

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTEL CORPORATION,
Petitioner,

v.

ADVANCED CLUSTER SYSTEMS, INC.,
Patent Owner.

IPR2025-00795
U.S. Patent No. 10,333,768

**PETITIONER'S OPPOSITION TO PATENT OWNER'S
REQUEST FOR DISCRETIONARY DENIAL**

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I. Introduction

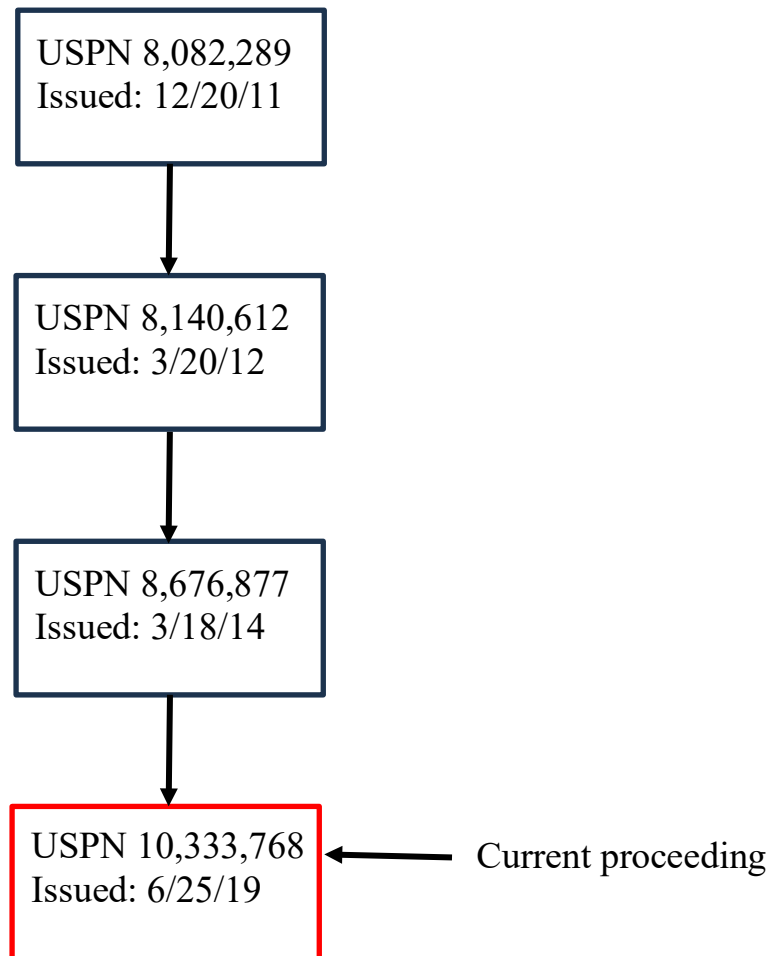
The United States has a compelling economic and national security interest in ensuring Petitioner Intel Corporation (“Petitioner”), a leading domestic manufacturer and innovator, has access to IPR review when faced with a potential injunction that implicates significant economic and national security interests. In this instance, Petitioner has filed an IPR against U.S. Patent No. 10,333,768 (the ’768 patent) because Patent Owner is using the ’768 patent, which comes from a family of patents **already determined to be likely unpatentable**, to seek an injunction against microprocessors that (i) would significantly cripple the data server market in the United States and (ii) are deemed “essential to the nation” by the Department of Defense. Accordingly, Petitioner submits that an IPR of the ’768 patent would be an appropriate use of Patent Office resources and opposes Patent Owner’s Request for Discretionary Denial (Paper 8, “PO Brief”).

Petitioner respectfully requests that the Director decline to exercise her discretion to deny and advance the instant petition (“Petition”) to a merits panel for consideration.

II. The ’768 patent comes from a patent family already determined to be likely unpatentable.

The ’768 patent has three parent patents, US 8,082,289 (“’289 patent”), US 8,140,612 (“’612 patent”), and US 8,676,877 (“’877 patent”), as shown in the

figure below. Ex.1001, 1-2 (field (63)).

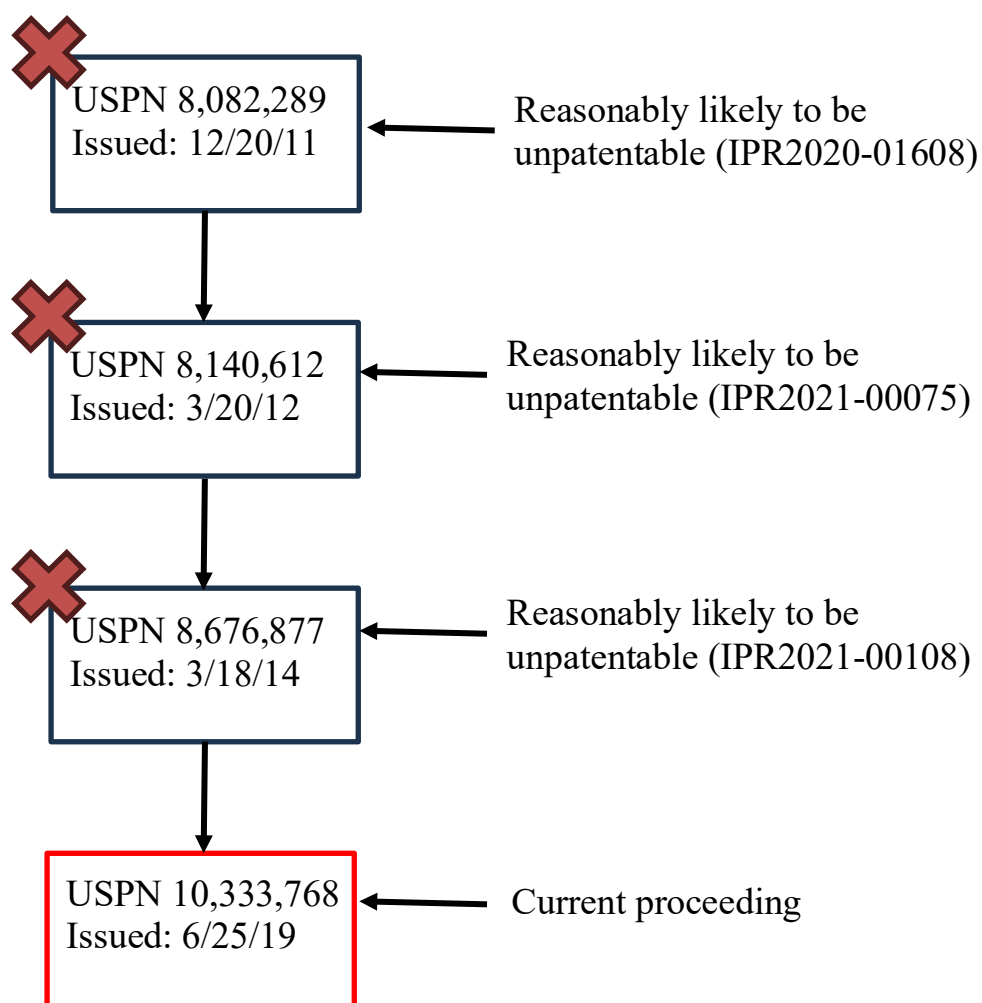


Each of these parent patents claim subject matter similar to the claims of the '768 patent. For example, the '289 patent claims a computer cluster having multiple processors, kernels, and cluster node modules that communicate with each other, similar to the claims of the '768 patent. Ex.1043 (*see, e.g.*, claim 1); Ex.1001 (*see, e.g.*, independent claims 1, 26, and 29). The '612 patent also claims a computer cluster, having multiple nodes, kernels, and cluster node modules, that accepts instructions from a user interface to interpret it, similar to the claims of the

'768 patent. Ex.1044 (*see, e.g.*, claim 1); Ex.1001 (*see, e.g.*, independent claims 1, 26, and 29). The '877 patent claims a system that “perform[s] an instruction received from a front end by executing commands,” where the system comprises multiple cluster node modules and nodes having access to kernels, similar to the computer clusters and computer cluster node (and functionalities thereof) claimed in the independent claims of the '768 patent. Ex.1045 (*see, e.g.*, claim 1); Ex.1001 (*see, e.g.*, claims 1, 26, 29, and 35).

Each of these parent patents of the '768 patent have already been found reasonably likely to be unpatentable. *See NVIDIA Corp. v. Advanced Cluster Systems, Inc.*, IPR2020-01608 (“Nvidia I”), Paper 11 (May 13, 2021) (instituted) (Ex.1067); *NVIDIA Corp. v. Advanced Cluster Systems, Inc.*, IPR2021-00075 (“Nvidia II”), Paper 9 (May 5, 2021) (instituted) (Ex.1068); and *NVIDIA Corp. v. Advanced Cluster Systems, Inc.*, IPR2021-00108, Paper 9 (May 13, 2021) (“Nvidia III”) (instituted) (Ex.1069).

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In a patent family where each parent patent was found reasonably likely to be unpatentable, an IPR of the child patent to determine its patentability would be an appropriate use of Patent Office resources.

III. The claim limitations determined to be missing from the earlier filed IPRs are specifically taught by the prior art in this Petition.

As noted above, each of the parent patents of the '768 patent was found

likely to be unpatentable. Then, in IPRs¹ filed against the '768 patent, Patent Owner argued that the '768 patent is patentable because it includes limitations directed to a precise order of operation: (1) the third node receives, from the second node, a result of a calculation that was performed by the second node; (2) the third node performs a different calculation based on the received result; and (3) the third node sends the new result to the first node. Ex.1040, 26-29; Ex.1084, 1-5, 18-21. The Board found that the prior art cited in the previous IPRs did not teach the precise order of operation. Ex.1041, 2, 24-30; Ex.1085, 25-31.

The Board in the previous IPRs, however, did not have the advantage of the best prior art. Specifically, Vijay Menon and Anne Trefethen, a research team at Cornell University, published papers that teach a parallel computing system that performs the precise order of operations recited in the claims of the '768 patent:

¹ Just as in the present case, the length of the '768 patent's claims necessitated separating the petition into two proceedings: IPR2021-00019 and IPR2021-00020.

