

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICROSOFT CORPORATION,
Petitioner,

v.

PARTEC CLUSTER COMPETENCE CENTER GMBH,
Patent Owner.

Case IPR2025-00318
Patent 11,537,442 B2

**PATENT OWNER'S BIFURCATED DISCRETIONARY DENIAL
BRIEFING PURSUANT TO THE DIRECTOR'S MARCH 26, 2025
MEMORANDUM**

Mail Stop "PATENT BOARD"
Patent Trial and Appeal Board
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

EXHIBIT LIST

Exhibit	Description
EX2001	Complaint for Patent Infringement, <i>PARTEC AG and BF EXAQC AG vs. MICROSOFT CORPORATION</i> , Civil Action No. 2:24-cv-433 (E.D. Tex. filed June 10, 2024)
EX2002	Second Amended Docket Control Order, Dkt. No. 48, <i>PARTEC AG and BF EXAQC AG vs. MICROSOFT CORPORATION</i> , Civil Action No. 2:24-cv-433 (E.D. Tex. filed April 9, 2025)
EX2003	United States District Courts – National Judicial Caseload Profile through December 31, 2024, https://www.uscourts.gov/sites/default/files/2025-02/fcms_na_distprofile1231.2024.pdf (accessed April 11, 2025)
EX2004	Defendant Microsoft’s October 30, 2024 Invalidity Contentions, <i>PARTEC AG and BF EXAQC AG vs. MICROSOFT CORPORATION</i> , Civil Action No. 2:24-cv-433 (E.D. Tex.)
EX2005	Defendant Microsoft’s March 6, 2025 Invalidity Contentions, <i>PARTEC AG and BF EXAQC AG vs. MICROSOFT CORPORATION</i> , Civil Action No. 2:24-cv-433 (E.D. Tex.)
EX2006	U.S. Patent Publication No. 2017/0262319
EX2007	Dynamic Process Management with Allocation-internal Co-Scheduling towards Interactive Supercomputing, Clauss et al., 1st COSH Workshop on Co-Scheduling of HPC Applications, 2016
EX2008	PDF comparison generated using PDF-XChange Editor of Petition Sections VII.C.1.c and VII.C.9.e against EX1003 Sections X.C.1.c and X.C.9.e
EX2009	Declaration of Dr. David Kaeli in Support of Patent Owner’s Preliminary Response
EX2010	<i>Curriculum Vitae</i> for Dr. David Kaeli
EX2011	List of Cases for Dr. David Kaeli
EX2012	The DEEP-ER project: I/O and resiliency extensions for the Cluster-Booster architecture, Anke Kreuzer et al., 2018
EX2013	NVIDIA GeForce RTX 2080 Ti Specs TechPowerUp GPU Database, https://www.techpowerup.com/gpu-specs/geforce-rtx-2080-ti.c3305 , accessed April 11, 2025

EX2014	Efficient Data-parallel Distributed DNN Training for Big Dataset under Heterogeneous GPU Cluster, Shinyoung Ahn et al., 2024 IEEE International Conference on Big Data
EX2015	Practice and Experience in using Parallel and Scalable Machine Learning with Heterogenous Modular Supercomputing Architectures, Morris Riedel et al., 2021

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I. Introduction

Patent Owner ParTec AG¹ (“ParTec” or “Patent Owner”) respectfully requests that the USPTO discretionarily deny Microsoft Corporation’s (“Microsoft” or “Petitioner”) Petition to institute *inter partes* review of U.S. Patent No. 11,537,442 (the “’442 Patent”). Patent Owner submits this bifurcated briefing—limited in scope to discretionary denial issues—pursuant to the Director’s March 26, 2025 Memorandum.²

¹ As noted in Patent Owner’s Power of Attorney (Paper 3), the Patent Owner in the caption for this proceeding should be updated to ParTec AG, as reflected in USPTO assignment records. ParTec Cluster Competence Center GmbH (Reel 57967 Frame 304) changed its legal form and name to ParTec AG (Reel 67920 Frame 941).

² Patent Owner is submitting its Preliminary Response addressing how the Petition fails to present a reasonable likelihood of invalidating any claims concurrently with this discretionary denial briefing. The Notice of Filing Date Accorded in this proceeding (Paper 5) issued on January 16, 2025. The Director’s Memorandum bifurcating discretionary denial briefing issued more than two months later on March 26, 2025—after “the time for filing discretionary denial briefing as described [in the memorandum] ha[d] already elapsed.” See <https://www.uspto.gov/sites/default/files/documents/InterimProcesses-PTABWorkloadMgmt->

The USPTO should exercise its discretion and deny institution under *Fintiv* because the same issues will be resolved in the parallel District Court proceeding before the Board would issue a final written decision in this proceeding, and under §325(d) because the Petition relies on art and arguments that are the substantially the same as what was considered (and rejected) during prosecution of the '442 Patent (including an overwhelming reliance on the same primary reference that the Examiner relied on during prosecution of the '442 Patent).

