

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PHISON ELECTRONICS CORPORATION,
Petitioner,

v.

VERVAIN, LLC,
Patent Owner.

IPR2025-00212
Patent 8,891,298 B2

Before STACEY G. WHITE, JON M. JURGOVAN, and
STEVEN M. AMUNDSON, *Administrative Patent Judges*.

JURGOVAN, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Petitioner Phison Electronics Corporation filed a Petition (Paper 2, “Pet.”) pursuant to 35 U.S.C. §§ 311–319 to institute an *inter partes* review of claims 1–11 (“the challenged claims”) of U.S. Patent No. 8,891,298 B2 (Ex. 1001, “the ’298 patent”).

Patent Owner Vervain, LLC, filed a Preliminary Response (Paper 8, “Prelim. Resp.”) arguing that the Board should exercise discretion to deny institution under § 314(a).¹ Patent Owner also argued that the Board should deny institution on the merits.

For reasons provided below, we determine on behalf of the Director (*see* 37 C.F.R. § 42.4(a)) that the record demonstrates that the Petition should be discretionarily denied under 35 U.S.C. § 314(a).

II. BACKGROUND

A. *Real Parties-in-Interest and Related Patents and Proceedings*

Petitioner and Patent Owner (“the parties”) identify themselves as the real parties-in-interest in this proceeding. Pet. 4; Paper 3, 1 (“Patent Owner’s Mandatory Notices”).

Petitioner and Patent Owner (“the parties”) indicate that the ’298 patent is part of a family of related patents that share the same priority date. Pet. 1–2; Paper 3, 1–2. These patents include U.S. Patent Nos. 9,196,385 B2, 9,997,240, 10,950,300, 11,830,546, 11,854,612 B1, 11,967,369, 11,967,370, 12,136,455, and 12,119,054. Pet. 1–2; Paper 3, 1–2.

¹ *See Apple, Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (“*Fintiv*”).

Petitioner and Patent Owner (“the parties”) identify the following district court cases as related to this proceeding (Pet. 4; Paper 3, 1): *Vervain, LLC v. Phison Electronics Corp.*, No. 1:24-cv-00259 (W.D. Tex.); and *Vervain, LLC v. Kingston Technology Co., Inc. et al.*, No. 1:24-cv-254 (W.D. Tex.). Pet. 4; Paper 3, 1.

The parties further identify the following current PTAB proceedings as related (Pet. 2–3; Paper 3, 2–3): PGR2024-00047 (U.S. Patent No. 11,830,546); PGR2024-00048 (U.S. Patent No. 11,854,612), IPR2025-00213 (U.S. Patent No. 9,196,385); and IPR2025-00214 (U.S. Patent No. 9,997,240).

The parties identify the following previous PTAB proceedings as related (Paper 3, 3–4): *Vervain, LLC v. Micron Technology, Inc., Micron Semiconductor Products, Inc. and Micron Technology Texas, LLC*, No. 6:21-cv-00487 (U.S. Patent Nos. 8,891,298, 9,196,385, 9,997,240 and 10,950,300); *Vervain, LLC v. Western Digital Corp., Western Digital Technologies, Inc. and HGST*, No. 6:21-cv-00488 (U.S. Patent Nos. 8,891,298, 9,196,385, 9,997,240 and 10,950,300); IPR2021-01547 (U.S. Patent No. 8,891,298); IPR2021-01548 (U.S. Patent No. 9,196,385); IPR2021-01549 (U.S. Patent No. 9,997,240); and IPR2021-01550 (U.S. Patent No. 10,950,300).

B. The '298 Patent (Ex. 1001)

The '298 patent relates to a data storage system that uses a combination of non-volatile single-level cell (SLC) and multi-level cell (MLC) NAND flash memory modules. Ex. 1001, 1:27–31. MLC NAND flash provides greater density and less cost than SLC NAND flash, but has lower access speed and lifetime (endurance). *See id.* at 3:19–21, 4:51–55.

