

Micron Technology, Inc.
Petitioner

v.

Vervain, LLC
Patent Owner

Case No. IPR2021-01550
U.S. Patent No. 10,950,300

Micron's Hearing Demonstratives

January 12, 2023

dmap

The 300 Patent

The Remaining Dispute: RAM Cache in Dusija's Controller

The Petition's Showing of RAM Cache in Dusija's Controller

Petitioner's Showing Remains Unrebutted

PO's Arguments Are Without Merit

dmap

The 300 Patent

The Remaining Dispute: RAM Cache in Dusija's Controller

The Petition's Showing of RAM Cache in Dusija's Controller

Petitioner's Showing Remains Unrebutted

PO's Arguments Are Without Merit

300 Patent

The specification discloses performing a “data integrity test” on data stored in MLC NAND flash by:

1. **retaining in DRAM** a copy of data to be written to the flash memory;
2. writing the data to the flash memory;
3. reading the data back from the flash memory; and
4. comparing the data read back from the flash memory **to the data retained in the DRAM**.

If the data integrity test fails, the data is written to the SLC NAND flash memory module.

A “read-modify-write” scheme is used to write data to the NAND flash. Data to be written to NAND flash is maintained in DRAM 20. After each write to an address within a particular address range, the device controller 14 will—as time permits—perform a read on the address range to ensure the integrity of the written data. If a data integrity test fails, the address range is remapped from the MIC NAND flash memory module 26 to the next available address range in the SLC NAND flash memory module 28.

Ex. 1007 (300 Patent), 5:59-67.

300 Patent – “Random Access Volatile Memory” in Claim 1

. A system for storing data comprising:
memory space containing volatile memory space and nonvolatile memory space, wherein the nonvolatile memory space includes both multilevel cell (MLC) memory space and single level cell (SLC) memory space;
at least one controller to operate memory elements and associated memory space;
at least one MLC nonvolatile memory element that can be mapped into the MLC memory space;
at least one SLC nonvolatile memory element that can be mapped into the SLC memory space;
at least one random access volatile memory;
an FTL flash translation layer, wherein the at least one controller, or FTL, or a combination of both maintain an address table in one or more of the memory elements and random access volatile memory;
the controller controlling access of the MLC and SLC nonvolatile memory elements and the random access volatile memory for storage of data therein, the controller, in at least a Write access operation to the MLC nonvolatile memory element, operable to store data in the MLC nonvolatile memory element and retain such stored data in the random access volatile memory;

the controller performing a data integrity test on stored data in the MLC nonvolatile memory element after at least a Write access operation performed thereon by comparing the stored data to the retained data in the random access volatile memory;
wherein the address table maps logical and physical addresses adaptable to the system, wherein the mapping is performed as necessitated by the system to maximize lifetime, and wherein the mapping maps blocks, pages, or bytes of data in either volatile or nonvolatile, or both, memories; and
wherein a failure of the data integrity test performed by the controller results in a remapping of the address space to a different physical range of addresses and transfer of data corresponding to the stored data to those remapped physical addresses from those determined to have failed the data integrity test to achieve enhanced endurance.

Ex. 1007 (300 Patent), Claim 1.

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.