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```
if ID==0                % first process: send
    a = 1
    Send(ID+1,a)
elseif ID == Nproc-1    % last process: receive and double
    a = 2*Recv
else                    % middle processes: receive, double, and send
    a = 2*Recv
    Send(ID+1,a)
end;
```

Process 0 creates the variable a with value 1 and sends it to process 1. Process 1 receives the message, doubles the value of a, and sends it along to process 2; and so on. If there are six processors the command Eval('cycle') produces the output

```
a = 1
a = 2
a = 4 ← Output of third node (a=4)
a = 8
a = 16
a = 32
```

Ex.1006, 6; Ex.1003, ¶88, ¶190; *see also* Paper 3 at 23, 50.

Accordingly, the Cornell team's papers describe a system where:

- node 0 (*first node*) sends data (a=1) to node 1 (*second node*),
- node 1 (*second node*) performs a mathematical calculation (multiplies by 2) and then sends that result (a=2) to node 2 (*third node*),
- node 2 (*third node*) performs a mathematical calculation (multiplies by 2), and
- the result (a=4) is output to the user (at the *first node*). Ex.1006, 6; Ex.1003, ¶88; *see also* Paper 3 at 23, 50.

The Cornell team also describes a system implemented with three nodes:

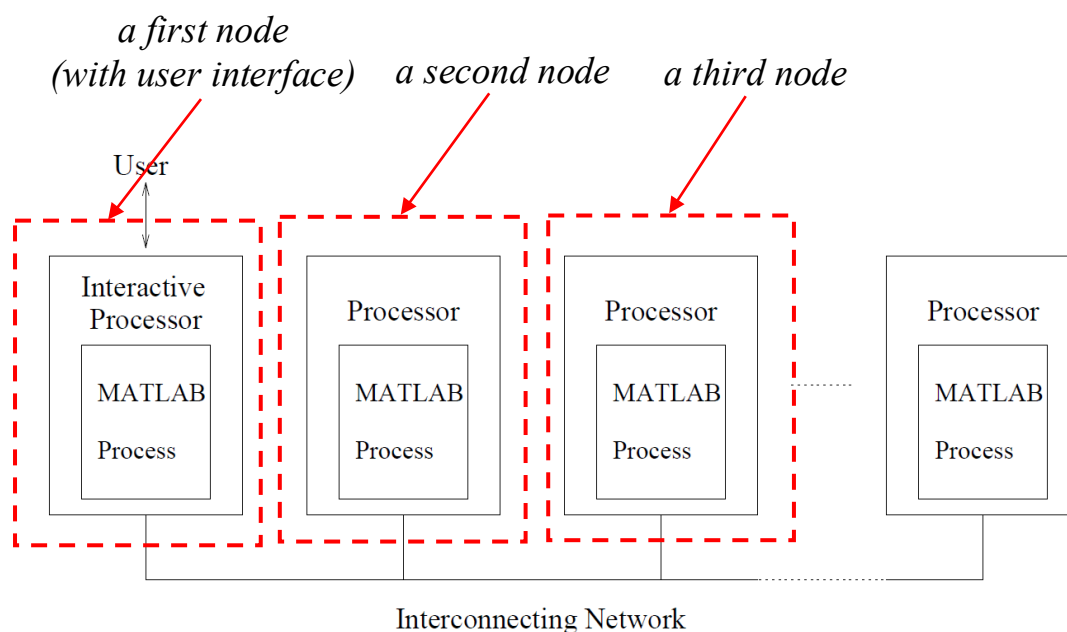


Figure 1: MultiMATLAB Architecture

Ex.1005, FIG. 1 (annotated); Ex.1003, ¶193.

Accordingly, the Cornell team's papers directly teach the claim limitations determined to be missing from the IPRs filed by a different petitioner. The existence of prior IPRs that did not proffer the best art to the Board does not mean that the '768 patent is valid. Instead, the direct teachings of the papers published by the Cornell team warrant consideration by a merits panel, particularly since the '768 patent issued only six years ago.

IV. Compelling economic and national security interests weigh against denial.

The United States has compelling economic and national security interests in affording Petitioner Intel the opportunity to challenge the '768 patent. Ex.1077. Here, Patent Owner alleged infringement of the '768 patent by filing a first

complaint against Petitioner Intel and a second complaint against Advanced Micro Devices (“AMD”) in the same court on the same day. Ex.1019; Ex.1071.

According to those complaints, Patent Owner is seeking royalty payments **and an injunction** against Intel’s “Xeon Scalable Processors” and “Habana AI accelerator architectures” and AMD’s “Instinct MI300X Platform” and MI200/MI300 accelerator products. Ex.1019, 15-18, 28; Ex.1071, 15-16, 29.

Patent Owner using the '768 patent to increase the costs of, and obtain an injunction against, Intel’s “Xeon Scalable Processors” and “Habana AI accelerator architectures” as well as AMD’s “Instinct” processors would have a direct impact on the United States’s economic and national security interests because these accused products are at the heart of data centers, military applications and artificial intelligence – all technologies recognized by the U.S. Government as vital to the country:

- President Trump’s executive order recognizes that “[a] nation’s ability to produce domestically is the bedrock of its *national and economic security*” particularly in “*certain advanced industrial sectors like ... technology products.*” Exec. Order No. 14257, 90 Fed. Reg. 15041, 15043 (April 2, 2025).
- President Trump’s administration recognizes that “[a]rtificial intelligence (AI) is rapidly transforming the modern world.” Exec.

Order No. 14277, 90 Fed. Reg. 17519, 17519 (April 28, 2025). “With the right Government policies, we can solidify our position as the global leader in AI and secure a brighter future for all Americans.”

Exec. Order No. 14179, 90 Fed. Reg. 8741, 8741 (January 31, 2025).

- Senate Commerce Committee Chairman Senator Ted Cruz stated at a May 8, 2025 hearing—which invited key leaders on AI, including AMD CEO Lisa Su—that “[g]rowth and development of new AI technologies will bolster our national security, create new jobs, and stimulate economic growth.” Ex.1080, 1.
- Advanced domestic engineering and manufacturing capacity “is critical to U.S. national security.” Exec. Order No. 14257, 90 Fed. Reg. 15041, 15043 (April 2, 2025).

As discussed in detail below, the economic and national security interests are compelling and weigh heavily in favor of Intel having the opportunity to have the merits of the prior art be analyzed in an IPR, particularly given the questionable validity of the '768 patent's family.

A. Economic interests weigh against denial.

Patent Owner's broad effort to assert the '768 patent risks increasing the costs of semiconductors through additional royalty payments and risks an injunction removing Intel and AMD processors from the market. These increased

costs and potential injunction would have a significant impact on the United States economy.

For example, servers using processors with x86 architecture (which are the processors alleged to infringe by Patent Owner) represent nearly 88% of the data center market. Ex.1046, 2. Intel's Xeon processors alone represent over 76% of the x86 server processors used in data center servers. Ex.1047, 1. Thus, according to Patent Owner's infringement allegations, the '768 patent implicates a significant majority of the x86 market for data center servers, which accounts for nearly 88% of the overall data center server market in the United States.

The impact to the United States economy of data centers and the processors that power those data centers "is widespread with significant contributions to employment, labor income, and value added across all states." Ex.1048, 28. Specifically, "California, Texas, Florida, New York, Georgia, Illinois, Washington, Pennsylvania, Virginia and New Jersey have emerged as leading beneficiaries." *Id.*, 28.

Further, the data center industry:

- contributed \$404 billion to the U.S. economy in 2023,
- contributed \$727 billion overall to the GDP in 2023,
- supports 4.7 million total jobs,

- supports higher earning jobs at the national level, and
- provides “public services and infrastructure.”

Id., 5, 28.

These numbers demonstrate that the data center industry is a growth engine for the United States economy and Intel's Xeon processors are a key cog of that industry. Patent Owner's infringement allegations using the overly-broad claims of the '768 patent threaten this engine with unexpected, additional costs and potential shutdown via an injunction.

AMD's accused products power some of the most advanced computing infrastructure in the United States government. For example, “[t]he El Capitan supercomputer at [the Department of Energy's] Lawrence Livermore National Laboratory [is] powered by AMD Instinct MI300A.” Ex.1081, 5. The “GPUs that power Frontier,” the “supercomputer at the Department of Energy's Oak Ridge National Laboratory,” are “AMD Instinct™ MI250X GPUs.” Ex.1082, 1, 3. Frontier's project director has noted that Frontier is used to solve “the biggest science problems on the planet,” such as modelling “cancer cells, supernovas, [and] the coronavirus.” Ex.1082, 2-3.

Accordingly, it is important to the economic interests of the United States that Intel has the opportunity to have the merits of the prior art be analyzed in an IPR, particularly given the questionable validity of the '768 patent's family.

B. National security interests weigh against denial.

Additionally, an injunction against Intel's Xeon processors would have wide-ranging impact on national security. As one commentator noted: "Policymakers must recognize Intel's national security importance within this decade's dramatically changed geopolitical environment. No other large chip manufacturer is investing anywhere close to the scale of Intel's projects in the United States." Ex.1049, 4. As a few examples, Intel's Xeon processors are used by (i) Naval Air Stations for secure wireless communications to support the National Security Agency, Ex.1050, (ii) the Air Force Research Laboratory for modeling advanced air, naval and ground weapons systems, Ex.1051, 2, (iii) US Special Operations Command, Ex.1052, 2, and (iv) the Department of Energy's Argonne National Laboratory conducting cutting-edge research into fusion reactors, advanced physics, and aerospace engineering, Ex.1053.

The CTO for the Department of Defense noted that Intel's microelectronics are "essential to the nation" and "enable our troops with an advantage by making possible adaptive secure communications, electronic warfare, and long range weapon systems." Ex.1054, 2. "To stay ahead, we need reliable access to secure microelectronics." *Id.*

Further underscoring national security implications, the U.S. Commerce Department imposed licensing requirements on exports of AMD's Instinct MI

chips, citing their strategic sensitivity. Ex.1083.

Accordingly, it is important to the national security of the United States that Intel has the opportunity to have the merits of the prior art be analyzed with respect to the overly-broad claims of the '768 patent.

V. There are no settled expectations.

First, as discussed in Section I, each of the parent patents in the family of the '768 patent was found reasonably likely to be unpatentable. *See* Ex.1067 (IPR instituted); Ex.1068 (IPR instituted); Ex.1069 (IPR instituted). The proceedings were then terminated due to settlement after institution. *Nvidia I*, Paper 17 (June 22, 2021) (Ex.1072); *Nvidia II*, Paper 15 (June 30, 2021) (Ex.1073); *Nvidia III*, Paper 15 (June 30, 2021) (Ex.1074). In a patent family where each parent patent was found reasonably likely to be unpatentable, there should be no settled expectations that the child '768 patent is patentable.

Second, the '768 patent was issued on June 25, 2019, and accordingly, the patent has not been in force long enough to create settled expectations as to its validity. *Cambridge Industries USA, Inc., v. Applied Optoelectronics, Inc.*, IPR2025-00433, Paper 12 at 2 (June 27, 2025) (finding that patents issued in 2019 “have not been in force for a significant period of time ... and, accordingly, Patent Owner has not developed strong settled expectations.”). Further, Petitioner would not have considered filing an IPR earlier because, absent the complaint filed by

Patent Owner, nothing would have caused Petitioner to consider the '768 patent's purported invention of "parallelization for an application program" such as "Mathematica" to apply to "Xeon Scalable Processors" and "Habana AI accelerator architectures." Ex.1001, 2:18-23.

Accordingly, the lack of settled expectations in view of the questionable validity of the '768 patent's family, combined with the strength of the prior art favors consideration of the Petition by a merits panel.

VI. Discretionary denial under *Fintiv* is not warranted.

The *Fintiv* factors, considered as a whole, do not warrant denial. *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (Mar. 20, 2020) (precedential) (*Fintiv*). Every factor either weighs against denial or is neutral.

A. Factor 1 is neutral: No evidence regarding a stay.

No motion to stay has been filed, so the Board should not infer the outcome of such a motion. *Sand Revolution II, LLC v. Continental Intermodal Group – Trucking LLC*, IPR2019-01393, Paper 24 at 7 (June 16, 2020) (informative). This factor is thus neutral.

Patent Owner asserts this factor weighs against institution, speculating that the district court judge is unlikely to grant a stay in view of that judge's historical record of denying opposed motions to stay pending IPR. PO Brief, 5. The Board, though, has made clear that it "decline[s] to infer, based on actions taken in