The system's controller manages data storage in the MLC and SLC flash modules to improve overall performance and lifetime. *Id.* at 4:48–63.

Figure 1 of the '298 patent is reproduced below.

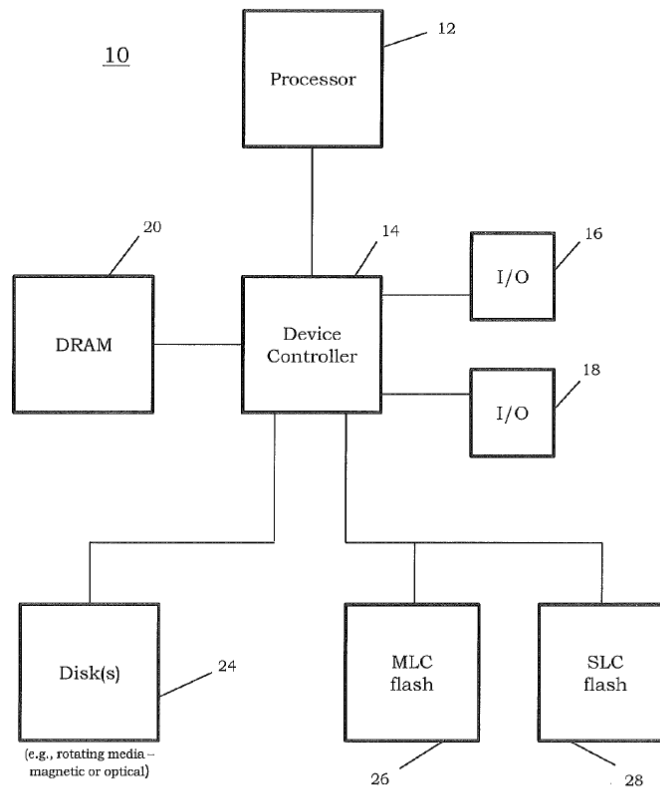
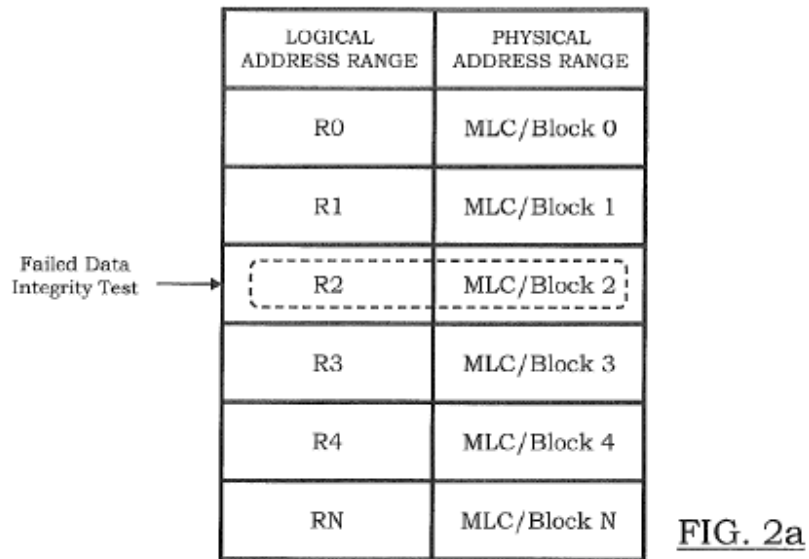


FIG. 1

Figure 1 shows computer system 10 which includes processor 12, device controller 14, DRAM 20, MLC NAND flash memory module 26, and SLC NAND flash memory module 28. *Id.* at 4:64–5:15.

Figure 2a of the '298 patent is reproduced below.



The diagram shows a table with two columns: 'LOGICAL ADDRESS RANGE' and 'PHYSICAL ADDRESS RANGE'. The rows are labeled R0, R1, R2, R3, R4, and RN. The corresponding physical addresses are MLC/Block 0, MLC/Block 1, MLC/Block 2, MLC/Block 3, MLC/Block 4, and MLC/Block N. A dashed box highlights the row for R2 and MLC/Block 2. An arrow points from the text 'Failed Data Integrity Test' to this dashed box.

