FlexTech Completes Flexible Hybrid Electronics Projects

With ENrG, nScrypt, and PARC

SAN JOSE, Calif. — May 11, 2016– FlexTech, a SEMI Strategic Association Partner, today announced the formal completion of three flexible hybrid electronics (FHE) R&D projects under its U.S. Army Research Laboratory (ARL) technology investment agreement. The completed projects are with ENrG for a flexible ceramic substrate; nScrypt and NovaCentrix for a next-generation three-dimensional (3D) printing tool for creating complex and functional objects; and PARC, a Xerox company, for a flexible sensor platform. Projects ranged from 12-18 months and were managed by a member of the FlexTech Technical Council, which is a team of experts in flexible, hybrid and printed electronics technologies.

- ENrG, located in Buffalo, New York, completed a 15 month project to develop a high-yield process to create a 20 micron thick, flexible ceramic substrate capable of retaining its integrity when drilled, cut, rolled and processed at high temperatures. During the project, ENrG developed processes to print thin-film lithium batteries, circuits, application of copper cladding and other metallization with excellent performance characteristics. The project, valued at $570,000 total, was 56% cost shared by the company.

- nScrypt, based in Orlando, Florida, in partnership with NovaCentrix of Austin, Texas, developed a 3D printer for rapid prototyping of new electronic devices. The total award of $1,291,000 was cost-shared by nScrpyt, NovaCentrix and FlexTech and it was completed over a 16-month period. The new tool additively builds integrated hybrid circuits on 3D surfaces, as well as devices on flexible, low temperature, and rigid planar substrates. It integrates processing of three previously-separate tools. The first tool has been installed at ARL. Commercial tools are available from nScrypt.

- PARC, a Xerox Company, Palo Alto, California, developed a passively powered, digitally-fabricated, communication-enabled, flexible sensor platform that is easily customizable to multiple sensor types. The project addressed the availability of an end-to-end system design that can be manufactured in large quantities with digital printing for smart tag or wearable applications. In its final report, the PARC researchers noted several key areas where additional development would be helpful, including components designed specifically to be compatible with flexible, printed sensor systems. Total cost was $409,000 and shared equally between PARC and FlexTech.

“Each of these projects, chosen and supported by the Technical Council, moves the needle on learning how to fabricate electronics on flexible substrates,” stated Michael Ciesinski, president of FlexTech. “Especially impressive is the teaming on the projects, which helps build out the FHE supply chain.”

About SEMI

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About FlexTech

FlexTech, a SEMI Strategic Association Partner, is focused on growth, profitability, and success throughout the manufacturing and distribution chain of flexible hybrid electronics, by developing solutions for advancing these technologies from R&D to commercialization. Visit FlexTech at www.flextech.org and follow FlexTech on LinkedIn and Twitter.

Learn more at www.nscrypt.com, www.novacentrix.com, www.enrg-inc.com, www.parc.com

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