different cases with different facts, how the District Court would rule should a stay be requested by the parties.” *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 12 (May 13, 2020) (informative). Patent Owner also asserts that a stay is unlikely because Petitioner’s alleged intention to litigate the same prior art in the parallel litigation means IPR institution will not result in issue simplification in the parallel litigation. PO Brief, 5. This speculative argument also holds no weight, as the Board has emphasized that “[i]n the absence of specific evidence, we will not attempt to predict how the district court ... will proceed because the court may determine whether or not to stay any individual case ... based on a variety of circumstances and facts beyond our control and to which the Board is not privy.” *Sand Revolution* at 7. Accordingly, Patent Owner’s arguments contravene Board precedence, and factor 1 is neutral as discussed above.

B. Factor 2 weighs against denial: The Final Written Decision would issue before the parallel proceeding’s trial date.

Factor 2 weighs against denial. Trial is currently set for November 16, 2026 (Ex.1020, 6), which would occur after the issuance of a Final Written Decision (approximately, October 2026). Under *Fintiv*, “[i]f the court’s trial date is at or around the same time as the projected statutory deadline..., the decision whether to institute will likely implicate other factors.” *Fintiv* at 9. Here, because the Final Written Decision would issue before the start of trial, in combination with

Petitioner's *Sotera* stipulation, factor 2 weighs against denial.

Moreover, the gap between the Final Written Decision and eventual trial date will likely widen.

First, the scheduled trial date of November 16, 2026, is inconsistent with the median time-to-trial in WDTX of 33.9 months (which puts trial in July of 2027). *See* Ex.1021, 37; *see also* USPTO Guidance of March 24, 2025 ("Boalick Memo," Ex.1078), 3 ("the Board may consider...median time-to-trial statistics"). And, while Patent Owner argues that the historical median time to trial for Judge Albright is 24.9 months, Patent Owner ignores the impact of Chief Judge Moses' order that, going forward, Judge Albright is taking on **40%** of the docket in the Austin division:

Item VIII

U.S. District Judge Alan D. Albright:

- (a) Forty percent (40%) of the civil docket in the Austin Division;
- (b) Forty percent (40%) of the criminal docket in the Austin Division;
- (c) One hundred percent (100%) of the civil docket in the Waco Division, with the exception of patent cases;
- (d) One hundred percent (100%) of the criminal docket in the Waco Division;
- (e) Patent cases will be assigned as ordered on May 30, 2024, in the Court's Order Assigning the Business of the Court as it Relates to Patent Cases; and
- (f) All other proceedings in the Waco Division.

Ex.1055, 3. Further, in the little more than five months since Chief Judge Moses's

order, the Austin division has transferred at least 395 cases to the judge overseeing the parallel proceeding, including 69 patent cases. *See* Ex.1056 (LexMachina report); Ex.1057 (LexMachina report). The volume and timing of the new cases assigned to the judge overseeing the parallel proceeding strongly indicates that the scheduled trial date will move more in line with the median time-to-trial statistics, pushing the trial date for the parallel litigation far beyond the Final Written Decision in this IPR.

Accordingly, Petitioner's early filing date resulting in the Final Written Decision issuing before the parallel proceeding's trial date weighs against denial.

Patent Owner makes two arguments alleging that this factor weighs against institution. PO Brief, 6-9. The first argument is premised on the existence of four IPR petitions filed against different patents asserted in the parallel litigation. *Id.*, 6-7. Patent Owner speculates the District Court might conduct a "trial on the four other patents," and then argues somehow that means *this* proceeding should not proceed to a merits panel. *Id.*

Patent Owner's arguments rely on its belief that the district court "hold[s] true to trial dates," which is misplaced, as the original trial date has already been moved by a month. PO Brief, 6; Ex.1020, 6. The trial date likely will be moved again, far beyond the Final Written Decision in the IPRs filed against the four other patents, because of the at least 395 new cases added to the judge's docket, as

discussed above (the district court's statement regarding its general unwillingness to move trial dates was made in a standing order from January 2024 (*see* Ex.2002, 12), before Chief Judge Moses's January 2025 order that transferred the at least 395 new cases to the judge's docket). As such, Patent Owner's first argument fails to establish that factor 2 weighs against institution.

Patent Owner's argument regarding Petitioner "electing to delay" the filing of the above-mentioned four IPR petitions is inaccurate. Petitioner prepared and filed IPRs against the 5 patents asserted by Patent Owner less than 4 months after receiving Patent Owner's Preliminary Infringement Contentions, and more than 5 months prior to the statutory deadline of September 26, 2025. *Fintiv* at 11 (Petitioner is diligent if "petitioner filed the petition expeditiously, such as promptly after becoming aware of the claims being asserted"); Paper 4 at 1 (Notice of Filing Date Accorded to the Petition indicating filing date of March 28, 2025); Ex.1059, 1, Ex.1060, 1, Ex.1061, 1, and Ex.1062, 1 (Notices of Filing Date Accorded to petitions in the four other IPRs, indicating same filing date of April 29, 2025); Ex.1022 (Patent Owner Preliminary Infringement Contentions dated Jan. 22, 2025).

Patent Owner's second argument alleging that factor 2 weighs against institution is based on the supposed "proximity of the trial date and projected final written decision date" of October 2026, and consideration of factors 3 and 4 in

view of said “proximity.” PO Brief, 8. As discussed above, it is likely the scheduled trial date will be pushed in line with the median time-to-trial statistics (to July 2027), far beyond Oct. 2026, and as a result, factor 2 would weigh against denial. Assuming, solely for arguments sake, that the ultimate trial date would be proximate to the Final Written Decision date (which it would not), consideration of factors 3 and 4 demonstrate that factor 2 weighs against denial.

C. Factor 3 weighs against denial: Minimal relevant investment and expeditious filing.

Factor 3 weighs against denial because, at institution, investment by the court and parties will have been minimal as to the activities pertinent to *Fintiv*. Patent Owner's Request for Discretionary Denial includes a laundry list of activities allegedly showing substantial investment, but very few relate to invalidity of the '768 patent. *See* PO Brief, 10-11. Under *Fintiv*, “[i]f, at the time of the institution decision, the district court has not issued orders ***related to the patent at issue in the petition***, this fact weighs against exercising discretion to deny institution.” *Fintiv* at 10. The only one of the multiple activities listed by Patent Owner that relates to an order regarding the '768 patent is the claim construction order. Patent Owner speculates, based on a few cherry-picked example cases, that the District Court judge will issue the claim construction order before the institution decision, which is due on October 17, 2025. PO Brief, 11-12; Paper 4

(Notice of Filing Date Accorded mailed on April 17, 2025); 35 U.S.C. § 316(a)(11).

First, *Sotera* explains that, even after *Markman* is complete, “much other work remains in the parallel proceeding as it relates to invalidity,” including “fact discovery,” “expert reports,” and “substantive motion practice.” *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 16 (Dec. 1, 2020) (precedential as to § II.A). The informative *Fintiv* and *Sand* decisions similarly observe that even after *Markman*, much work remains. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 13-14 (May 13, 2020) (informative) (“We recognize that much work remains in this case as it relates to invalidity: fact discovery is in its early stages, with document production ongoing and depositions just getting underway, expert reports are not yet due, and substantive motion practice is yet to come.”); *Sand Revolution*, 10 (“But aside from the district court’s *Markman* Order, much of the district court’s investment relates to ancillary matters untethered to the validity issue itself.”).

Here, although the *Markman* hearing is scheduled to occur prior to institution, much work will occur well after the institution decision on October 17, 2025. Fact discovery will be in its initial stages and will not close for *six months* after the institution decision—in April 2026. Ex.1020, 4. Opening expert reports are not due for *seven months* after the institution decision (May 2026), and expert

discovery will not close for another month after that (June 2026). *Id.* Substantive motion practice will be similarly yet to come. *Id.*, 3-4. Accordingly, because much of the investment relevant to issues of invalidity will occur after institution, this factor weighs against denial. Notably, a recent PTAB panel analyzing *Fintiv* under the Boalick Memo came to the same conclusion with similar facts. *See Bio-Rad Labs., Inc. v. California Inst. of Tech.*, IPR2024-01451, Paper 11 at 10 (Mar. 27, 2025)(finding that Factor 3 “weighs against exercising our discretion to deny institution” where the *Markman* hearing has been held but “much more work remains, including, expert reports, expert discovery, expert depositions, and pretrial motions and disclosures”).

Second, Patent Owner's speculation about the District Court judge issuing the claim construction order before the institution decision is unfounded as, by Patent Owner's own admission, the District Court judge “typically issues ... a written [claim construction] order within a few weeks” of the *Markman* hearing, scheduled for Aug. 12, 2025, i.e., possibly after the institution decision due on October 17, 2025. PO Brief, 11. Patent Owner provides three cherry-picked example cases from the district court as evidence that the district court judge issues claim construction orders at most a few days after *Markman* hearings. *Id.*, 11-12. Patent Owner does not provide any evidence these are typical wait periods between *Markman* hearings and issuance of claim construction orders. To the contrary,

there are several instances where the judge's written claim construction order came months after a *Markman* hearing (long enough for the institution decision in the instant IPR to issue before any claim construction order). *See, e.g., ParkerVision, Inc. v. MediaTek Inc. et al.*, No. 6:22-cv-01163-ADA, 1, 48 (W.D.Tex. April 29, 2024) (Ex.1063)(claim construction order issued after more than three months); *TOT Power Control, S.L. v. AT&T, Inc. et al.*, No. 6:21-cv-00107-ADA, 1-2 (W.D.Tex. June 6, 2025) (Ex.1064)(claim construction order issued after more than three months and one week); *AlmondNet, Inc. v. Amazon.com, Inc., et al.*, No. 6:21-cv-00898-ADA, 1, 53 (Ex.1065)("claim construction order issued after six and half months"). Thus, Patent Owner's argument for factor 3 favoring denial of institution is deficient.

Third, this factor weighs against denial because "the petitioner filed the petition expeditiously." *Fintiv* at 11. Here, Petitioner has worked diligently to file the instant Petition less than 4 months after receiving Patent Owner's Preliminary Infringement Contentions and more than 5 months prior to the statutory deadline of September 26, 2025. At the time of the Petition's filing, the parallel litigation was in its initial stages and claim construction briefing had yet to begin. Several post-Boalick Memo panels have agreed that similar diligence is reasonable and weighs against denial. *See Samsung Elecs. Co., Ltd. v. Mullen Industries LLC*, IPR2024-01472, Paper 9 at 10 (Mar. 31, 2025) ("Petitioner's diligence in filing its Petition