II. Argument

The discretionary denial analysis supports denial of the Petition on multiple bases. First, the USPTO should exercise its discretion and deny institution under *Fintiv* because the same issues will be resolved in the parallel District Court proceeding before the Board would issue a final written decision in this proceeding. Further, the USPTO should deny institution under §325(d) because the Petition relies on art and arguments that are substantially the same as those already considered (and rejected) during prosecution of the '442 Patent. Additional relevant considerations, such as Petitioner's overreliance on an expert declaration which merely parrots the Petition, and its decision not to challenge the other patents asserted against it in the

20250326.pdf at 3 (accessed on April 7, 2025). Therefore, Patent Owner is filing this briefing "within one month of the date of th[e] memorandum." *Id.*

parallel District Court proceeding further support discretionary denial in this proceeding.

A. The Board should exercise its discretion to deny the Petition under *Fintiv*

The Board should exercise its discretion to deny the Petition under *Fintiv* because the same issues will be resolved in the parallel District Court proceeding before the Board likely would issue a final written decision in this proceeding. ParTec sued Microsoft for infringement of the '442 Patent on June 10, 2024 in *ParTec AG and BF exaQC AG v. Microsoft Corporation*, Case No. 2:24-cv-00433 (E.D. Tex.) (the “District Court Proceeding”). EX2001 at 1, 17, 86.

The Director has discretion to deny institution under 35 U.S.C. § 314(a). *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016). The Director should exercise such discretion here and deny the Petition because the same invalidity arguments will be addressed, and resolved, in the co-pending District Court Proceeding well before the deadline for the Board to issue a final written decision in this proceeding.

The USPTO considers the presence and status of parallel District Court litigation in determining whether to deny institution. *See NHK Spring Co. Ltd. v. Intri-Plex Techs. Inc.*, IPR2018-00752, Paper 8 at 20 (P.T.A.B. Sept. 12, 2018) (precedential); *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 17 (P.T.A.B. May 13, 2020) (informative) [hereinafter “*Fintiv*”]; *see also Gen. Plastic Indus. Co.*,

Ltd. v. Canon Kabushiki Kaisha, IPR2016-01357, Paper 19 at 16-17 (P.T.A.B. Sept. 6, 2017) (“[W]e recognize that an objective of the AIA is to provide an effective and efficient alternative to district court litigation . . .”). *Fintiv* “sets forth factors that balance considerations of system efficiency, fairness, and patent quality when a patent owner raises an argument for discretionary denial due to the advanced state of a parallel proceeding.” *Fintiv*, Paper 15 at 7-8.

The factors are:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board’s exercise of discretion, including the merits.

Id. “[T]he Board examines these factors, which relate to whether efficiency, fairness, and the merits support the exercise of authority to deny institution. In evaluating the factors, the Board takes a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Id.* (internal citations omitted). As detailed below, these factors favor discretionary denial under §314(a).

1. Factor 1: whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted

The District Court Proceeding is ongoing and no party has moved for a stay (nor is there evidence that one may be granted if the Petition is instituted). Thus, this factor is neutral. *See Sand Revolution II, LLC v. Continental Intermodal Group-Trucking LLC*, IPR2019-01393, Paper 24 at 7 (P.T.A.B. June 16, 2020) (informative).

2. Factor 2: proximity of the court's trial date to the Board's projected statutory deadline for a final written decision

Trial in the District Court Proceeding is scheduled for June 15, 2026. EX2002 at 1. Patent Owner is filing its Preliminary Response on April 16, 2025. If the Board reaches its institution decision within three months of receiving the preliminary response, 35 U.S.C. §314(b), and issues a final written decision within 1 year of institution, 35 U.S.C. §316(a)(11), a final written decision would likely not issue until around July of 2026. Given the earlier scheduled trial date, proceeding with this duplicative IPR proceeding is highly inefficient. The only reason to do so is to give Petitioner two bites at the invalidity apple. This factor weighs strongly in favor of denial.

Petitioner contends this factor favors denial because the District Court has other trials set for April 20, 2026. Pet. at 4. However, that is no longer the projected trial date due to a scheduling conflict, which resulted in the District Court resetting

the trial date to June 15, 2026. Therefore, any analysis based on the April 20, 2026 date is irrelevant.

