

IoT Device Security Summit:
David K Lam and Mike Borza joint presentation September 28, 2017

"Device Unique Key" (DUK) provides foundation for a secure system

SANTA CLARA, CA - September 12, 2017 - David K. Lam and Michael A. Borza (Synopsys) are jointly presenting at the IoT Device Security Summit this month.

The presentation, "Embedding Security in IoT Devices", will introduce a new way to embed a "Device Unique Key" (DUK) into each and every IoT device for secure authentication.

The DUK is inscribed (in silicon) deep inside an IoT device during normal fab production using a technology known as Direct Electron Writing, or DEW. Remarkably, the IoT device itself is the most secure place to store the "hard-coded" DUK. Used with security protocols, the DEW-embedded DUK verifies the trustworthiness of firmware, commands, and data, allowing legitimate access for updates and bug-fixes while blocking hacker malware. The DUK thus establishes a crucial part of the hardware "Root-of-Trust" - the foundation of a secure system.

The presentation will also evaluate and compare current device-level security solutions and highlight how the DUK complements software and network security to bolster IoT device security.

Direct Electron Writing (DEW) for IoT Device Security

IoT devices are small, low-cost, and easy to hack. The huge quantity of these insecure devices pervading our lives poses an enormous security threat.

DEW offers a new way to secure IoT and other devices with robust, cost-efficient, hardware-based authentication. Multibeam's DEW process leverages multi-e-beam lithography to embed device unique keys into every IC during high-volume IC fabrication.

About Multibeam Corporation

Multibeam is a leading electron-beam technology innovator. Over the past two years, the company has doubled its IP portfolio. Of the 40 patents filed, 30 have been awarded by the USPTO. Patented applications include Direct Electron Writing (DEW) to embed security in IC devices; Complementary E-Beam Lithography (CEBL) to reduce mask cost, process complexity, cycle time, and yield impact due to optical multi-patterning; Direct Deposition/Etch (DDE); and E-Beam Inspection (EBI), in addition to multi-column charged-particle technology. Based in Santa Clara, California, Multibeam is led by Dr. David K. Lam, the founder and first CEO of Lam Research who successfully guided the development and market penetration of his eponymous company's first fully automated plasma etch system. Widely recognized as a key contributor to the growth of the semiconductor industry, Dr. Lam was inducted into the Silicon Valley Engineering Hall of Fame in 2013.

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