(a) less than five months after receiving Patent Owner's infringement contentions and (b) prior to the parties briefing claim construction issues weighs against exercising discretionary denial."); *Samsung Elecs. Co., Ltd. v. Headwater Research LLC*, IPR2024-01396, Paper 13 at 7 (Apr. 1, 2025) ("[W]e find Petitioner's diligence in filing its Petition approximately 4 months before it was statutorily required to do so, and while litigation is in its early stages, weighs against denial, not for it.").

Accordingly, factor 3 weighs against denial.

D. Factor 4 weighs against denial: Petitioner's "Sotera" stipulation.

Factor 4 weighs against denial because Petitioner has filed a *Sotera* stipulation in district court prior to filing the IPR. *See* Ex.1042 (stipulation filed in parallel district court proceeding). Specifically, Petitioner stipulated that:

1. Intel hereby stipulates that, if the PTAB institutes an IPR proceeding on the grounds presented for claims 1–25 and 30–34 of the '768 patent in Intel's Petition in IPR2025-00794, Intel will not pursue an invalidity defense in the above-captioned district court litigation that the patent claims subject to the instituted IPR are invalid based on grounds that were raised or reasonably could have been raised during the IPR (i.e., any ground that could have been raised under 35 U.S.C. §§ 102 or 103 on the basis of prior art patents or printed publications).

2. Intel further stipulates that, if the PTAB institutes an IPR proceeding on the grounds presented for claims 26–29 and 35–39 of the '768 patent in Intel's Petition in IPR2025-00795, Intel will not pursue an invalidity defense in the above-captioned district court litigation that the patent claims subject to the instituted IPR are invalid based on grounds that were raised or reasonably could have been raised during the IPR (i.e., any ground that could have been raised under 35 U.S.C. §§ 102 or 103 on the basis of prior art patents or printed publications).

Also weighing against denial under factor 4 is that the Petition challenges claims that are not asserted in the parallel proceeding, including claims in an unasserted claim set. The Petition challenges claims 26-29 and 35-39 of the '768 patent,² but only claims 1, 4, 20, 21, 26, 27, 29, 30, 31, 33, 34, 35, 36, 37, and 39 are currently asserted against Petitioner. Paper 3 at 16 (instant Petition listing

² Between IPR2025-00794 and IPR2025-00795, Petitioner has challenged *all* claims of the '768 patent. However, the length and volume of the claims of the '768 patent necessitated filing two contemporaneous petitions to fit within the regulatory word count limits. IPR2025-00794 challenges claims 1-25 and 31-34, while IPR2025-00795 challenges claims 26-29 and 35-39. IPR2025-00794, Paper 3 at 16 (petition listing challenged claims) (Ex.1079).

challenged claims); Ex.1022, 2 (Patent Owner's Preliminary Infringement Contentions listing asserted claims). Petitioner's invalidity contentions in the parallel proceeding are limited to only the asserted claims. *See* Ex.2008, 4. Petitioner elected to challenge additional, unasserted claims for efficiency reasons—in the event Patent Owner asserts additional claims in the parallel litigation, Petitioner need not file another IPR proceeding for any newly asserted claims.

These challenged (but unasserted) claims mean that issues in the IPR Petition will not be resolved by the district court, further reducing the degree of overlap under Factor 4. *See Fintiv* at 13 (examining whether the district court will “resolve key issues in the petition”). Therefore, the issues in this IPR will not be resolved by the district court.

Accordingly, factor 4 weighs heavily against denial because (i) Petitioner filed a broad *Sotera* stipulation and (ii) the district court will not resolve issues raised in the Petition.

Patent Owner advances primarily three reasons to allege that factor 4 weighs strongly against institution. **First**, while acknowledging that only “15 of the 39 claims asserted in the two IPRs are challenged in the Parallel Litigation,” Patent Owner proceeds to argue that “the District Court is better suited to address all of the invalidity issues.” PO Brief, 14. This is not true, as the district court would only

address the validity of 15 of the 39 claims, while the Board will be addressing the validity of all 39 claims if the instant IPR (9 of the 39 claims) and the related IPR2025-00794 (the remaining 30) are instituted. *See* footnote 1. Patent Owner cites to a Board decision that found “15 additional claims,” challenged in an IPR but not asserted in litigation, weighed in favor of institution, however “very slightly,” even though those claims “depend[ed] directly or indirectly from the 5 claims asserted in Parallel Litigation.” *Id.* (citing *TCL Elec. Holdings LTD v. Maxell, LTD*, IPR2025-00135, Paper 9 at 19 (PTAB May 20, 2025)). Of the 39 claims challenged in the instant and the related IPR, 24 are additional claims that are not asserted in the parallel litigation. Paper 3 at 16; Ex.1022, 2. If 15 additional claims weighed in favor of institution in *TCL Elec. Holdings LTD*, then logic would dictate that 24 additional claims in the instant and related IPRs also would.

Second, Patent Owner alleges that Petitioner's *Sotera* stipulation would not “prevent the Petitioner from presenting duplicative arguments that the MultiMATLAB system alone or in combination with the same references presented in this Petition render any of the challenged claims invalid.” PO Brief, 15. According to Patent Owner, this is because Petitioner has reserved the right to assert invalidity in the parallel litigation based on “any other ground” (“than any ground that could have been raised under 35 U.S.C. § 102 or 103”). *Id.*, 15-16 (citing Ex.1042, 1-2). Patent Owner relies on *SAP Am., Inc. v. Cyandia, Inc.*, which

takes the view that a *Sotera* stipulation would have “limited practical effect in reducing the overlapping efforts” because “Petitioner’s *Sotera* stipulation would not prevent Petitioner from asserting invalidity based on public use or sale.” *SAP Am., Inc. v. Cyandia, Inc.*, IPR2024-01432, Paper 14 at 9 (Apr. 7, 2025).

In *Sotera Wireless, Inc. v. Masimo Corporation*, the Board found that a *Sotera* stipulation, which did not disclaim any ground based on system art, “mitigates any concerns of duplicative efforts between the district court and the Board, as well as concerns of potentially conflicting decisions” and “ensures that an *inter partes* review is a ‘true alternative’ to the district court proceeding.” *Sotera Wireless, Inc. v. Masimo Corporation*, IPR2020-01019, Paper 12 at 19 (Dec. 1, 2020) (precedential as to § II.A). This holding by the Board was recently reaffirmed as a binding precedent. *See* 1058 (USPTO Notice rescinding the June 21, 2022, memorandum entitled “Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation.”). The Federal Circuit has also confirmed that “Congress intentionally limited an IPR’s scope to invalidity challenges based on ‘prior art consisting of patents or printed publications.’” *Ingenico Inc. v. IOENGINE, LLC*, 136 F.4th 1354, 1365 (Fed. Cir. 2025).

As such, Patent Owner’s allegation that Petitioner’s *Sotera* stipulation will not prevent duplicative arguments is in direct conflict with a controlling Board

precedent holding to the contrary, and is inconsistent with Federal Circuit precedent as well. *SAP America, Inc.* is also at variance with *Sotera*, and tellingly with other Board decisions that looked faithfully to *Sotera* when evaluating a *Sotera* stipulation, such as *HP Inc. v. Universal Connectivity Tech., Inc.*, IPR2024-01428, Paper 12 at 7-8 (PTAB Apr. 8, 2025).³ In *HP Inc.*, the Board found that Petitioner's *Sotera* "stipulation mitigates certain concerns of duplicative efforts between the District Court and the Board, as well as concerns of potentially conflicting decisions," even though "the stipulations state[d] that Petitioner 'expressly reserved the right to challenge invalidity at the district court based on the same references relied upon here in combination with 'any system, product, or public knowledge or use that embodies' any of the identified prior art patents or printed publications.'" *Id.*, 8. Based on the *Sotera* stipulation, the Board in *HP Inc.* found that factor 4 strongly favors not exercising discretionary denial. *Id.*

Patent Owner also speculates, without any evidence, that Petitioner "intends to" "repackage" the references in the instant Petition "as grounds based on system prior art" in the parallel litigation. PO Brief, 17. Any invalidity theory by Petitioner

³ *SAP America, Inc.* is currently the subject of a petition for a writ of mandamus at the Federal Circuit arguing against the Board's analysis of the *Sotera* stipulation in *SAP America, Inc.* Ex.1066, 1-3 and 16-20.

in the parallel litigation that is based on “any other ground” reserved in the *Sotera* stipulation would be based on that other ground, and not on the invalidity grounds based on the patents and printed publications in the instant Petition. Patent Owner's speculation of what Petitioner “intends” to do is not evidence, nor a basis for finding Petitioner's *Sotera* stipulation moot.

Third, Patent Owner lists prior art products and systems that are part of Petitioner's invalidity contentions in the parallel litigation as evidence that Petitioner's *Sotera* stipulation would not ensure the instant IPR would be a “true alternative” to the parallel litigation. PO Brief, 17-23. Specifically, Patent Owner faults Petitioner's stipulation for allegedly “mak[ing it] clear that Petitioner intends to litigate invalidity in both proceedings using the same references (and likely the same arguments) and to present substantial additional grounds in the Parallel Litigation far more expansive than those of the present Petition.” *Id.*, 23. Patent Owner's arguments are meritless.

As recited above in this section, Petitioner's *Sotera* stipulation disclaims “grounds that were raised or reasonably could have been raised during the IPR (i.e., any ground that could have been raised under 35 U.S.C. §§ 102 or 103 on the basis of prior art patents or printed publications).” These “grounds are the theories of invalidity available to challenge a claim under 35 U.S.C. §§ 102 and 103, which are limited in an IPR to asserting that the claimed invention was patented or

described in a printed publication (or would have been obvious only on the basis of prior art patents or printed publications).” *Ingenico Inc.* at 1366. As such, contrary to Patent Owner’s assertion, Petitioner’s stipulation makes it clear that Petitioner does **not** intend to litigate in the parallel litigation invalidity theories challenging the claims of the ’768 patent for being anticipated and/or obvious over the “same references” as in the instant Petition.

Further, it goes without saying that IPRs can only be alternatives to district court proceedings to the extent of their scope allowed by the patent statutes, which, “[u]nder 35 U.S.C. § 311(b), ... is limited to ‘a ground that could be raised under section 102 or 103’ ... based on ‘prior art consisting of patents or printed publications.’” *Ingenico Inc.* at 1365. That is, Petitioner’s *Sotera* stipulation disclaims in the parallel litigation all invalidity grounds that could be raised in the instant IPR, making the IPR a “true alternative” to the parallel litigation to the maximum extent of its scope. Patent Owner seeks to remove system prior art from being available in the parallel litigation under the guise of “mitigat[ing] any duplicative efforts between the district court and the Board.” *Sotera* at 8. System art-based invalidity grounds, however, would not and cannot have been considered by the Board.

