

Sanjay Mehrotra

Sanjay Mehrotra is the recipient of the 2019 Flash Memory Summit Lifetime Achievement Award for co-founding SanDisk, advancing the architecture that enabled the industry and market for flash memory, and leadership of Micron Technology, Inc. and the Semiconductor Industry Association.



Mehrotra's Early Days

Dr. Mehrotra came to the U.S. and studied electrical engineering and computer science at UC Berkeley. His education allowed him to hit the ground running in the dynamic semiconductor industry, and he began his career in 1980 by designing EPROMs at Intel. This job allowed him to work with George Perlegos and to meet Eli Harari, and they became two of the great mentors of his career. (George received the 2017 Lifetime Achievement Award, and Eli received the 2012 Lifetime Achievement Award). After Intel, Dr. Mehrotra designed memory devices at SEEQ, Integrated Device Technologies, and ATMEL. During this time, he created the first five-volt CMOS EEPROM with integrated error correction.

In 1988, Eli Harari recruited Sanjay Mehrotra and Jack Yuan to start a new company with a vision to build solid-state drives from flash memory, which at the time was a fledgling laboratory technology. The three immigrants (from Israel, India, and China, respectively) formed a start-up named SunDisk (later renamed SanDisk).

Dr. Mehrotra's Role in the Growth of Flash

The initial SunDisk design was based on a unique triple-poly NOR technology, and this led to the first system-level flash design which used a processor to manage the flash in order to deal with flash's wear-out characteristic. As this system-level approach (which is now the foundation for flash throughout the industry) was much different from the component-only design that the competition was pursuing, some venture investors told SunDisk that they were on the wrong track. However, the three founders – along with system architect and early team member Bob Norman – believed in this approach, and they spent their initial months securing multiple patents which would ultimately shape the future of the flash industry. Most critical amongst these patents was U.S. Patent No. 5,297,148 (the '148 patent), whose inventors were Sanjay Mehrotra, Eli Harari, and Bob Norman. This was the first of a large family of patents that encompassed this system-level approach, and these are amongst over 70 patents that include Mehrotra as an inventor.

During the early days at SunDisk, Dr. Mehrotra was co-inventor of an important patent (U.S. Patent No. 5,172,338), along with Eli Harari and Winston Lee, on multi-level cell (MLC) technology, which described how more than one bit could be stored in a flash memory cell. Dr. Mehrotra also led the SanDisk engineering teams that drove innovation in controller and firmware technology based on the '148 patent. These innovations spurred the exponential cost declines that allowed flash memory to be a key enabler of the billions of mobile consumer devices in use today.



SunDisk's earliest CompactFlash card from 1994

At SanDisk, Mehrotra advanced through management roles in device design, product engineering, process technology, and systems engineering, and he eventually led all engineering at the company. He became Chief Operating Officer in 2001, President in 2006, and finally CEO in 2010 after Harari's retirement. "George Perlegos taught me how to be a great engineer, and the things good engineers should focus on," said Mehrotra. "Eli Harari really transformed me from an engineer into a business leader, and I feel fortunate to have worked with him, and to have been mentored by him."

Mehrotra's Transitions at SanDisk and Micron

In 2016, Dr. Mehrotra led the sale of SanDisk to Western Digital for close to \$16 billion (at the time of the announcement), something he describes as a "difficult and emotional decision, but also the culmination of a hugely impactful and fulfilling journey." He expected to retire, but was soon recruited to fill the top job at Micron Technology. "When I was approached by Micron, I felt deeply honored and privileged," he said. "I really see Micron as an iconic company, a national treasure."

At Micron, Mehrotra is driving a transformation to increase the company's efficiency, strengthen its cost competitiveness, and move it further into high-value, system-level solutions. He and his management team are also positioning Micron to take advantage of huge trends in artificial intelligence, 5G, and autonomous vehicles that the company's comprehensive memory and storage portfolio is uniquely positioned to address. Under his leadership, Micron gained 45 spots on the 2019 Fortune 500 list, with FY2018 revenue of over \$30 billion. Sanjay is also driving a cultural shift at Micron that includes increasing the percentage of women in leadership and technical roles. The number of women in senior leadership more than tripled between 2017 and 2019, and Micron is achieving 99% gender pay parity across all roles. He is also bolstering Micron's already exemplary philanthropic giving and team volunteerism.

Now with 40 years of industry experience, Dr. Mehrotra is enjoying the challenges associated with leading a "powerhouse company" to the next level. He notes that not many leaders get the chance to co-found and lead a startup to become a multi-billion-dollar company, and to then also lead the transformation of a large, well-established company. "It is really a very unique opportunity," he said. "I feel really privileged to be at Micron today, and am excited about what I know our strong team can accomplish in the years ahead." In 2020, Sanjay Mehrotra also served as Board Chairman of the Semiconductor Industry Association.



SanDisk co-founders Jack Yuan, Sanjay Mehrotra and Eli Harari



Sanjay with members of Micron's Women Leadership Network. Under his leadership, Micron is creating greater opportunity for women and underrepresented minorities



Sanjay and the Micron team celebrate after its NASDAQ opening in 2018



2019 Lifetime Achievement Award winner Sanjay Mehrotra (holding award) with committee members

Comments from Some Past Lifetime Achievement Award Winners

2012 Lifetime Achievement Award recipient Eli Harari: "Sanjay's inventiveness has had a fundamental impact on the industry, and his big heart advocates for disadvantaged young people."

2017 Lifetime Achievement Award recipient George Perlegos: "Since his start as a young engineer out of UC Berkeley, Sanjay's persistence, handiwork, and focus on results have allowed him to excel."

2015 Lifetime Achievement Award recipient Bob Norman: "As he is a true flash pioneer, Sanjay is most deserving of this prestigious award. It was a privilege and honor to have worked with him."