Petitioner also appears to suggest this factor favors denial based on a data set it selected from DocketNavigator purportedly addressing all cases for Judge Schroeder filed “On or After Dec. 19th, 2014.” EX1025 at 2; Pet. at 4. Petitioner suggests this shows “the district court judge’s median time to jury trial is 27.0 months.” Pet. at 4. Petitioner did not provide the underlying data or explain why it chose the particular dataset of all cases filed since 2014, rather than utilizing recent statistics. As a result, Petitioner’s cherry-picked dataset is of little or no relevance to the *Fintiv* analysis.

Based on recent statistics provided by uscourts.gov, the median time to trial for the relevant district is currently 23 months (which would suggest a trial in May 2026 based on the June 2024 District Court complaint). EX2003 at 35. That again demonstrates that the District Court trial is likely to occur prior to a final written decision in this proceeding and weighs in favor of denial.

3. Factor 3: investment in the parallel proceeding by the court and the parties

The investment by the court and parties in the parallel District Court proceedings is significant. The parties already have submitted patent infringement contentions and invalidity contentions. Pet. at 4. Microsoft also asked the Court to admit supplemental invalidity contentions filed on March 6, 2025, demonstrating

Microsoft's continued investment in trying its invalidity case in the District Court Proceeding regardless of whether this IPR is instituted. *See* EX2005 at 109. Within a month of the institution decision deadline of July 16, 2025, the parties will have also exchanged proposed claim terms for construction in preparation for the Markman hearing. EX2002 at 5.

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

Petitioner asserts the same prior art and invalidity grounds in the District Court Proceeding as it does here, thus there is complete overlap between the issues raised in the Petition and in the parallel District Court proceeding. EX2004 at 29-30, 82-83 (Petitioner's original invalidity contentions relying on Lippert, Budenske, and Kambatla); EX2005 at 29-30, 86 (Petitioner's revised invalidity contentions relying on Lippert, Budenske, and Kambatla). Further, Petitioner declined to make a *Sotera* stipulation, essentially guaranteeing that the efforts performed in this proceeding will be duplicated in the District Court. *See Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 18-19 (P.T.A.B. Dec. 1, 2020) (precedential).

Additionally, even if Petitioner had made a *Sotera* stipulation here, validity of the '442 Patent still would likely continue to be at issue in both this proceeding and the district court proceeding. For example, both versions of Petitioner's invalidity

contentions assert unpublished system art³ against the '442 Patent which even a *Sotera* stipulation might not moot. *See* ORDER Granting Director Review, Vacating the Decision Granting Institution, and Denying Institution of *Inter Partes* Review, IPR2024-01205, Paper 19 at 4 (P.T.A.B. March 28, 2025) (“Petitioner’s invalidity arguments in the district court are more expansive and include combinations of the prior art asserted in these proceedings with unpublished system prior art, which Petitioner’s [*Sotera*] stipulation is not likely to moot.”). Thus, even if instituted this proceeding still could not provide a “‘true alternative’ to the district court proceeding.” *See id.* at 3-4.

Thus, this factor strongly favors denial.

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

Petitioner Microsoft and Patent Owner ParTec are both parties to the District Court Proceeding. EX2001 at 1. Under the Board’s *Sotera* opinion, when the parties are the same this factor supports denying institution. *Sotera*, IPR2020-01019, Paper 12 at 19.

³ EX2004 at 30; EX2005 at 30-31.

6. Factor 6: other circumstances that impact the Board's exercise of discretion, including the merits.

As discussed in the concurrently filed Preliminary Response brief, the merits of this Petition are particularly weak. In short, in the absence of any close prior art, Petitioner was forced to rely on a primary reference authored by Patent Owner that was already thoroughly addressed and distinguished during prosecution. Petitioner attempted to address the distinctions identified during prosecution, but ultimately could not find any art more relevant than that already considered by the Office. Instead, Petitioner was forced to rely on a 20+ year old reference (Budenske) that not only fails to teach the missing limitations, but expressly teaches away from the solution claimed in the '442 Patent.

Furthermore, additional relevant considerations addressed in section II.C (including Petitioner's overreliance on an expert declaration which merely parrots the Petition and its decision not to challenge the other patents asserted against it in the parallel district court proceeding) also support discretionary denial under *Fintiv*. On balance, the *Fintiv* factors and additional considerations strongly favor discretionary denial.