Accordingly, Patent Owner’s arguments regarding factor 4 are defective, and as discussed above, factor 4 weighs against denial.

E. Factor 5 is neutral: Petitioner is a defendant in the parallel litigation.

Petitioner is a defendant in the parallel litigation. That is true of most IPR petitioners, making this factor neutral. *See HP Inc. v. Slingshot Printing LLC*, IPR2020-01084, Paper 13 at 9 (Jan. 14, 2021); *see also NVIDIA Corp. v. Invensas Corp.*, IPR2020-00603, Paper 11 at 23 (Sept. 3, 2020) (this factor weighs against discretionary denial where the district court trial and IPR Final Written Decision are expected “around the same time”).

F. Factor 6 weighs against denial: The merits of the Petition remain strong because Patent Owner's arguments are deficient on their face.

Factor 6 weighs against denial because the Petition plainly shows that the '768 patent claims no more than well-known subject matter. As discussed in Section IV, the Petition shows that a Cornell research team published the purported inventive concepts several years prior and the relied-upon prior art references include express teachings suggesting their combination.

Reflecting the strength of the merits of the Petition, Patent Owner fails to address the Cornell team's MultiMATLAB solution that teaches the purported inventive concepts of the '768 patent.

Claims 26, 29, and 35 each recites a “processor with a plurality of processing cores.” Ex.1001, Claim 1. Claim 35 also recites a “processor [that] comprises multiple processor cores.” Ex.1001, Claim 35. Patent Owner argues that

RS6000 does not teach a processor with a plurality of processing cores because it does not “disclose or suggest that the Symmetric MultiProcessor (SMP) is a hardware processor with a plurality of processing cores.” PO Brief, 27. Patent Owner's argument ignores the plain meaning of the claim term in view of the teachings of the prior art, and also excludes embodiments disclosed in the '768 patent's specification.

First, the claim simply requires a processor to have a plurality of processing cores. The claim does not require any particular arrangement or physical relationship between the processor and the cores. RS6000 teaches a “Symmetric MultiProcessor” that has “four, eight, twelve, or sixteen 375 MHz 630FP 64-bit processors.” Ex.1007, 10. Thus, RS6000 teaches a processor (“*Symmetric MultiProcessor*”) with a plurality of processing cores (“*four, eight, twelve, or sixteen 375 MHz 630FP 64-bit processors*”). Paper 3 at 50.

To the extent Patent Owner is implicitly arguing that RS6000's “four, eight, twelve, or sixteen 375 MHz 630FP 64-bit processors” do not teach the recited “cores,” Patent Owner's argument excludes embodiments described in the '768 patent's specification. The '768 patent describes “[p]rocessor cores [as] generally independent microprocessors.” Ex.1001, 5:9-11. In other words, the '768 patent contemplates a processor having a plurality of processing cores, where the cores are “independent microprocessors.” *Id.* Patent Owner's attempt to exclude RS6000

from the scope of the claims correspondingly excludes the embodiments described in the '768 patent where the processor has independent microprocessors. And Patent Owner's attempt to distinguish RS6000's Symmetric MultiProcessor as a "configuration" (PO Brief, 26) fails because that is no different than the configuration of independent microprocessors described in the '768 patent.

Second, Patent Owner alleges that Petitioner failed to show Exhibits 1006, 1007, 1008, and 1017 were publicly accessible before the claimed priority date of the '768 patent. PO Brief, 29-37. Regarding Exhibits 1007 and 1008, Patent Owner alleges that there is:

no evidence of library indexing, cataloging, or practical searchability. ... Instead, the evidence offered by the Petition showed only that the IBM manuals were technically accessible to people who were aware of certain private company website addresses (based on IBM's company name and certain corresponding IBM product names, e.g., "RS6000," "AIX"). However, the Petition did not show that the IBM technical manuals relied upon were publicly searchable based on their subject matter or substantive content.

Id., 31. Patent Owner's allegations are meritless at least for the following reasons.

First, despite Patent Owner's assertion that "[t]he Petition contains: [n]o catalog or database indexing records," the Petition shows that both Exhibits 1007 and 1008 were "catalogued and indexed in IBM's online document library" earlier than the priority date of the '768 patent. *Id.*, 30; Paper 3 at 17-18. The evidence includes two link chains, each starting at IBM's home website "http://www.ibm.com/us/," showing how an interested POSITA can use the catalog and index to locate and find Exhibits 1007 and 1008. Ex.1003, ¶¶93, 97. "When a reference is uploaded to a website or deposited in a library, the fact that the reference is indexed or cataloged in some way can indicate that it is publicly accessible." *Samsung Elecs. Co. v. Infobridge Pte. Ltd.*, 929 F.3d 1363, 1369 (Fed. Cir. 2019). "Because there are many ways in which a reference may be disseminated to the interested public, 'public accessibility' has been called the touchstone in determining whether a reference constitutes a 'printed publication.'" *Jazz Pharm., Inc. v. Amneal Pharm., LLC*, 895 F.3d 1347, 1355 (Fed. Cir. 2018)(quoting *In re Hall*, 781 F.2d 897, 898–99 (Fed. Cir. 1986)). Accordingly, the public accessibility of Exhibits 1007 and 1008, as indicated by the indexing or cataloging of both, shows that both Exhibits 1007 and 1008 are printed publications.

Second, the Petition shows that Exhibit 1008 "was distributed with the IBM SP2 systems and published" before the priority date of the '768 patent. Paper 3 at

18. Dr. Bajaj explains that “the IBM SP2 parallel computing platform was distributed with manuals,” including Exhibit 1008, which included web addresses (including one of the links in the link chain for Exhibit 1008 discussed above) for both viewing and downloading Exhibit 1008. Ex.1003, ¶98. A prior art document is considered publicly accessible if it was “disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it.” *Jazz Pharm., Inc.* at 1355 (quoting *In re Wyer*, 655 F.2d 221, 226 (CCPA 1981)). Because Exhibit 1008 was distributed, i.e., disseminated and/or otherwise made available, to diligent POSITAs, it is considered publicly available, and as such is a printed publication.

Third, Patent Owner errs when asserting “the Petition did not show that the IBM technical manuals relied upon were publicly searchable based on their subject matter or substantive content.” PO Brief, 31. “[A] printed publication need not be easily searchable after publication if it was sufficiently disseminated at the time of its publication.” *Suffolk Techs., LLC v. AOL Inc.*, 752 F.3d 1358, 1365 (Fed. Cir. 2014). Thus, because Exhibits 1007 and 1008 were “disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate” them, as discussed above, the exhibits were publicly available, and as such are printed publications. *Jazz Pharm., Inc.* at 1355. Patent Owner also errs by failing to

recognize that Menon's references to the IBM SP2, IBM RS6000 and IBM's Parallel Operating Environment also indicates public availability of the corresponding documentation. Ex.1005, 5, 6.

Patent Owner's reliance on *In re Cronyn*, 890 F.2d 1158 (Fed. Cir. 1989) to support its allegations is misguided. PO Brief, 31. Patent Owner points to *In re Cronyn*, and argues that "the Federal Circuit found insufficient public accessibility because 'the only research aid in finding the theses was the student's name, which of course, bears no relationship to the subject of the student's thesis.'" *Id.*, 31. "The theses [were] listed on individual cards which show the student's name and the title of the thesis. The cards [were] filed alphabetically by the author's name." *In re Cronyn* at 1159. The court in *In re Cronyn* did not consider the titles to be research aids because "the titles of the [three] theses were listed on 3 out of 450 cards filed alphabetically by author ..., [and] such 'availability' was not sufficient to make them reasonably accessible to the public." *In re Cronyn* at 1161. In other words, only the names of the authors can be of use in searching for the theses. In contrast, for references that are uploaded to a website, their entire content is a "research aid" because a search for a content (e.g., text keywords such as "RS6000," "AIX," "POE") in a document (e.g., Exhibits 1007 or 1008) on a website that hosts the document would return the document, demonstrating sufficient relationship between the content and the document for public accessibility determination. And

again, a POSITA seeking to implement Menon's system would have known to look for manuals on the IBM SP2, RS6000, and Personal Operating Environment. Ex.1005, 5-6.

Regarding Exhibit 1017, Patent Owner alleges the exhibit was not available to the general public by misconstruing Exhibit 1017's statement, on page iv, that "[t]he University of Tennessee and Oak Ridge National Laboratory made the draft available by anonymous FTP mail servers and were instrumental in distributing the document." PO Brief, 32. Specifically, Patent Owner asserts that this statement "refer[s] to limited distribution to the MPIF participants who were collaborating to develop Exhibit 1017 – not the general public." *Id.*, 32. Patent Owner arrives at this erroneous conclusion because the statement does not expressly state "publicly" available. *Id.*

Exhibit 1017 states that "[t]he goal of the Message Passing Interface, simply stated, is to develop a **widely used** standard for writing message passing programs." Ex.1017, ii. Exhibit 1017 also states that "[t]his standard is intended for use **by all** those who want to write portable message passing programs." Ex.1017, 2. In addition, Exhibit 1017 states that "[t]his is the final report, Version 1.0, of the Message Passing Interface Forum." Ex.1017, ii. These statements indicate that Exhibit 1017 is a final document meant for wide distribution. Exhibit 1017 invites those that receive it to provide feedback "to MPIF [Message Passing Interface

Forum] committee members who will attempt to respond,” indicating that the distribution recipients include additional persons than the MPIF committee members or participants that developed MPI. *Id.* This is further bolstered by Exhibit 1017's statement that the “membership of [the MPI Forum] has been open to all members of the high performance computing community.” Ex.1017, 2. Dr. Bajaj also explains that “[i]t was common practice at the relevant timeframe for MPI documentations to be distributed to interested parties as they became available and my research team at the University of Texas at Austin would have received a copy as well.” Ex.1003, ¶103. Viewed in this context, it is clear that Exhibit 1017's statement about distributing Exhibit 1017 and making it available refers to public availability, showing that Exhibit 1017 qualifies as a printed publication.

Patent Owner asserts the Petition fails to show that “Exhibit 1017 was practically searchable by reasonable effort in a public forum, or that the alleged FTP server content was catalogued, indexed, or searchable by the public at large.” PO Brief, 33. This is irrelevant because “a printed publication need not be easily searchable after publication if it was sufficiently disseminated at the time of its publication,” and Exhibit 1017 was “sufficiently disseminated” as discussed immediately above. *Suffolk Techs., LLC* at 1365.

Regarding Exhibit 1006, Patent Owner asserts that Petitioner's showing that Exhibit 1006 was available on a Cornell university website “is not evidence that

interested members of the public could have found that particular internet address with reasonable diligence if they did not already know about it.” PO Brief ,34. This is incorrect, as Petitioner shows in the Petition and Dr. Bajaj’s declaration. Paper 3 at 16; Ex.1003, ¶¶90-91.

