Q4 Company

ELES and proteanTecs Partner to Enhance Reliability Testing with Deep Data Analytics

10/4/2023

Collaboration enables SoC manufacturers to improve their qualification envelope to achieve lifetime reliability, shorten their root cause analysis time, and reduce operational costs

HAIFA, Israel--(BUSINESS WIRE)-- proteanTecs, a global leader of deep data analytics for advanced electronics, and ELES, a worldwide provider of semiconductor device reliability testing solutions, today announced their partnership for safety and mission-critical applications. The collaboration combines proteanTecs' Health and Performance Monitoring solutions with ELES' Design for Reliability methodology and advanced reliability test platforms. The two companies have published a new white paper highlighting the joint benefits, titled "Using Deep Data Analytics to Enhance Reliability Testing: The Fast Roadmap for Zero Defects," which can be downloaded here.

ELES and proteanTecs announce their partnership to enhance reliability testing with deep data analytics. (Graphic: Business Wire)

Reliability testing procedures are based on stress iterations, but are mostly limited to pass/ fail conclusions and critical effects can be missed. Modern mission-critical applications, such as automotive and cloud computing, require going beyond traditional IC testing methods to assure lifetime reliability, resilience and safety. The proteanTecs and ELES collaboration enables an innovative approach that adds parametric measurements during the stress test in order to accurately and precisely monitor the real degradation effects. Additional applications include smart selection of the test material, dynamic stress level calibration to match the required mission profile, early identification of outliers, and the ability to quickly root cause once a failure is observed. Customers gain improved confidence in their reliability and mission profiles, saving significant time and cost.

"Our strategic cooperation with proteanTecs enhances our Design for Reliability Test (DfRT) process, by enabling a

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smarter, more effective qualification flow that addresses the increasing performance and reliability needs of advanced electronics," said Antonio Zaffarami, President of ELES. "ELES' Reliability Embedded Test Engineering (RETE) methodologies—empowered by proteanTecs deep data analytics—allows our clients to identify and remove device weaknesses and to manufacture more reliable devices, achieving higher production yields and shortening their time to market. Enter the era of manufacturing with zero scraps!"

"It is privilege to partner with ELES, a recognized leader in semiconductor reliability solutions, to enhance and innovate the device qualification and test domains for our joint customers," said Uzi Baruch, Chief Strategy Officer (CSO) at proteanTecs. "By providing parametric visibility based on chip telemetry, we offer Quality and Reliability engineers increased confidence, enabling both novel measurement techniques and predictability in reliability testing. Together, we look forward to taking the industry one step further towards seamless visibility."

proteanTecs and ELES will be speaking at ITC Test Week, held from Oct. 8-13 in Anaheim, Calif. proteanTecs' VP of Solutions Engineering, Noam Brousard, will present at the **IEEE ARTS23** (Automotive, Reliability, Test & Safety) workshop on "Prognostics and Monitoring of Automotive Electronics Using On-Chip Telemetry." This session will be held on Friday, Oct. 13 from 8:30 to 9:20 a.m. PDT.

In the same ARTS23 session, ELES' R&D Manager Luca Moriconi and Application Development Manager Alessandro Maseri, will present "RETE: Design and Test for Reliability – Data Analysis for Zero Defects," prepared together with STMicroelectronics.

About ELES S.p.A.

Founded in 1988, ELES S.p.A. (ELES) designs and manufactures semiconductor test solutions (SoC, Power, MEMS and memories). ELES produces universal test systems together with engineering services for reliability tests, having developed a co-engineering process with its customers aimed at guaranteeing "zero defect" microelectronic devices. The company also develops customized test applications for devices to be tested on its universal systems, along with the data management of test results. ELES counts among its customers multinational companies producing semiconductors and manufacturers of electronic modules for automotive and the aerospace and defense sectors.

About proteanTecs

proteanTecs is the leading provider of deep data analytics for advanced electronics monitoring. Trusted by global leaders in the datacenter, automotive, communications and mobile markets, the company provides system health and performance monitoring, from production to the field. By applying machine learning to novel data created by on-chip monitors, the company's deep data analytics solutions deliver unparalleled visibility and actionable insights

—leading to new levels of quality and reliability. Founded in 2017 and backed by world-leading investors, the company is headquartered in Israel and has offices in the United States, India and Taiwan. For more information, visit **www.proteanTecs.com**.

proteanTecs Press Contact:

Elizabeth Brown, Media Relations

elizabeth@proteanTecs.com

+1 619-993-4648

ELES Press Contact:

Marco Paolucci, Sales & BD Director

marco.paolucci@eles.com

+39 348 7754765

Source: proteanTecs