B. The Petition should be denied under § 325(d) because substantially the same art and arguments were previously presented and considered

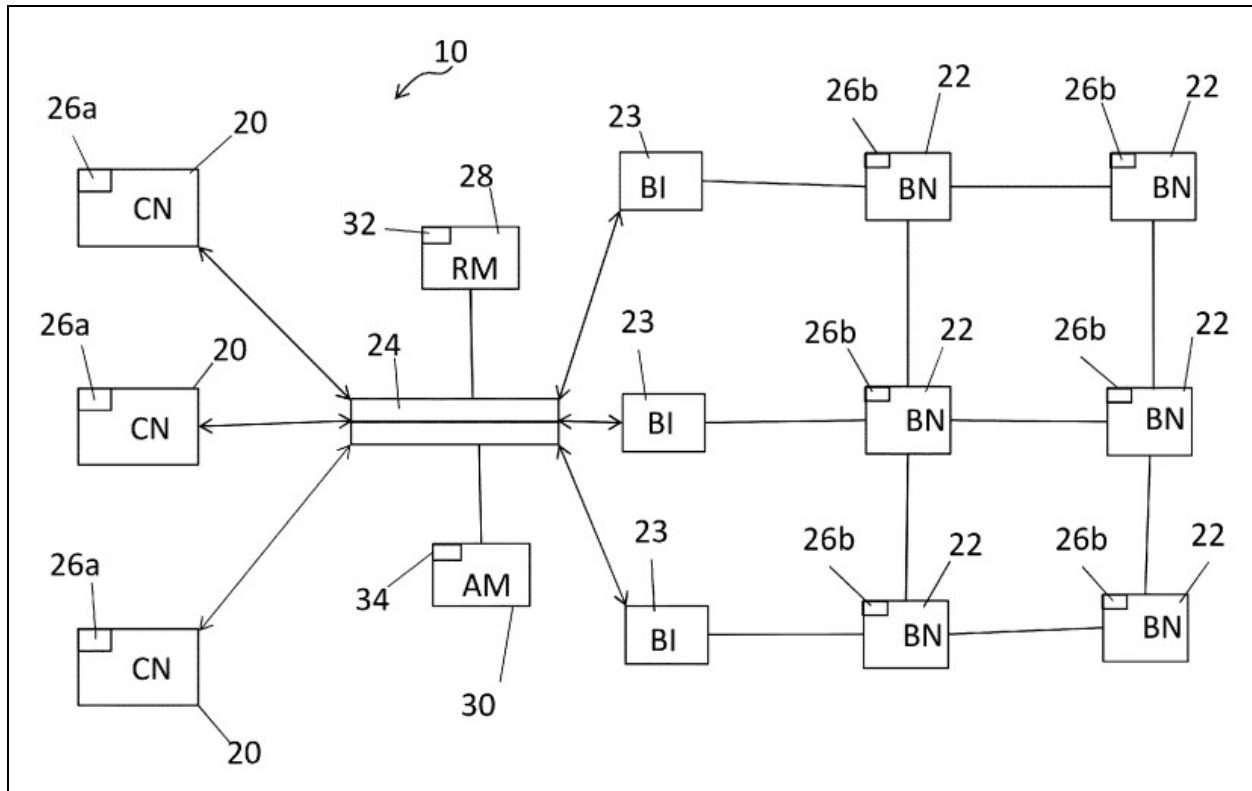
The USPTO should also discretionarily deny the Petition because substantially the same art and arguments were previously presented to the Office and

patentability of the challenged claims was confirmed over that art and those arguments. Patent Owner briefly addresses the '442 Patent, asserted prior art references, and the '442 Patent prosecution history below to provide more context on the duplicative nature of the Petition.

1. The '442 Patent Invention

The '442 Patent is directed to an improved heterogeneous computing system configuration capable of providing more efficient computation of tasks due, in part, to how it redistributes sub-tasks across computing iterations. Heterogeneous computing systems incorporate different types of processors, often including general purpose processors along with more specialized “accelerator-type” processors. *See* EX1001 at 3:24-38.

An example embodiment is shown in Figure 1:



EX1001 Fig. 1.

As shown in Figure 1, the example system includes computation nodes 20 (“CN”) in communication with booster nodes 22 (“BN”) using communication infrastructure 24. *Id.* at 2:66-3:11. “The system 10 also includes a resource manager 28 shown connected to the communication infrastructure 24 and an application manager 30.” *Id.* at 3:19-21.

The ’442 Patent teaches how such heterogeneous computing systems can be adapted for parallel processing of large computation jobs. *See* EX1001 at 1:15-20. “A job to be computed by the system may comprise a number of tasks some of which or all may be repeated a number of times during the execution of the job.” *Id.* at

3:43-46. “The tasks may comprise a number of sub-tasks or kernels. Each of these sub-tasks may be more or less suitable for processing by one or more of the computation nodes or one or more of the boosters. In particular, the scalability of the sub-task may indicate whether it is more appropriate for the sub-task to be processed by a computation node or a booster.” *Id.* at 3:50-55.

