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**DfR Solutions Addresses Mission-Critical Impact on Electronics Reliability**  
System-Level Effects on Solder Joints in Harsh Environments

**Beltsville, MD – May 14, 2018** – DfR Solutions, leader in quality, reliability, and durability (QRD) solutions for the electronics industry, today announced that Dr. Craig Hillman, CEO of DfR Solutions is speaking at the IPC High Reliability Forum for Mil-Aero and Automotive Sectors in Linthicum, Maryland, taking place May 15-17, 2018. Dr. Hillman will present *System-Level Effects on Solder Joint Reliability* on Thursday, May 17 at 10:45 AM. Dr. Hillman is a preeminent authority on electronics design reliability. DfR Solutions works closely with Aerospace and Automotive industries to improve electronics reliability and safety.

Electronic systems may often fail, not because of poorly designed chips, substrates or other components, but because of the failure of the solder joints that link them all together. The mismatch between PCB solder materials can result in thermal expansion problems including excessive strain, cracking and open circuits. The impact of thermal fatigue, soldering defects, vibration and residual strains must be considered when analyzing solder reliability. These and other issues are often exposed in accelerated stress tests.

The most common method for testing solder joint reliability is thermal cycling where the thermal modulation process mimics environmental strains. Other testing methods including power cycling, HALT, shock, and vibration can expose potential metallurgical and physical failures. In his presentation, Dr. Hillman will discuss how, in extreme environments, it is even more important to understand the conditions that induce solder joint strain and greatly reduce overall system lifetime.

The IPC High Reliability Forum will focus on electronics used for Mil-Aero and Automotive sectors subjected to harsh use environments. Dr. Hillman will be joined by other industry experts such as i3 Electronics, American Standard Circuits, Conductor Analysis Technologies, Inc., Lockheed Martin Missiles and Fire Control, Motorola, Raytheon, RBP Chemical, and SAIC.

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'Electronics in the Military, Aerospace, and Automotive industries operate in the most extreme environments imaginable,' said Dr. Craig Hillman, CEO of DfR Solutions. 'And solder joint reliability is often a key pain point in the design of an electronic system,' stated Hillman. 'With the focus on vehicle autonomy and IoT, the ability to understand and predict the lifetime of electronic systems *under real world conditions*, is mission-critical,' stated Hillman. 'As experts in the field of Reliability Physics, we are huge proponents of moving this important process forward,' said Hillman.

### **About DfR Solutions**

DfR Solutions has world-renowned expertise in applying the science of Reliability Physics to 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 Reliability Physics and its innovative, [Sherlock Automated Design Analysis™ software](#) provide 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](http://www.dfrsolutions.com).

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