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## Weebit Nano and Leti's Collaboration Resulted in Three Patents

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Weebit Nano, a leading innovator in the next generation memory technology, and Leti, one of the world's largest organizations for applied research into microelectronics and nanotechnology, who have been jointly working toward the development of silicon oxide ReRAM technology, recently filed three patents on identifying failure modes, improving process flows, and enhancing the reliability and yield of ReRAM memory cells.

[Weebit Nano](#), the next generation memory technology for the global semiconductor industry, and its development partner Leti, the French research institute recognised as a global leader in the field of micro-electronics, have filed three new patents for Weebit's Silicon Oxide (SiOx) ReRAM technology.

The latest patents from Weebit and Leti use newly developed smart algorithms to increase the reliability and yield of ReRAM memory cells and enable scalable immune ReRAM process improvements. Two patents identify failure modes, in which optimised smart programming algorithms then improve the window margin and array yield. The third patent improves process flows, allowing increased stability at scaled memory cells in geometries of 40nm and below.

These patents outline methods to overcome issues that stem from physical limitations, which are common in advanced geometries approaching atomic-level limitations, resulting in increased yield and ultimately revenues per wafer.

Coby Hanoch, CEO of Weebit Nano, said: "Developing disruptive technology for productisation is not only a result of great material science engineering, but also understanding and controlling the physics of the device. A company needs to develop sophisticated process flow techniques as well as smart algorithms to overcome challenges and control the physics of the manufacturing environment. Weebit and Leti invest on both fronts to create unique know-how that will enable simpler and lower-cost manufacturability,

resulting in highly reliable and cost-effective ReRAM memory solutions.

“These patents further fortify Weebit’s intellectual property and create a unique package of process and memory control that will be incorporated in our future products, enabling us to increase the potential revenues from each wafer produced,” said Mr Hanoach.

Weebit Nano continues to refine its ReRAM technology in partnership with Leti, in order to ensure it is highly attractive to potential customers. The Company remains on track to transfer its technology to a production fab by December 2020, and is continuing developments with a number of potential customers.

Read the [original article](#) on Weebit Nano.