The ’442 Patent teaches that efficiency can be improved by using a specific configuration capable of dynamically updating the distribution of sub-tasks between the computation nodes and the booster nodes over the course of multiple computing iterations using information relating to the processing of the sub-tasks. EX1001 at 3:59-4:15. For example, even though a sub-task might appear suitable for a particular BN based on initial analysis or the results of earlier iterations, the sub-task might be better suited for a different distribution of computing resources on subsequent iterations. The ’442 Patent teaches techniques to perform the monitoring and distribution based on “information learned about the processing of the sub-task and any need to call further sub-tasks during the processing.” *See id.* at 4:48-5:9.

2. Petitioner’s References

Petitioner asserts two grounds based on three references as shown in the table below. Pet. at 2.

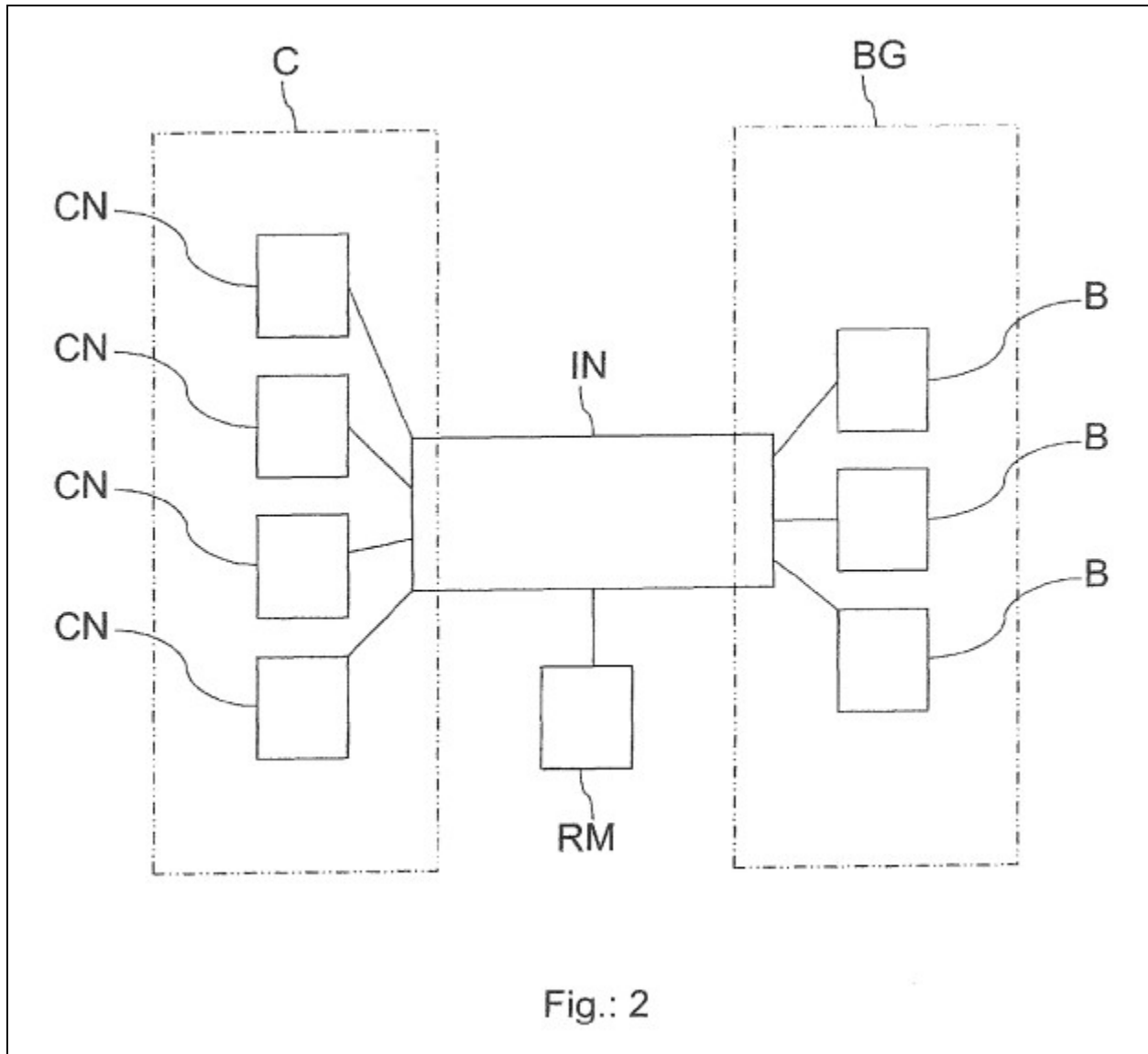
Ground	References	Statute	Claims
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Ground 1	Lippert (EX1004) and Budenske (EX1005)	35 U.S.C. § 103	1-10
Ground 2	Lippert, Budenske, and Kambatla (EX1006)	35 U.S.C. § 103	2-5, 8-10