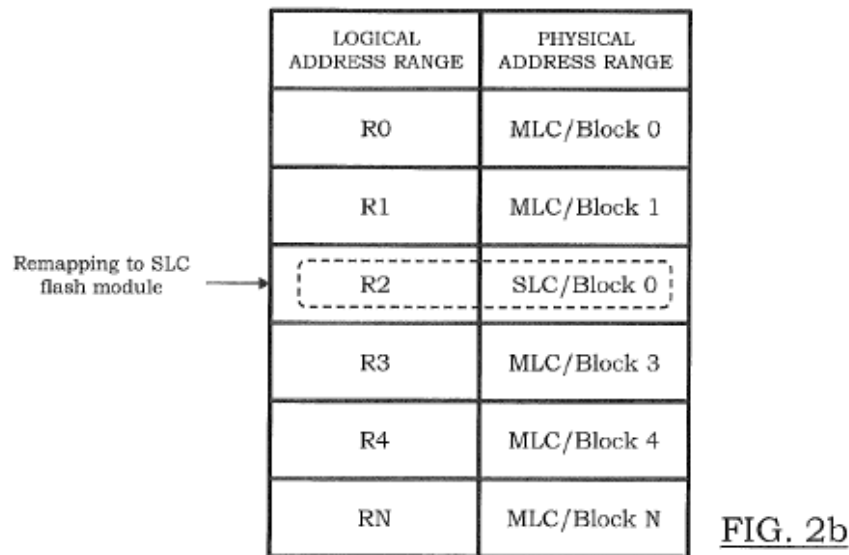
LOGICAL ADDRESS RANGE	PHYSICAL ADDRESS RANGE
R0	MLC/Block 0
R1	MLC/Block 1
R2	MLC/Block 2
R3	MLC/Block 3
R4	MLC/Block 4
RN	MLC/Block N

FIG. 2a

As illustrated in Figure 2a, the system's controller maintains an address map listing logical address ranges accessible by a computer system in correspondence with physical addresses ranges. *Id.* at 5:41–46. These physical ranges are translated to blocks on the MLC NAND flash memory module. *Id.*

The controller receives quanta of data to be written to a logical address range and maintains the quanta in its DRAM. *Id.* at 5:32–34. The controller uses a “read-modify-write” scheme to write the quanta to the corresponding physical address range in the MLC NAND flash memory module. *Id.* Thereafter, the controller performs a data integrity test by reading and comparing the quanta of data with the original data retained in DRAM. *Id.* at 5:34–37. In the example of Figure 2a, the written quanta fail the data integrity test.

Figure 2b of the '298 patent is reproduced below.



In Figure 2b, in response to the failed data integrity test, the controller remaps the logical address range to the next available physical address range in the SLC memory module. *Id.* at 5:50–54.

The controller also determines blocks of the MLC and SLC memory modules that are accessed most frequently, and transfers their contents to blocks in the SLC memory module. *Id.* at 6:24–29.

C. Overview of Challenged Claims

Petitioner challenges claims 1–11 of the '298 patent. Claim 1 is the only independent claim and is reproduced below with Petitioner's identifiers shown in brackets.

1. [1.PRE] A system for storing data comprising:
 - [1a] at least one MLC non-volatile memory module comprising a plurality of individually erasable blocks;
 - [1b] at least one SLC non-volatile memory module comprising a plurality of individually erasable blocks; and

[1c] a controller coupled to the at least one MLC non-volatile memory module and the at least one SLC non-volatile memory module wherein the controller is adapted to:

[1d] a) maintain an address map of at least one of the MLC and SLC non-volatile memory modules, the address map comprising a list of logical address ranges accessible by a computer system, the list of logical address ranges having a minimum quanta of addresses, wherein each entry in the list of logical address ranges maps to a similar range of physical addresses within either the at least one SLC non-volatile memory module or within the at least one MLC non-volatile memory module;

