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**D2S AND NUFLARE EXTEND PARTNERSHIP TO ACCELERATE EBEBAM COMPUTATIONAL DESIGN PLATFORM DEPLOYMENT FOR ADVANCED PHOTOMASKS**

**SAN JOSE, Calif., September 9, 2013**—D2S®, a supplier of computational design platforms, today announced that it has extended its partnership with NuFlare Technology, a world leader in electron beam (eBeam) mask writing systems, to accelerate the deployment of eBeam technologies that reduce write times and improve the accuracy of advanced photomasks for future design nodes leveraging general purpose graphic processing unit (GPGPU) acceleration. As part of this agreement, NuFlare will invest an undisclosed amount in D2S. NuFlare joins other investors in D2S, which include Benchmark Capital, DAG Ventures and Samsung Ventures.

In addition, the two companies announced that NuFlare has purchased D2S' [TrueMask® DS GPGPU-accelerated platform](#) for internal use for research and development. D2S will leverage the extensibility of the TrueMask DS platform to develop custom extensions for NuFlare for scientific and engineering exploration.

eBeam technology, which is used in manufacturing all semiconductor devices today, is increasingly critical to the semiconductor ecosystem as the industry migrates to smaller design nodes. The amount of design data required to produce photomasks for leading-edge chip designs is increasing at an exponential rate, which puts more pressure on mask writing systems to maintain reasonable write times for these advanced masks, as well as puts tremendous cost pressure on the entire mask supply chain.

In 2011, [D2S began a partnership](#) with NuFlare that enabled the deployment of overlapping eBeam shots on NuFlare machines to enable the writing of complex mask patterns in acceptable write times. As the complexity of mask designs and requirements of maintaining mask accuracy continue to rise, new innovations in eBeam technology such as D2S' TrueMask GPGPU-based computational design platforms for [model-based mask data preparation \(MB-MDP\)](#) are needed to lower the photomask cost and write-time curve while keeping pace with requirements for increasingly complex masks.

"GPGPU-based eBeam technology is an important area of investment for future technologies at NuFlare," stated Hirokazu Yamada, senior manager of strategic planning on mask lithography at NuFlare Technology. "We think the approach that D2S is taking with their TrueMask eBeam simulation technology is very promising for a broad range of applications, and we support the company's efforts to develop it for the benefit of the entire eBeam technology ecosystem."

"At a time when Moore's Law is hitting the mask community with extra demand on accuracy and turnaround time, it's great to see an industry leader like NuFlare taking action to invest in the community," said Aki Fujimura, CEO of D2S. "This investment in D2S enables us to better serve our customers as adoption of our TrueMask GPGPU-accelerated eBeam simulation platform increases to meet these demands."

**About D2S, Inc.**

D2S is a supplier of a computational design platform to maximize existing eBeam technology to reduce mask costs for both low- and high-volume applications. D2S TrueMask solutions enable advanced photomask designs at 28-nm-and-below process nodes using complex shapes for superior wafer quality but within practical, cost-effective write-times using existing eBeam mask writing equipment. D2S is the managing sponsor of the eBeam Initiative. Headquartered in San Jose, Calif., the company was founded in 2007. For more information, see: [www.design2silicon.com](http://www.design2silicon.com).

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