(a) Lippert [EX1004]

“Lippert” is a U.S. Patent Application (Pub. No. 2013/0282787) to Thomas Lippert titled “Computer Cluster Arrangement For Processing A Computation Task And Method For Operation Thereof.” EX1004 at 1. Thomas Lippert is one of the inventors of the ’442 Patent challenged in this proceeding, and the patent that issued from the 2013/0282787 patent application (10,142,156) also was assigned to Patent Owner ParTec. The Lippert patent application was addressed extensively during prosecution of the ’442 Patent, and its disclosure is incorporated by reference into the ’442 Patent as “WO 2012/049247.” *See, e.g.*, EX1002 at 156-166, 173-175; EX1001 at 1:23-24; Section II.B.3. The ’442 Patent notes that it is a further development of the Lippert invention. ’442 Patent at 1:23-27.

Lippert discloses a computer cluster arrangement including computation nodes (“CN”) coupled to boosters (“B”) using a communication infrastructure (“IN”). EX1004 at [0067]. A Resource Manager (“RM”) can be used in Lippert to assign boosters to computation nodes. EX1004 at [0041]. An embodiment of this arrangement can be seen in Lippert’s Figure 2:



It is not surprising that Lippert and the '442 Patent share some similarities given the '442 Patent notes that it is a further development of Lippert. EX1001 at 1:23-28. Nor is it surprising that the '442 Patent inventors continued to work to improve on Thomas Lippert's earlier work, leading to the claimed advances in the '442 Patent that included the concept of dynamically reassigning sub-tasks to CN's and BN's during subsequent processing iterations based on information related to

the processing of the sub-tasks. *See* EX1001 at 1:35-38, 4:4-15. Petitioner’s use of Lippert as the primary reference in this proceeding (despite its extensive analysis during prosecution) demonstrates just how groundbreaking the Lippert disclosure was and how deficient the other available prior art is in comparison to ParTec’s own patents.

(b) Budenske [EX1005]

“Budenske” is an article listing authors John R. Budenske, Ranga S. Ramanujan and Howard Jay Siegel titled “A Method for the On-Line Use of Off-Line Derived Remappings of Iterative Automatic Target Recognition Tasks onto a Particular Class of Heterogeneous Parallel Platforms.” EX1005 at iv. Budenske identifies itself as being included in the October 1998 Edition of The Journal of Supercomputing. *Id.* at i-iii.

Petitioner relies on Budenske to address distributing sub-tasks between CNs and BNs in a further computing iteration after the initial iteration. *See, e.g.,* Pet. at 29-32. While Budenske may be directed to a “heterogeneous” system to the extent that it can include different types of processors, it expressly notes that its system was not capable of distributing tasks to a *mix* of processor types. EX1005 at 392 (“[I]f an implementation of a given subtask uses multiple processors, all processors will be of the same type.”). As explained in more detail in Patent Owner’s concurrently filed Preliminary Response, distributing sub-tasks between processors of different

types is difficult, and a POSITA would have understood Budenske to (at best) be determining which processor type to use for the entire sub-task—not distributing sub-tasks between disparate processor types.

(c) Kambatla [EX1006]

“Kambatla” is a U.S. Patent Application (Pub. No. 2018/0074855) to Karthik Kambatla titled “Utilization-Aware Resource Scheduling in a Distributed Computing Cluster.” EX1006 at 1. Kambatla relates to computing clusters, but does not teach anything directed to heterogeneous computing. *See, e.g., id.* at [0002]. Kambatla never discusses the use of different processor types, distribution of tasks to different processor types, or anything else that might make it relevant to an actual heterogeneous computing architecture. Thus, Kambatla cannot remedy any of the deficiencies related to distribution of sub-tasks between disparate processor types.

3. ’442 Patent Prosecution History

As Petitioner concedes, the USPTO has already extensively evaluated its primary reference (Lippert) during prosecution of the ’442 Patent. *See* Pet. at 6-7. The examiner initially rejected all pending ’442 Patent Claims over Lippert in an April 22, 2022 Office Action. EX1002 at 154-167. The applicant then amended the claims and traversed the rejection, noting Lippert failed to teach redistribution of sub-tasks in further computing iterations based on information related to the processing of the plurality of sub-tasks. EX1002 at 171-175. Thus, “Lippert fail[ed]

to disclose the claimed combination ‘in a first computing iteration, assigning and processing the plurality of sub-tasks by at least a portion of the plurality of computation nodes and at least a portion of the plurality of booster nodes in a first distribution,’ and ‘generating, using information relating to the processing of the plurality of sub-tasks by at least the portion of the plurality of computation nodes and at least the portion of the plurality of booster nodes, a further distribution of the plurality of sub-tasks between the plurality of computation nodes and the plurality of booster nodes for processing thereby in a further computing iteration,’ as recited in amended claim 1 and as similarly recited in amended claim 9.” *Id.* at 175. The examiner agreed, allowing the amended claims over Lippert. *Id.* at 184.