[1e] b) determine if a range of addresses listed by an entry and mapped to a similar range of physical addresses within the at least one MLC non-volatile memory module, fails a data integrity test, and, in the event of such a failure, the controller remaps the entry to the next available equivalent range of physical addresses within the at least one SLC non-volatile memory module;

[1f] c) determine which of the blocks of the plurality of the blocks in the MLC and SLC non-volatile memory modules are accessed most frequently by maintaining a count of the number of times each one of the blocks is accessed; and

[1g] d) allocate those blocks that receive the most frequent writes by transferring the respective contents of those blocks to the at least one SLC non-volatile memory module.

Ex. 1001, 7:8–8:9.

D. Asserted Prior Art

Petitioner relies on the following three references as prior art against claims 1–11 of the '298 patent. Pet. 15–16.

Name	Reference	Exhibit No.
Gavens	US 8,634,240 B2	1045
Moshayedi	US 2009/0327591 A1	1043
Sutardja	US 2008/0140918 A1	1042

Patent Owner does not dispute that these references are prior art against claims 1–11 of the '298 patent. *See generally* Prelim. Resp.

E. Asserted Grounds

Petitioner asserts the following grounds of unpatentability. Pet. 15–16.

Ground	Reference(s)/Basis	35 U.S.C. § ²	Claim(s) Challenged
1	Gavens	103	1–11
2	Moshayedi	103	1–11
3	Sutardja	103	1–11

F. Testimonial Evidence

Petitioner relies on expert witness testimony of Dr. Carl Sechen. Ex. 1002. Patent Owner relies on opposing expert witness testimony of Dr. Sunil Khatri. Ex. 2001.

² Amendments to 35 U.S.C. § 103 enacted by the Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”) took effect on March 16, 2013. The '298 patent was filed as U.S. Application No. 13/455,267, on April 25, 2012. Ex. 1001, codes (21, 22). It claims priority to U.S. Provisional Application No. 61/509,257, filed on July 19, 2011. *Id.* at code (60). Therefore, because the '298 patent's priority date is before March 16, 2013, we apply the pre-AIA version of § 103. The outcome of this Institution Decision, however, would not be different if the AIA version applied.

III. DISCRETIONARY DENIAL UNDER 35 U.S.C. § 314(A)

Patent Owner argues that we should discretionarily deny institution of *inter partes* review under the *Fintiv* factors because issues presented in this case are already being litigated in *Vervain, LLC v. Phison Electronics Corp.*, 1:24-cv-00259 (W.D. Tex.) (the “parallel proceeding”). Prelim. Resp. 10, 30–37. Petitioner contends that the *Fintiv* factors weigh against discretionary denial. Pet. 63–66.

We address Patent Owner’s and Petitioner’s arguments under each of the *Fintiv* factors below and conclude that they weigh for discretionary denial of institution for the reasons that follow.

1. *whether a stay exists or is likely to be granted if a proceeding is instituted*

Petitioner states that it does not know whether the District Court will issue a stay if the Board were to institute *inter partes* review in this case, and asserts that this factor weighs neither for nor against institution. Pet. 65.

Patent Owner asserts that Petitioner has not sought a stay, and with the timing and complexity of the parallel proceeding, “it is improbable that Judge Albright would grant a stay even if this Petition is instituted.” Prelim. Resp. 31–32. Patent Owner argues that discovery will be “practically complete” by the time an institution decision issues, and opening expert reports will be served soon after, including Petitioner’s report challenging validity. *Id.* at 32. Patent Owner argues that the District Court will have expended significant resources and would be unlikely to grant a stay. *Id.*

Patent Owner further states that it asserted eight patents against Petitioner in the parallel proceeding and that Petitioner filed *inter partes* or post grant reviews against each of those patents. *Id.* Patent Owner states

that the Board decided the first of the petitions and is unlikely to decide the others until August 2025 after fact discovery has closed. *Id.* at 32–33. Patent Owner asserts that it is unlikely the Board would issue a final written decision (if any) on the first petition until April 2026, months after the trial date of December 15, 2025. *Id.* at 33. Patent Owner asserts that under these circumstances, the district court would be unlikely to grant a stay. *Id.*

Petitioner and Patent Owner (“the parties”) acknowledge that the District Court has not issued a stay in the parallel proceeding. We decline to speculate on whether the district court would enter a stay if *inter partes* review were granted in this case. Consequently, *Fintiv* factor 1 weighs neither for nor against institution.