Besides the noted website, Exhibit 1006 “was [also] published and distributed on the webpage of one of its authors,” which is also a Cornell website. Paper 3 at 16; Ex.1023, 40 (“cs.cornell.edu”). As discussed by Dr. Bajaj, “Cornell was recognized at the relevant timeframe as a pioneer in” the field of high-performance cluster computing. Ex.1003, ¶91. Therefore, an interested and diligent POSITA would be expected to visit Cornell websites of researchers and university departments that are involved in the field of high-performance cluster computing. *Id.* That is, Petitioner did show that an interested and diligent POSITA could have found Exhibit 1006 without prior knowledge of the websites. Menon also included a reference to, and URL link of, Ex.1006, showing that a POSITA could have found Ex.1006. Paper 3 at 24-26; Ex.1003, ¶90.

Petitioner also showed that both Exhibits 1005 and 1006 were listed with links on the same webpage of one of the authors. Paper 3 at 25; Ex.1003, ¶90. Petitioner showed that Exhibit 1005 was publicly available (Patent Owner does not dispute this). Paper 3 at 16-17; Ex.1003, ¶¶84-86. Therefore, as explained by Petitioner, a diligent POSITA interested in high-performance cluster computing

would have located Exhibit 1005, and then would have accessed Exhibit 1006 from the webpage. Paper 3 at 25-26; Ex.1003, ¶¶91.

Patent Owner alleges that Exhibits 1035 and 1037 are inadmissible as hearsay because they are unauthenticated. PO Brief, 35-36. Patent Owner's argument fails because, even if Patent Owner's argument were true (which it is not), the exhibits need not be admissible for Dr. Bajaj's expert testimony, which reasonably relies on those exhibits. Fed. R. Evid. § 703.

Further, Patent Owner's reliance on *Medivis, Inc. v. Novard Corp.* (IPR2023-00042) to allege Exhibits 1035 and 1037 are insufficient to show public accessibility is misplaced. PO Brief, 35-36. In *Medivis, Inc.*, the petitioner simply provided, in a declaration, a list of seven publications, and further stated that the declarant has found, based on her research, that a reference was cited by the seven publications. *Medivis, Inc. v. Novard Corp.*, IPR2023-00042, Exhibit 1028, 3-4 (Ex.1076). The Board was "not even suppl[ied] these publications as exhibits," or any other evidence for that matter, "for our inspection to verify these citations." *Medivis, Inc. v. Novard Corp.*, IPR2023-00042, Paper 35 at 28. Here, in direct contrast to *Medivis*, Exhibits 1035 and 1037 are printouts of "cited by" pages from the ACM Digital Library's online database to provide inspection and verification. Ex.1003, ¶¶90-91, 103-104. Accordingly, Patent Owner's reliance on *Medivis* is inapplicable.

G. The *Fintiv* factors as a whole weigh against denial.

In summary, each *Fintiv* factor is either neutral or weighs against denial:

Factor	Weight	Reason
1 (stay)	neutral	no evidence of a stay
2 (trial gap)	against denial	FWD will issue prior to trial date; Albright's docket will create delay
3 (investment)	against denial	no court orders for '768 patent; expeditious filing
4 (overlap)	against denial	<i>Sotera</i> stipulation; many claims will not be resolved by district court
5 (same party)	neutral	Petitioner is defendant
6 (merits)	against denial	merits remain strong in light of Trefethen's precise order of operations

Because the *Fintiv* factors as a whole weigh against denial, the Director should not discretionarily deny institution under §314(a).

VII. Discretionary denial under *General Plastic* is not warranted.

Petitioner submits that *General Plastic* does not apply to the present Petition. Importantly, Patent Owner agrees that *General Plastic* “does not apply to the circumstances of the present Petition.” PO Brief, 37. For the reasons set forth below, discretionary denial under *General Plastic* is not warranted.

A. Factor 1 weighs against discretionary denial: the same petitioner did not previously file a petition directed to the same claims of the same patent.

This factor weighs against discretionary denial because this petition is filed by Intel Corporation, while a prior challenge was filed by a different petitioner,

NVIDIA Corporation.⁴ See *Toshiba America Information Systems, Inc. et al. v. Walletex Microelectronics Ltd.*, IPR2018-01538, Paper 11 at 20-21 (PTAB Mar. 5, 2019).

Although the Board held in *Valve Corp. v. Elec. Scripting Prods., Inc.*, IPR2019-00062, Paper 11 (Apr. 2, 2019) (precedential), that the application of the first *General Plastic* factor is not limited to instances where multiple petitions are filed by the same petitioner, the facts here are distinguishable from *Valve*. First, in *Valve*, both the petitioner (Valve) and HTC (who filed the earlier IPR) were co-defendants in the same district court case and were accused of infringing the patent-at-issue based on the same product. See *Valve*, Paper 11 at 9.

However, in the present case, Intel was sued separately and accused of infringement based on different products more than five years after NVIDIA.

The Board routinely finds that “*General Plastic* and *Valve* do not apply” to the circumstances here, where the petitioners were sued independently, were sued on different products, and have no significant relationship. See, e.g., *NetNut Ltd. v. Bright Data Ltd.*, IPR2021-00465, Paper 11 at 8-11 (Aug. 12, 2021) (“NetNut”)(“Under these circumstances, we decline to extend *General Plastic* and

⁴ Just as in the present case, the length of the '768 patent's claims necessitated separating the petition into two proceedings: IPR2021-00019 and IPR2021-00020.

Valve to the situation here: where a follow-on petition is filed by a petitioner who is not the same as previous petitioners and does not have any relationship, much less a significant relationship, with previous petitioners.”).

Further, Petitioner has not coordinated with NVIDIA for the purposes of preparing this Petition. *See Twitter, Inc., v. Palo Alto Research Center Inc.* IPR2021-01458, Paper 11 at 33 (PTAB April 6, 2022)(declining to discretionarily deny the petition under *General Plastic* and finding that there was no evidence that Petitioner had coordinated with previous filers).

Lastly, multiple petitions are a direct result of Patent Owner's own litigation activity, electing to file separate complaints against Intel and NVIDIA. *See Samsung Elecs. Co. v. Iron Oak Techs., LLC*, IPR2018-01554, Paper 9 at 31 (PTAB Feb. 13, 2019) (The Board, when evaluating the *General Plastic* factors, “decline[d] to wield [Patent Owner's] litigation activities as a shield.”).

B. Factor 2 weighs against denial: at the time of filing of the first petition the petitioner did not know of the prior art asserted in the second petition.

At the time the previous IPRs were filed, Intel had not been sued and had not yet identified the combination of references proposed in this petition.

Because Intel is not a petitioner in the NVIDIA IPRs, factor 2 “is of little probative value.” *NetNut* at 9; *Western Digital Corp. v. Spex Technologies, Inc.*, IPR2018-00084, Paper 14 at 17 (April 25, 2018) (“Because Petitioner has not

previously filed a petition against the same patent, factors 2–5 bear little relevance in this case.”).

And, while Intel's Petition relies on one reference in common with the NVIDIA IPRs (i.e., MPIref, Ex.1017), Intel's combination of references and grounds for unpatentability are materially different. *See Streck, Inc. v. Ravgen, Inc.*, IPR2021-01577, Paper 20 at 20 (PTAB Apr. 22, 2022) (even in the case of overlapping prior art, different theories based on that art are “new before” the Board). Intel's combinations teach (i) cluster computing, (ii) parallelizing mathematical processing, (iii) peer-to-peer architecture, and (iv) sequential processing. In particular, the Trefethen reference in this proceeding (Ex.1006), specifically provides example program code that performs the 1-2-3-1 sequential processing recited in the claims of the '768 patent (as discussed above in Section IV).

Further, any overlap in the prior art used by Intel in this IPR does not weigh in favor of denial because “any similarities in the prior art teachings as applied to the challenged claims will provide some basis for efficiency in timely resolving the issue of this review.” *Twitter, Inc.* at 36.

This factor weighs against discretionary denial.

C. Factor 3 is neutral: the petitioner did not use the Board's prior decision as a road map.

The Board's decision on whether to institute review of the NVIDIA IPRs was issued prior to the filing of this petition. Petitioner, however, has used the express language of the claims to identify the relevant prior art and has not used the PTAB's prior decisions or Patent Owner's arguments as a "roadmap." See *General Plastic Indus. Co., Ltd. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 at 16-19 (PTAB 2017); see also *Apple, Inc. v. Theta IP, LLC*, IPR2024-00818, Paper 11 at 18 (PTAB 2024) (reviewing and considering a prior petition does not warrant a *General Plastic* denial).

D. Factor 4 weighs against denial: petitioner acted with diligence to prepare this petition.

Petitioner's preliminary invalidity contentions were due April 9, 2025 and the 1-year time bar is September 26, 2025. Ex.1020, 2. Petitioner filed this IPR on March 28, 2025. Paper 4 at 1. Accordingly, Petitioner filed this IPR before the service of its invalidity contentions at the district court and well before the 1-year time bar. Petitioner has acted with reasonable diligence to prepare this petition.

This factor weighs against discretionary denial.

E. Factor 5 weighs against denial: the petitioner has not filed serial petitions against the '768 patent.

As noted in factor 1, Intel has not filed serial petitions against the '768 patent. To the extent this factor requires an explanation for the time elapsed since NVIDIA's petitions, as explained in factor 4, Petitioner has been diligent in its

searching and analysis of prior art since being separately sued for patent infringement. Moreover, Petitioner did not copy the previous petitioner's arguments but instead relies on distinct grounds.

F. Factor 6 is neutral: Only modest resources of the Board are needed to issue a final determination not later than 1 year after the date on which the Director notices institution of review.

Petitioner expects that instituting review would require only modest resources from the Board, which already is familiar with the '768 patent, and would proceed in compliance with 32 U.S.C. § 316(a)(11).

G. The *General Plastic* factors as a whole weigh against denial.

In summary, each *General Plastic* factor is either neutral or weighs against denial:

Factor	Weight	Reason
1 (same petitioner)	against denial	different petitioner
2 (knowledge of the prior art)	against denial	Petitioner's combination of references and grounds for unpatentability are materially different
3 (existence of prior decision)	neutral	Petitioner did not use prior decision as a roadmap.
4 (diligence)	against denial	Petitioner filed Petition before invalidity contentions.
5 (serial petitions)	against denial	Petitioner has not filed serial petitions.
6 (resources of the Board)	neutral	only modest resources of the Board

Because the *General Plastic* factors as a whole weigh against denial, the Director should not discretionarily deny institution using *General Plastic*.

VIII. The Petition properly relies on evidence-supported expert testimony in accordance with Federal Circuit precedent.