4. § 325(d) Legal Standard

“Section 325(d) provides that the Director may elect not to institute[] a proceeding if the challenge to the patent is based on matters previously presented to the Office.” *Advanced Bionics, LLC, v. Med-el Elektromedizinische Geräte GMBH*, IPR2019-01469, Paper 6 at 7 (Feb. 13, 2020) (precedential). “35 U.S.C. § 325(d) identifies two separate issues for the Director to consider in exercising discretion to deny institution of review: whether the petition presents to the Office the same or substantially the same art previously presented to the Office, or whether the petition presents to the Office the same or substantially the same arguments previously presented to the Office.” *Id.*

“[U]nder § 325(d), the Board uses the following two-part framework: (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.” *Id.* at 8.

[If] petitioner fails to make a showing of material error, the Director generally will exercise discretion not to institute *inter partes* review. If reasonable minds can disagree regarding the purported treatment of the art or arguments, it cannot be said that the Office erred in a manner material to patentability. At bottom, this framework reflects a commitment to defer to previous Office evaluations of the evidence of record unless material error is shown.

Id. at 8-9.

In evaluating whether to deny institution when the same or substantially the same prior art was previously presented to the Office, the Board considers:

(1) the similarities and material differences between the asserted art and the prior art involved during examination;

(2) the cumulative nature of the asserted art and the prior art evaluated during examination;

(3) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;

(4) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art;

(5) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and

(6) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.

Becton, Dickinson and Company v. B. Braun Melsungen AG, IPR2017-01586, Paper 8 at 17-18 (Dec. 15, 2017) (precedential).

5. The § 325(d) factors favor denial

(a) The art and arguments are substantially the same as those previously considered

(i) Lippert

Petitioner concedes that “Lippert (EX1004) was considered during prosecution of the ’442 patent, with the Examiner rejecting all claims for being anticipated by Lippert.” Pet. at 3. As noted in Section II.B.3, the Patent Owner and Examiner extensively discussed the scope of Lippert and the differences between it and the ’442 Patent during prosecution. Thus, there is no question that Lippert (and Petitioner’s arguments based on Lippert) were previously considered.

(ii) Budenske and Kambatla

Petitioner suggests that its overwhelming reliance on the same art and arguments previously addressed regarding Lippert should be excused because “Budenske (EX1005) and Kambatla (EX1006) were neither cited nor discussed during prosecution.” Pet. at 2. However, exact identity of references is not required, and based on Petitioner’s representations substantially the same art and arguments was before the Office during prosecution.

First, Petitioner suggests that Budenske is noncumulative because it “provides express teachings on remapping iterative tasks onto heterogeneous parallel hardware platforms between iterations.” Pet. at 2-3. As discussed above in Section II.B.2.b (and further explained in Patent Owner’s concurrently filed preliminary response), the opposite is true—Budenske expressly notes that it cannot map a sub-task onto different types of processors, but instead can only utilize one of the available types of processors at a time. EX1005 at 392.

However, even taking Petitioner’s characterization of Budenske a face value, it would still be cumulative of previously considered art. The ’442 Patent specification identifies U.S. Patent Publication No. 2017/0262319 as describing processes that “automate the distribution of data and mapping of tasks to computing resources.” EX1001 at 1:56-63. That publication, titled “Task Mapping for Heterogeneous Platforms,” addresses “mapping a plurality of concurrent tasks onto

a heterogeneous platform of computing resources, namely platforms having a mixture of computing node types.” EX2006 at [0021]. Thus, the ’442 Patent specification itself identifies teachings which establish that Budenske would have been cumulative under Petitioner’s interpretation.

Second, Petitioner suggests that Kambatla is noncumulative because it “provides express teachings on cluster resource management.” Pet. at 3. It is unclear how that distinction could possibly render Kambatla noncumulative of Lippert, given that Lippert describes that topic as its field of invention. EX1004 at [0002] (“The present invention is directed toward a computer cluster arrangement. In particular, it relates to a computer cluster arrangement with improved resource management.”). Nor would it render it noncumulative of the other references that the ’442 Patent discusses in its specification regarding similar topics. *See, e.g.*, EX2007 at 2 (“[A]t cluster level, an outer resource manager maintains the different job queues of the batch system and performs the overall resource assignments granted by a job scheduler.”) [discussed at EX1001 at 1:27-35, 3:10-18].