2. *proximity of the court’s trial date to the Board’s
projected statutory deadline*

Petitioner indicates that the court has “*tentatively*” set jury selection for December 15, 2025 such that *Fintiv* factor 2 weighs neither for nor against institution. Pet. 65.

Patent Owner asserts that this factor weighs against institution because trial is scheduled to begin more than six months before the projected final written decision (assuming a trial date of December 15, 2025 and a projected date for final written decision of June 26, 2026). Prelim. Resp. 33. Patent Owner argues that Judge Albright has a practice of not moving the trial date except in extreme situations. *Id.*

Because the projected date for a final written decision is approximately six months after the trial date, even if tentative, this factor weighs toward discretionary denial. *Fintiv* at 9.

3. *investment in the parallel proceeding by the court and parties*

Petitioner argues that the parallel proceeding is at an “early stage.” Pet. 64. Specifically, Petitioner indicates that the complaint was filed March 8, 2024, and amended May 13, 2024. *Id.* (citing Ex. 1082). Petitioner states that the District Court has not issued any substantive opinions concerning scope or validity of the challenged claims. *Id.* Furthermore, Petitioner states that its motion to dismiss has not been decided, and that fact discovery has not proceeded beyond automatic disclosure. *Id.* Petitioner states that invalidity and subject-matter eligibility contentions were filed August 16, 2024. Claim construction materials have been exchanged between the parties, and a *Markman* hearing was scheduled for December 5, 2024. *Id.* (citing Ex. 1083). Petitioner further asserts that the parallel proceeding limited *Markman* construction to only twelve terms for eight patents with “verbal variations of the same specification.” *Id.* Accordingly, Petitioner argues “there has not been overriding investment” in the parallel proceeding. *Id.*

Patent Owner argues that this factor weighs against institution because the parties and the District Court “have invested and will continue to invest significant resources” in the parallel proceeding by the time of the institution decision. Prelim. Resp. 34. Patent Owner states that the parties will have completed *Markman* briefing (November 22, 2024), briefed a motion to dismiss (decided December 2, 2024), participated in a *Markman* hearing during which the Court provided its constructions (February 6, 2025), and exchanged final infringement and invalidity contentions (February 28, 2025). *Id.* (citing Ex. 2018; Ex. 2037). Patent Owner further notes that

shortly after the projected institution date, fact discovery will be nearly completed in July 2025 and the parties will exchange opening expert reports. *Id.*

Reviewing the evidence, we find this factor does not weigh for or against institution because while investment has been made by the parties and the District Court, there is no indication in the record before us that final substantive orders have been issued particularly with respect to claim construction or invalidity.³

4. *overlap between issues raised in the petition and in the parallel proceeding*

Petitioner acknowledges that there is overlap between the requested institution and the parallel proceeding. Pet. 64. Petitioner, however, asserts that the requested institution would include more issues because the District Court restricted construction to only twelve claim terms. *Id.*

Patent Owner argues that this factor weighs against institution because of the “significant overlap” between the Petitioner and parallel proceeding. Prelim. Resp. 35. Particularly, Patent Owner argues that both proceedings involve the ’298 patent and the same single-reference obviousness grounds based on Gavens (Ground 1), Moshayed (Ground 2), and Sutardja (Ground 3). *Id.* (citing Ex. 1082). Patent Owner contends that Petitioner included these same grounds in its invalidity contentions. *Id.* (citing Exs. 2034–2036). Patent Owner states that it asserted claim 1, the only independent claim challenged in the Petition, in the parallel proceeding

