

Press release

February 19th, 2010

TSMC and MAPPER Reached Joint Development Milestone

Global relationship underscores TSMC's participation in Euro tech development

Hsinchu, Taiwan/Delft, The Netherlands – February 19, 2010 – Taiwan Semiconductor Manufacturing Company (TWSE: 2330, NYSE: TSM) and MAPPER Lithography today revealed that a pre-alpha MAPPER tool located on TSMC's Fab 12 GigaFab™ is repeatedly printing features previously unachievable using current immersion lithography technology.

Over the past several months TSMC has expanded its Maskless Lithography team and has been working with MAPPER engineers at Fab 12 to integrate electron beam direct write capabilities into manufacturing processes for development of future technology nodes.

"TSMC is always searching for the most cost effective manufacturing processes," says Dr. Shang-Yi Chiang, TSMC Senior Vice President of Research & Development. "The results coming from our project with MAPPER have met aggressive objectives and mark a significant achievement in our Multiple-E-Beam Direct Write program that covers all viable Multiple-E-Beam technologies. Based on these encouraging results, we are convinced that the Multiple E-Beam technology is one of the technologies to become the future lithography standard."

Dr. Christopher Hegarty, MAPPER's CEO adds, "Having TSMC as our launch customer is of great benefit to MAPPER. Now that we have an operational tool at TSMC and we simultaneously intensify our efforts in bringing MAPPER's technology to market, we are supremely confident that electron beam direct write will be successfully introduced into high-volume manufacturing processes."

TSMC and MAPPER will present their latest results at the SPIE Advanced Lithography 2010 conference in San Jose, CA.

MAPPER's Technology

MAPPER develops lithography machines for the chip industry. These machines utilize a new and innovative technology with which the chips of the future can be made cost effectively. MAPPER's machine provides a highly cost-effective way of making the next generation of chips because it significantly reduces costs by eliminating the photomask while simultaneously providing the ultimate in resolution and high productivity. MAPPER's technology makes use of massively parallel electron beams, thereby providing the very high resolution of electron beam at extremely high throughput. Current lithography machines use photographic techniques to create minute electrical circuits smaller than 1/100th of a human hair on a silicon wafer. They use a mask that contains the blueprint of the chip and transfer this pattern on to a photosensitive layer (comparable to a photograph being exposed on film), however the photographic techniques used are very limited in the resolution they can provide and are no longer adequate for future generations of semiconductors.

About TSMC

TSMC is the world's largest dedicated semiconductor foundry, providing the industry's leading process technology and the foundry's largest portfolio of process-proven libraries, IPs, design tools and reference flows. The Company's managed capacity in 2009 totaled 9.96 million (8-inch equivalent) wafers, including capacity from two advanced 12-inch GIGAFABs™, four eight-inch fabs, one six-inch fab, as well as TSMC's wholly owned subsidiaries, WaferTech and TSMC China, and its joint venture fab, SSMC. TSMC is the first foundry to provide 40nm production capabilities. Its corporate headquarters are in Hsinchu, Taiwan. For more information about TSMC please visit <http://www.tsmc.com>.

About MAPPER Lithography

MAPPER's offices are located in Delft, The Netherlands, near Delft University of Technology, one of the shareholders. MAPPER has a headcount of 170 people. Shareholders of MAPPER are besides Delft University of Technology professional investors – Capital-C Ventures, KT Venture Group, Quest for Growth and KBC Private Equity - and private investors.