The foundational decisions upon which patent law is based—*Phillips*, *KSR*, etc.—require the adjudicator to evaluate the patent and prior art from the perspective of a POSITA. That perspective is established with evidence, often in the form of expert declarations. Attorney argument is insufficient. Here, Petitioner's expert, Dr. Chandra Bajaj, provides that perspective with testimony supported by dozens of tertiary references in accordance with 37 CFR § 42.65 and *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9 (Aug. 24, 2022) (precedential).

A. Federal Circuit precedent requires expert testimony.

It is well established that patent claims are construed based on the understanding of a POSITA. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (“We have made clear, moreover, that the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.”) (citing *Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004) (“A

court construing a patent claim seeks to accord a claim the meaning it would have to a person of ordinary skill in the art at the time of the invention.”)); *Home Diagnostics, Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1358 (Fed. Cir. 2004)(“customary meaning” refers to the “customary meaning in [the] art field”); *Ferguson Beauregard/Logic Controls v. Mega Sys., LLC*, 350 F.3d 1327, 1338 (Fed. Cir. 2003) (claim terms “are examined through the viewing glass of a person skilled in the art”); *see also PC Connector Solutions LLC v. SmartDisk Corp.*, 406 F.3d 1359, 1363 (Fed. Cir. 2005) (meaning of claim “must be interpreted as of [the] effective filing date” of the patent application); *Schering Corp. v. Amgen Inc.*, 222 F.3d 1347, 1353 (Fed. Cir. 2000) (same)).

Obviousness grounds are likewise evaluated from the perspective of a POSITA. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007) (“If a person of ordinary skill can implement a predictable variation, §103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.”), 418 (“[I]t can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.”), 421 (“A person of ordinary skill is also a person of ordinary creativity, not

an automaton.”).

The Federal Circuit has also made it clear that attorney argument alone is not evidence and should be given little weight. *Icon Health & Fitness, Inc. v. Strava, Inc.*, 849 F.3d 1034, 1043 (Fed. Cir. 2017) (“Attorney argument is not evidence.”) (citing *Gemtron Corp. v. Saint-Gobain Corp.*, 572 F.3d 1371, 1380 (Fed. Cir. 2009) (“[U]nsworn attorney argument . . . is not evidence and cannot rebut . . . other admitted evidence . . .”)); see also *Elbit Sys. Of Am., LLC, v. Thales Visionix, Inc.*, 881 F.3d 1354, 1359 (Fed. Cir. 2018) (“Elbit fails to present any evidence supporting this contention beyond attorney argument . . . and ‘[a]ttorney argument is not evidence’ and cannot rebut other admitted evidence.”).

Because attorney argument is not evidence, expert testimony is *a requirement* to properly support claim construction and obviousness positions in an IPR petition that are evaluated from the perspective of a POSITA. This is precisely how the Petition presents and relies upon the testimony of Dr. Bajaj. See Petition, 12-103 (relying on testimony of Dr. Bajaj to support claim construction positions and obviousness grounds). The unpatentability grounds set forth in the Petition are fully supported by the references themselves—Dr. Bajaj’s testimony serves to confirm, support, and explain the disclosures of the references from the perspective of a POSITA. See *id.*

Importantly, Dr. Bajaj’s testimony is supported by corroborating evidence in

the form of the disclosure of the references relied upon in the unpatentability grounds and one or more tertiary references. *See generally*, Ex.1003. Further still, Dr. Bajaj repeatedly provides technical reasoning to support his statements and understandings of the references. *See generally*, Ex.1003.

Moreover, the Federal Circuit has recognized that “when the technology is complex and ‘beyond the comprehension of laypersons,’ expert testimony is ‘sometimes essential.’” *Synopsys, Inc. v. Mentor Graphics Corp.*, 814 F.3d 1309, 1320 (Fed. Cir. 2016) (internal quotations removed), *overruled on other grounds by Aqua Prods., Inc. v. Matal*, 872 F.3d 1290, 1296 n.1 (Fed. Cir. 2017) (en banc); *see also Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1330 (Fed. Cir. 2009) (“If the relevant technology were complex, the court might require expert opinions.”). This is precisely the situation here. Dr. Bajaj’s expertise is utilized to explain the technical background of complicated concepts relevant to the ’768 patent (*see, e.g.*, Ex.1003, ¶¶28-52). Dr. Bajaj also provides detailed explanations regarding how a POSITA would have understood the technical descriptions found in the ’768 patent and the prior art references (*see, e.g.*, Ex.1003, ¶¶53-72). Dr. Bajaj’s testimony serves these essential purposes and is a strength of the Petition.

B. Dr. Bajaj’s testimony is fully supported by evidence under *Xerox*.

Patent Owner fails to even allege that Dr. Bajaj’s testimony is not supported by evidence or lacks technical reasoning. Nor could it—Dr. Bajaj’s testimony is

fully supported by extensive underlying evidence including specific quotes from the references relied upon in the unpatentability grounds and a variety of tertiary references establishing the knowledge of a POSITA. For example, Dr. Bajaj relies upon more than two dozen different tertiary references to support his opinions.

Ex.1003, ¶4.

Accordingly, the Petition's proper reliance on evidence-backed expert testimony to support the unpatentability grounds weighs against denial.

IX. Parallel petitions do not weigh in favor of discretionary denial.

As discussed in Petitioner's Notice of Multiple Petitions (paper 2), the '768 Patent has 4 independent claims and a total of 39 claims. Petitioner is challenging all claims over two petitions. The petition in IPR2025-00794 challenges independent claim 1 and all claims depending therefrom. The petition in IPR2025-00795 challenges independent claims 26, 29 and 35 and all claims depending therefrom.

A. The '768 patent contains numerous lengthy claims.

The 39 claims of the '768 patent, alone, are 2,899 words long—nearly 21% of the single petition word limit. The considerable number and length of the challenged claims makes presenting the asserted grounds in a single petition impractical. Thus, institution of two petitions is warranted and consistent with the Board's decisions in other cases. *See, e.g., Flex Logix Techs., Inc. v. Venkat*

Konda, IPR2020-00261, Paper 22 at 24 (PTAB Aug. 3, 2020) (independent claim more than one column long did not weigh in favor of discretionary denial); *Peloton Interactive, Inc. v. Ifit, Inc.*, IPR2022-00030, Paper 12 at 33-34 (PTAB Apr. 22, 2022) (finding “Petitioner’s filing of three petitions to challenge different claims of the ’062 patent...promotes efficiency” where the patent “include[s] five independent claims” that “differ[...]in various, potentially significant ways.”); *Novartis Gene Therapies v. Genzyme Corporation*, IPR2023-01045, Paper 10 at 3 (PTAB Jan. 17, 2024) (instituting multiple petitions where patent included seven independent claims with differing features and scope).

Petitioner is filing the two petitions concurrently and has not sought “a timing advantage that might otherwise occur were the petitions filed serially,” which further supports institution. *Samsung Electronics Col., Ltd. v. Ryan Hardin*, IPR2022-01335, Paper 13, 22-23 (PTAB Feb. 8, 2023) (Institution Decision).

B. Parallel petitions have no overlap.

Patent Owner has served a complaint that declines to constrain the claims that it asserts. Ex.1019, 16 (“at least claim 1 and 35 of the ’768 Patent”). Patent Owner’s Infringement Contentions assert each independent claim, along with many dependent claims, but “reserves the right to modify, amend, or otherwise supplement” its contentions. Ex.1022, 1, 3. Moreover, Final Infringement Contentions are not due until October 8, 2025. Ex.1020, 4. Given the uncertainty

of which claims Patent Owner intends to assert at trial and the eventual one year time bar, Petitioner is placed in the position of challenging all claims.

Nevertheless, Petitioner has structured the petitions so that there is no overlap of claims. Thus, Petitioner is not seeking duplicative or repetitive grounds, and the petitions are materially different.

C. Parallel petitions would not materially increase burden on the Board.

Because the Petitions challenge each claim only once, while relying on the same combinations of prior art and the same expert declaration, institution of the two petitions would not raise concerns of duplicative time and resources.

Moreover, because the grounds, prior art and expert declaration are the same, consolidation of the two proceedings under 35 U.S.C. § 315(d) would be appropriate and would serve to increase efficiency.

D. AMD's parallel petitions include a motion to join Intel's petitions and would not increase the burden on the Board.

While AMD has filed its own petitions against the '768 patent (IPR2025-00862 and IPR2025-00863), those petitions were filed with corresponding motions to join Intel's respective petitions. AMD's petitions use identical unpatentability arguments, the same grounds and the same evidence as the Intel petitions.

Accordingly, the parallel petitions by AMD do not weigh in favor of denial of Intel's petitions.

X. The new Interim Process should not govern the decision to institute.

Petitioner also respectfully submits that the standards articulated in the June 2022 Procedures should apply to this Petition, until the Board issues new regulations in accordance with 35 U.S.C. § 316 and the Administrative Procedure Act (“APA”).

As the Board knows, it announced significant changes to applicable standards beginning in March 2025, beginning with the March 24, 2025 Memorandum of Chief Administrative Patent Judge Scott Boalick (the “Boalick Memo”) and the March 26, 2025 Memorandum of Acting Director Stewart (the “Director Memo”). The Director Memo introduced an entirely new “interim process” that bifurcates institution between “(i) discretionary considerations and (ii) merits and other non-discretionary statutory considerations.” Director Memo, 1 (Ex.1077). Under this new procedure, “the Director, in consultation with at least three PTAB judges” will determine whether discretionary denial is appropriate based on “all relevant considerations,” including several newly enumerated factors. *Id.* Three weeks after the Director Memo issued, the USPTO held an oral webcast setting forth additional substantive details of the new interim procedure not found in the Director Memo. Then, eight days after the webcast, the USPTO posted on its website “FAQs for Interim Processes for PTAB Workload Management” (Ex.1070) with even more substantive details, some potentially in conflict with

details provided during the oral webcast.

Petitioner respectfully submits that these new procedures—as announced in the Boalick Memo, the Director Memo, the oral webcast, and the FAQs (collectively, the “Announcements”)—fall short of satisfying the requisite statutory and due process obligations of the USPTO.

By way of example, 35 U.S.C. § 316(a) mandates that “[t]he **Director shall prescribe regulations**” including regulations “(2) setting forth the standards for the showing of sufficient grounds to institute a review under section 314(a).” The Announcements fall short of 35 U.S.C. § 316(a) by:

- (1) Making changes without going through notice-and-comment rulemaking, particularly given the agency’s representation that it will make any further changes to the institution process through notice-and-comment rulemaking. *See* 88 Fed. Reg. 24503 (April 21, 2023). The Announcements violate the notice-and-comment requirements under the APA and are arbitrary and capricious.
- (2) Proposing considerations that lack clarity so that they fail to set “forth the standards for the showing of sufficient grounds to institute review.” 35 U.S.C. § 316(a). For example, many of the new considerations set forth in the Director Memo have no basis in Federal Circuit law or PTAB regulations such that petitioners cannot anticipate how the Director will