³ However, the transcript (Ex. 2032) for the *Markman* hearing indicates that Judge Albright maintained preliminary constructions for various claim terms.

along with other dependent claims. *Id.* at 36 (citing Ex. 2034). Patent Owner further argues that Petitioner has not filed a *Sotera*⁴ stipulation or any other stipulation to mitigate concerns of duplicative efforts between the District Court and Board, as well as the potential for conflicting decisions. *Id.* Patent Owner asserts that “this factor weighs heavily against institution.” *Id.*

Given that both proceedings involve claim 1 of the ’298 patent and the same invalidity challenges, in addition to the lack of any stipulation to avoid duplicative efforts and conflicting decisions, we determine that this factor weighs in favor of discretionary denial.

5. *whether the petitioner and the defendant in the parallel proceeding are the same party*

Petitioner acknowledges that it is the same party as the defendant in the parallel proceeding. Pet. 64. Patent Owner argues that this factor weighs in favor of discretionary denial. Prelim. Resp. 36–37. We agree that *Fintiv* factor 5 weighs toward discretionary denial in this case.

6. *other circumstances that impact the Board’s exercise of discretion, including the merits*

Petitioner asserts the merits strongly weigh for instituting trial because of the strength of the grounds. Pet. 65. Petitioner argues that institution is warranted because the related litigation would be more complex, involving multiple suits, patents, third parties, divided or indirect infringement,

⁴ *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 19 (PTAB Dec. 1, 2020).

questions of who bears liability, confidentiality, and venue issues. *Id.* (citing Ex. 1081).

Petitioner contends that the public interest “in cleaning away verbal variants of questionable innovation” in the asserted eight patents would be best served by instituting review. *Id.* at 65. Petitioner asserts that the Board may “take notice” that this litigation, if it reaches trial, will have been reduced in claims and theories asserted. *Id.* at 65–66. Petitioner argues that institution would allow focus on resolving all challenged claims in a single patent, and may simplify the parallel proceeding without extensive discovery. *Id.* at 65–66. In addition, Petitioner asserts that the merits are compelling. *Id.* at 66.

Patent Owner asserts that the merits are weak. Prelim. Resp. 37. In addition, Patent Owner states that Petitioner filed eight separate petitions challenging the eight patents asserted in the parallel proceeding, but one has been denied and the remaining seven would not allay concerns about inefficiency and duplication of efforts. *Id.* Patent Owner argues these petitions would address only some of the issues covered in the single, mature parallel proceeding, and this would be “inefficient and a considerable waste of resources.” *Id.* (citing *Fintiv* at 6).

We determine that this factor weighs neither toward nor against discretionary denial. We do not find the merits to rise to the level of compelling, and the remaining considerations for this factor, to the extent relevant, balance out against one another.

7. *Weighing the Fintiv Factors*

We take “a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review” when evaluating the *Fintiv* factors. *Fintiv* at 6.

The trial date (December 2025) for the parallel proceeding is considerably earlier than the projected statutory deadline (June 2026) for issuing a final written decision in this proceeding. Accordingly, *Fintiv* factor 2 weighs for discretionary denial.

Under *Fintiv* factor 4, there is significant overlap between the invalidity challenges asserted in the two proceedings. Petitioner has proffered no stipulation to ameliorate concerns of duplicative efforts and conflicting decisions. Accordingly, this factor weighs for discretionary denial.

Petitioner and the defendant in the parallel proceeding are the same, so *Fintiv* factor 5 weighs for discretionary denial.

Fintiv factors 1, 3, and 6 are neutral.

Weighing the factors together, we determine that discretionary denial is warranted.

IV. CONCLUSION

For the above reasons, we exercise our discretion to deny institution under 35 U.S.C. § 314(a).

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), the petitioned institution of *inter partes* review of claims 1–11 of the ’298 patent is *denied*.

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