Thus, the art and arguments presented in the Petition are substantially the same as those already considered during prosecution of the ’442 Patent.

(b) Petitioner has identified no material error

At step two, Petitioner identified no material error in the Office’s prior findings. Petitioner’s only purported error was that “[n]othing in the record,

however, indicates that the Examiner considered a combination of Lippert with Budenske, or of Lippert with Budenske and Kambatla.” Pet. at 3. Even if Petitioner’s conclusory argument was entitled to any weight, a proposed combination of a previously considered reference along with two cumulative references cannot support a finding of material error. Nor does it matter that the proposed combinations are “informed by expert testimony.” *See* Pet. at 3. The presence of “expert testimony” does not—in itself—indicate any kind of error, much less material error. Furthermore, Petitioner’s expert offered little (if any) original analysis, instead content to simply copy much of what was in the Petition. *See, e.g.,* Section II.C.

That Petitioner might have a different interpretation of the references than the prior Examiner does not matter—Petitioner cannot succeed in its challenge without identifying some material error made by the Office. “If reasonable minds can disagree regarding the purported treatment of the art or arguments, it cannot be said that the Office erred in a manner material to patentability. At bottom, this framework reflects a commitment to defer to previous Office evaluations of the evidence of record unless material error is shown.” *Advanced Bionics*, IPR2019-01469, Paper 6 at 9. Therefore, the Office should deny institution under 35 U.S.C. § 325(d).

C. Additional relevant considerations

Several additional considerations are relevant to the discretionary denial analysis discussed above and further support denial.

First, Petitioner has chosen not to challenge the other patents asserted in the District Court Proceeding, ensuring that this IPR proceeding could not provide an alternative to the litigation as a whole, but rather only a duplication of litigation efforts. In the District Court Proceeding, Patent Owner has asserted U.S. Patent Nos. 10,142,156 (the “’156 Patent”) and 11,934,883 (the “’883 Patent”) in addition to the ’442 Patent. EX2001 at 17. As of the time this brief was filed, Petitioner has not filed IPR challenges to the ’156 or ’883 Patents. Nor would it change anything if Petitioner chose to file challenges after this briefing—the trial in the District Court Proceeding is already projected to occur before a final written decision would issue in this proceeding, meaning that there could be little (if any) simplification in the District Court Proceeding even if this (and any speculative future) petitions were instituted.

Additionally, Petitioner’s reliance on an expert declaration that does little more than parrot the Petition further supports discretionary denial.⁴ In the absence

⁴ See March 26, 2025 Interim Processes for PTAB Workload Management at 2, available at <https://www.uspto.gov/sites/default/files/documents/InterimProcesses-PTABWorkloadMgmt-20250326.pdf> (accessed on March 27, 2025); *Xerox Corp. et al. v. Bytemark, Inc.*, IPR2022-00624, Paper 9 at 15 (granting little

of compelling prior art, Petitioner has relied heavily on its expert declaration, citing to it approximately 100 times over the course of the Petition. *See generally* Petition. Despite this heavy reliance, Petitioner's expert provided little (if any) actual technical analysis, and was instead content to mostly copy and paste from the legal brief and add his name to it. For example, the expert's analysis of '442 Patent limitations [1.3] and [9.5]⁵ (the last limitations of independent claims 1 and 9) was largely copied from the Petition (down to the italicization). *See generally* EX2008 (a PDF comparison generated by PDF-XChange Editor highlighting differences between Petition Sections VII.C.1.c and VII.C.9.e and EX1003 Sections X.C.1.c and X.C.9.e). This heavy reliance on "expert" testimony that is entitled to little (if any) weight further supports discretionary denial.

weight to an expert declaration which "merely repeats, *verbatim*, the conclusory assertion for which it is offered to support") (precedential).

⁵ Limitations [1.3] and [9.5] were used to distinguish Petitioner's primary reference disclosure (Lippert) during prosecution of the '442 Patent. *See* EX1002 at 173-175, 183-184. Thus, Petitioner and its expert would have been well aware that those limitations were likely to be a source of dispute in this proceeding as well.

III. Conclusion

Patent Owner respectfully requests that the USPTO exercise its discretion to deny institution for the reasons stated herein.

Dated: April 16, 2025

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned certifies that pursuant to 37 C.F.R. § 42.6(e), a copy of the foregoing was served via email to lead and backup counsel of record for Petitioner as follows:

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CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), the undersigned hereby certifies that this brief complies with the type-volume limitation of 37 C.F.R. § 42.24 because this brief contains 4,851 words.

Dated: April 16, 2025

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