apply them. *See* Ex.1077, 2-3 (“[s]ettled expectations,” “reliance on expert testimony,” “workload,” and “[c]ompelling economic, public health, or national security interests”).

- (3) Lacking a sufficiently reasoned explanation for the changes in the factors relevant to institution, including changes that directly contradict the agency's prior guidance in the June 2022 Procedures—such as the controlling effect of a *Sotera* stipulation and the relevance of compelling merits. The passing reference to “efficiency” in the Announcements does not explain how the changes will aid that goal.⁵ *See Food & Drug Admin. v. Wages & White Lion Invs., L.L.C.*, 145 S. Ct. 898, 906 (2025) (explaining that when an agency changes position, it must “offer ‘good reasons for the new policy’”); *see also F.C.C. v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009) (agency changing position must show “that the new policy is permissible under the statute, that there are good reasons for it, and that the agency believes it to be better, which the conscious change of course adequately indicates”).

⁵ Notably, a self-imposed reduction in office staff and judges to reduce the Board's ability to perform its statutory functions should not be viewed as a rational basis to use discretionary denial to frustrate Congress's intent.

(4) Applying the oral webcast and FAQs retroactively to petitions filed prior to issuance of the new policies (such as in this case), thereby undermining stakeholders' reliance interests and prejudicing petitioners, including the Petitioner in this case, with respect to strategies between district court and USPTO proceedings. This is particularly true where the retroactive application of a new rule was not first subjected to notice-and-comment rulemaking under the APA, despite the agency's stated intent to follow such procedures. *See NetworkIP, LLC v. F.C.C.*, 548 F.3d 116, 122–23 (D.C. Cir. 2008).

(5) Creating at least a perception of a lack of transparency in the discretionary stage of the new bifurcated process. For example, a FAQs webpage that may be “frequently” updated “controls the interim processes.” Ex.1070, 1 (encouraging stakeholders to “check back frequently for updates”). *Id.* Further, there is no way for the parties to know who is designated to advise the Director and, thus, whether there are any conflicts of interest or other procedural concerns related to the process.

In the face of this non-exclusive list of deficiencies in the Announcements, Petitioner urges the Board and Director to consider whether to institute based on the standards articulated in the June 2022 Procedures until such time as the Board issues new regulations in accordance with 35 U.S.C. § 316 and the rulemaking

procedures of the APA.

XI. Conclusion

For the above reasons, Petitioner respectfully requests that the Director refrain from exercising her discretion to deny this Petition and instead pass it to a merits panel for consideration.

Respectfully submitted,

Date: July 17, 2025

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PETITIONER'S EXHIBIT LIST

Ex.1001	U.S. Patent No. 10,333,768
Ex.1002	Prosecution History of U.S. Patent No. 10,333,768
Ex.1003	Declaration of Dr. Chandrajit L. Bajaj under 37 C.F.R. § 1.68
Ex.1004	<i>Curriculum Vitae</i> of Dr. Chandrajit L. Bajaj
Ex.1005	"MultiMATLAB: Integrating MATLAB with High-Performance Parallel Computing," Menon et al., SC '97: Proceedings of the 1997 ACM/IEEE Conference on Supercomputing 1997
Ex.1006	"MultiMATLAB: MATLAB on Multiple Processors," Trefethen et al., 1996 Computer Science Technical Report, Cornell University 1996
Ex.1007	"RS/6000 SP: Planning Vol. 1, Hardware and Physical Environment," IBM 2001
Ex.1008	"Operation and Use, Volume 1, Using the Parallel Operating Environment," IBM 2001
Ex.1009	"Single program multiple data" in Dictionary of Algorithms and Data Structures, P. E. Black, (accessible at https://www.nist.gov/dads/HTML/singleprogrm.html) December 2004
Ex.1010	The RS/6000 SP Inside Out" to Barrios et al., IBM 1999
Ex.1011	"High Performance Cluster Computing: Programming and Applications," Rajkumar Buyya, Vol. 2, 1999
Ex.1012	"Analysis of 100Mb/s Ethernet for the Whitney Commodity Computing Testbed," Fineberg et al., NAS Technical Report NAS-97-025 1997
Ex.1013	"A Parallel Linear Algebra Server for Matlab-like Environments," G. Morrow et al., SC '98: Proceedings of the 1998 ACM/IEEE Conference on Supercomputing 1998

Opposition to Patent Owner’s Request for Discretionary Denial
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Ex.1014	“Parallel MATLAB: Doing It Right,” R. Choy et al., Proceedings of the IEEE, Vol. 93, No. 2, 2005
Ex.1015	“Mathematica Parallel Computing Toolkit - Unleash the Power of Parallel Computing,” R. Maeder, 2005
Ex.1016	“Mastering MATLAB® 5 – A Comprehensive Tutorial and Reference,” D. Hanselman et al., 1998
Ex.1017	“MPI: A Message-Passing Interface Standard,” Message Passing Interface Forum, 1994
Ex.1018	“Modern Operating Systems,” A.S. Tanenbaum, 2001
Ex.1019	September 26, 2024 Complaint in Western District of Texas against Intel
Ex.1020	Order Granting Joint Motion for Entry of Amended Scheduling Order for <i>Advanced Cluster Systems, Inc. v. Intel Corporation</i> , 7:24-CV-00245 (W.D.TX.)
Ex.1021	Federal Court Statistics
Ex.1022	Advanced Cluster Systems, Inc.’s Preliminary Infringement Contentions, January 22, 2005, <i>Advanced Cluster Systems, Inc. v. Intel Corporation</i> , 7:24-cv-00245 (WDTX)
Ex.1023	Cornell Websites
Ex.1024	“pyMPI–An introduction to parallel Python using MPI,” P. Miller 2002
Ex.1025	Amended Joint Claim Construction Chart for <i>Advanced Cluster Systems, Inc. v. NVIDIA Corporation</i> , 1:19-cv-02032 (DDE)
Ex.1026	SC97: High Performance Networking and Computing Conference Website
Ex.1027	Declaration of IEEE
Ex.1028	ACM Digital Library - Citations to Menon

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Ex.1029	Affidavit of Archive.org
Ex.1030	HPC Wire Article about the SC97 High Performance Computing Conference
Ex.1031	Flyer about the SC97 High Performance Computing Conference
Ex.1032	IEEE Xplore Website
Ex.1033	Article about Cornell Theory Center
Ex.1034	ACM Digital Library
Ex.1035	ACM Digital Library - Citations to Menon
Ex.1036	A Beginner's Guide to the IBM SP
Ex.1037	ACM Digital Library - Citations to MPIref
Ex.1038	IBM Website for RS6000
Ex.1039	IBM Website for POE
Ex.1040	ACS Preliminary Response, IPR2021-00019
Ex.1041	Decision Denying Institution, IPR2021-00019
Ex.1042	Sotera Stipulation, <i>Advanced Cluster Systems, Inc. v. Intel Corporation</i> , 7:24-cv-00245 (WDTX)
Ex.1043 (New)	U.S. Patent No. 8,082,289
Ex.1044 (New)	U.S. Patent No. 8,140,612
Ex.1045 (New)	U.S. Patent No. 8,676,877
Ex.1046 (New)	"X86 vs. ARM: A Deep Dive into the Architecture," Semicon Electronics, October 28, 2024

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Ex.1047 (New)	“Intel battles AMD with new data center chips,” Cherney et al, Reuters, June 4, 2024
Ex.1048 (New)	“Economic Contributions of Data Centers in the United States, 2017-2023,” PWC, Feb. 2025
Ex.1049 (New)	“Back & Forth 2: Intel and the Semiconductor Industry,” S. Shivakumar et al., Center for Strategic & International Studies, Jan. 13, 2025
Ex.1050 (New)	“DoD Extends Contract for ORAN-based Private 5G Networks through 2025,” Echostar, March 18, 2024
Ex.1051 (New)	“HPE selected to deliver supercomputers for DoD computing modernization program,” M. Iriarte, Military Embedded Systems, February 20, 2018
Ex.1052 (New)	“ZMicro to Provide Rugged Computers for US Sky Warden Aircraft,” R. Manuel, The Defense Post, Oct. 6, 2022
Ex.1053 (New)	“Argonne National Laboratory’s Aurora 2+ ExaFLOPS System Will Enable New Science and Engineering,” Intel
Ex.1054 (New)	“What milestone advancements in computer chips mean for the military,” Breaking Defense
Ex.1055 (New)	Amended Order Assigning the Business of the Court (Judge Moses, Jan. 31, 2025)
Ex.1056 (New)	LexMachina docket report
Ex.1057 (New)	LexMachina docket report
Ex.1058 (New)	USPTO Notice rescinding the June 21, 2022, memorandum entitled “Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation.”
Ex.1059 (New)	Notice of Filing Date Accorded to Petition, IPR2025-00915
Ex.1060	Notice of Filing Date Accorded to Petition, IPR2025-00914

Opposition to Patent Owner's Request for Discretionary Denial
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(New)	
Ex.1061 (New)	Notice of Filing Date Accorded to Petition, IPR2025-00916
Ex.1062 (New)	Notice of Filing Date Accorded to Petition, IPR2025-00913
Ex.1063 (New)	Claim Construction Order and Memorandum in Support Thereof, <i>ParkerVision, Inc. v. MediaTek Inc. et al.</i> , 6:22-cv-01163 (WDTX)
Ex.1064 (New)	Claim Construction Order, <i>TOT Power Control, S.L. v. AT&T, Inc. et al.</i> , 6:21-cv-00107 (WDTX)
Ex.1065 (New)	Claim Construction Order, <i>AlmondNet, Inc. v. Amazon.com, Inc., et al.</i> , No. 6:21-cv-00898-ADA (WDTX)
Ex.1066 (New)	Petition for a Writ of Mandamus, <i>In re Sap America, Inc.</i> , 25-118 (Fed. Cir.)
Ex.1067 (New)	Decision Granting Institution of <i>Inter Partes</i> Review, IPR2020-01608
Ex.1068 (New)	Decision Granting Institution of <i>Inter Partes</i> Review, IPR2021-00075
Ex.1069 (New)	Decision Granting Institution of <i>Inter Partes</i> Review, IPR2021-00108
Ex.1070 (New)	"FAQs for Interim Processes for PTAB Workload Management" (USPTO)
Ex.1071 (New)	September 26, 2024 Complaint in Western District of Texas against AMD
Ex.1072 (New)	Termination Due to Settlement After Institution of Trial, IPR2020-01608
Ex.1073 (New)	Termination Due to Settlement After Institution of Trial, IPR2021-00075
Ex.1074 (New)	Termination Due to Settlement After Institution of Trial, IPR2021-00108
Ex.1075 (New)	Reserved
Ex.1076	Declaration of Pamela Keyl, IPR2023-00042

Opposition to Patent Owner’s Request for Discretionary Denial
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(New)	
Ex.1077 (New)	March 26, 2025 Memorandum titled “Interim Processes for PTAB Workload Management” (Acting Director Stewart)
Ex.1078 (New)	March 24, 2025 Memorandum titled “Guidance on USPTO’s rescission of ‘Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation’” (Chief Administrative Patent Judge Boalick)
Ex.1079 (New)	IPR petition, IPR2025-00794
Ex.1080 (New)	Senate hearing on “Winning the AI Race: Strengthening U.S. Capabilities in Computing and Innovation,” May 8, 2025
Ex.1081 (New)	“2024 Annual Report,” AMD
Ex.1082 (New)	“Frontier supercomputer hits new highs in third year of exascale,” Oak Ridge National Laboratory, Nov. 18, 2024
Ex.1083 (New)	“AMD flags \$800 million hit from new US curbs on chip exports to China,” Reuters, Apr. 16, 2025
Ex.1084 (New)	ACS Preliminary Response, IPR2021-00020
Ex.1085 (New)	Trial Institution Document, IPR2021-00020

CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24(d), Petitioner hereby certifies, in accordance with and reliance on the word count provided by the word-processing system used to prepare this Petition, that the number of words in this paper is 12,197. Pursuant to 37 C.F.R. § 42.24(d), this word count excludes the table of contents, table of authorities, mandatory notices under § 42.8, certificate of service, certificate of word count, appendix of exhibits, and any claim listing.

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CERTIFICATE OF SERVICE

The undersigned certifies, under 37 C.F.R. § 42.6, that service was made on the Patent Owner as detailed below.

Date of service July 17, 2025

Manner of service Electronic Email: dlindner@crowell.com;
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Documents served **Petitioner's Opposition to Patent Owner's Request for Discretionary Denial; Exhibits 1043-1074 and 1076-1085.**

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