage the product. Selection of the wrong polymer materials for the application could result in early failure due to unwanted stresses. Incorporating these materials in mechanical simulation of electronics has always been extremely challenging. In the newest version of Sherlock, designers can now model the effects of different potting, coating, and staking materials with a click of a button.

Rapid model development and accurate material properties allows for easy prediction potential failures under both accelerated test and real world conditions.

Wire bonds are still the most prevalent interconnect method for packaging of power modules. They can be susceptible to fatigue failure due to vibration or shock loads. Now wire bonds can be quickly and easily modeled directly in Sherlock, enabling designers to predict possible failures caused by vibration, and correct product designs before a prototype has been built. Tradeoffs between wirebond material (copper vs. aluminum), wirebond height, and even potting material can all be rapidly quantified for the product team.

Housing elements play a crucial role in the response of electronic hardware to thermal and mechanical events (such as shock, vibration, and power dissipation). Some parts like power bus bars, cold plates, heat sinks and other mechanical parts also act as stiffeners. In Sherlock Version 4.2, designers can quickly and easily add complex housing elements and other mechanical parts directly to the board and model their possible effects.

BGA solder balls have been added to the newest version of Sherlock. This newest interconnect geometry (along with the other existing surface mount and through hole geometries) can help identify manufacturing challenges and potential reliability concerns when boards are subjected to thermal or mechanical stresses.

"This new release is another example of how Sherlock continues to grow and improve to meet the sophisticated needs of its customers," stated DfR Solutions CEO Craig Hillman. "While still being the easiest and most intuitive modeling software on the market, Sherlock now allows our users the flexibility to model all physical geometry in semiconductor packaging and electronic hardware. This is driving a revolutionary democratization of simulation and modeling, which is quickly creating massive separation between organizations using Sherlock and the rest of the electronics industry.

About Sherlock Automated Design Analysis™ Software

Sherlock is the first-of-its-kind Automated Design Analysis software for analyzing, grading, and certifying the expected reliability of products at the circuit card assembly level. Based on the science of Physics or Failure, it is used by the electronics industry across all markets. Sherlock continues to evolve, incorporating new innovations and enhancements allowing users to manage increasingly complex analyses faster and more efficiently than ever before.

About DfR Solutions

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 regarding DfR Solutions, visit www.dfrsolutions.com.