

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FEDEX CORPORATION, and FEDEX OFFICE
AND PRINT SERVICES, INC.
Petitioners

v.

VALTRUS INNOVATIONS LTD.,
Patent Owner

Case No. IPR2026-00060
Patent No. 8,370,416

PATENT OWNER'S PRELIMINARY RESPONSE TO THE PETITION

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PATENT OWNER’S EXHIBIT LIST

No.	Exhibit Description
2001	Memorandum titled “ <i>Director Institution of AIA Trial Proceedings</i> ,” dated October 17, 2025 (“the Director Institution Memo”)
2002	Memorandum titled “Interim Processes for PTAB Workload Management,” dated March 26, 2025 (“the Interim Processes Memo”)
2003	PTAB Proposed Rule 2025-0025
2004	<i>Ex parte</i> Reexamination request filed by NetApp., Inc. in <i>Ex Parte</i> Reexamination No. 90/015,685
2005	<i>Reserved</i>
2006	<i>Reserved</i>
2007	First Amended Docket Control Order in <i>Valtrus Innovations Ltd. et al v. FedEx Corporation et al.</i> , Case No. 2:25-cv-00516-JRG (E.D. Tex. May 9, 2025)
2008	Complaint in <i>Valtrus Innovations Ltd. et al v. NetApp, Inc.</i> , Case No. 2:25-cv-00517-JRG (E.D. Tex. May 9, 2025)
2009	Complaint in <i>NetApp, Inc. v. Valtrus Innovations Ltd. et al.</i> , Case No. 1:25-cv-06138 (S.D.N.Y. July 25, 2025)
2010	Complaint in <i>Valtrus Innovations Ltd. et al v. FedEx Corporation et al.</i> , Case No. 2:25-cv-00516-JRG (E.D. Tex. May 9, 2025)
2011	<i>Reserved</i>
2012	Complaint in <i>Starbucks Corporation v. Valtrus Innovations Ltd. et al.</i> , Case No. 2:25-cv-01859 (W.D. Wash. September 25, 2025)
2013	Docket Navigator Statistics for Judge Gilstrap
2014	Docket Navigator Statistics for EDTX Patent Cases
2015	<i>Reserved</i>

No.	Exhibit Description
2016	Invalidity Contentions (cover pleading) in <i>Valtrus Innovations Ltd. et al v. FedEx Corporation et al.</i> , Case No. 2:25-cv-00516-JRG (E.D. Tex. May 9, 2025)
2017	Declaration of Angela Quinlan
2018	R. Mansinghani, et al., “A Data-Based Look at Ex Parte Reexaminations,” American Bar Association (March 26, 2025)

I. INTRODUCTION

Patent Owner’s Brief in Support of Discretionary Denial (Paper 8, “Discretionary Denial Brief”) laid out a host of reasons why institution of the Petition for *Inter Partes* Review (Paper 2) of U.S. Pat. No. 8,370,416 (“the ’416 Patent”) filed by Fedex Corporation and FedEx Office and Print Services, Inc. (collectively, “FedEx” or “Petitioners”) would be an inappropriate use of Office resources and why discretionary denial of the Petition is accordingly appropriate. Notably, the Director already denied IPR petitions filed by Petitioners that presented substantially similar discretionary considerations.¹ In this Patent Owner Preliminary Response (“POPR”), Patent Owner provides yet more reasons to deny the Petition—because the Petition itself fails to establish a reasonable likelihood of success as to any challenged claim, for multiple reasons.

First, the Petition fails because Petitioners have proffered irreconcilably contrary claim construction positions before this tribunal and the parallel district court, and thus failed to comply with their responsibility to clearly articulate in the

¹ See *FedEx Corporation et al. v. Valtrus Innovations Ltd.*, IPR2025-01490, Paper 20 (Director, December 18, 2025; *FedEx Corporation et al. v. Valtrus Innovations Ltd.*, IPR2025-01491, Paper 17 (Director, December 18, 2025).

petition “[h]ow the challenged claim is to be construed.”² Specifically, in the Petition, Petitioners purport to be capable of reasonably interpreting the claims under the *Phillips* standard and to apply the prior art based on those interpretations. In parallel district court litigation, however, Petitioners have taken the position that numerous challenged terms—including multiple claim terms in all challenged independent claims—are indefinite for “fail[ing] to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” EX2016 at 101-102. This is plainly improper and an independent ground for denial under Office precedent.

Second, the Petition should be denied because it attempts to supply claim limitations that are otherwise missing from the prior art via vague and conclusory allegations regarding the alleged knowledge of a skilled artisan. This is contrary to PTAB regulations, which require that IPR petitions “must specify where each element of the claim is found in the prior art patents or printed publications relied upon,”³ and is likewise contrary to the Office’s July 31, 2025 memorandum (the

² 37 C.F.R. § 42.104(b)(3).

³ 37 C.F.R. § 42.104(b)(4).

“July 31 Memo”)⁴ statement that “applicant admitted prior art (AAPA), expert testimony, common sense, and other evidence that is not ‘prior art consisting of patents or printed publications’ (collectively, ‘general knowledge’) ***may not be used to supply a missing claim limitation.***”⁵ Further, the expert testimony that Petitioners rely upon to supply multiple missing limitations merely mimics the attorney argument in the Petition and thus is unreliable and conclusory. Accordingly, independent of the overwhelming case for discretionary denial, the Petition should be denied as failing to establish a reasonable likelihood of success as to any challenged claim.

⁴ See “ENFORCEMENT AND NON-WAIVER OF 37 C.F.R. § 42.104(B)(4) AND PERMISSIBLE USES OF GENERAL KNOWLEDGE IN INTER PARTES REVIEWS,” U.S.P.TO July 31, 2025 (*available at* https://www.uspto.gov/sites/default/files/documents/aapa_memo_final_signed.pdf?utm_campaign=subscriptioncenter&utm_medium=email&utm_source=govdelivery). The July 31 Memo applies to any petition for IPR filed on or after September 1, 2025.” July 31 Memo at 3. Accordingly, it applies here in full.

⁵ All emphasis supplied unless otherwise noted.

II. BACKGROUND

A. The Parallel Proceedings

As explained in the Discretionary Denial Brief, there are host of pending district court actions involving the '416 Patent—including a fifth action that was filed after the Discretionary Denial Brief was filed. This multitude of district court proceedings is summarized below:

- *Valtrus Innovations Ltd. et al v. FedEx Corporation et al.*, Case No. 2:25-cv-00516-JRG (E.D. Tex., filed May 9, 2025) (the “FedEx Action”). Nature of action: Patent infringement action alleging infringement of four patents, including the '416 patent. EX2010. Trial date: March 1, 2027. EX2007, 001
- *Valtrus Innovations Ltd. et al v. NetApp, Inc.*, Case No. 2:25-cv-00517-JRG (E.D. Tex., filed May 9, 2025) (the “NetApp Action”). Nature of action: Patent infringement action alleging infringement of six patents, including the '416 patent. EX2008. Consolidated with Case No. 2:25-cv-00516 for discovery purposes. Trial date: March 1, 2027. EX2007, 001.
- *NetApp, Inc. v. Valtrus Innovations Ltd. et al.*, Case No. 1:25-cv-06138 (S.D.N.Y., filed July 25, 2025) (the “NetApp DJ Action”). Nature of action: Declaratory judgment action alleging non-infringement of six patents, including the '416 patent. EX2009. Trial date: To be determined.
- *Starbucks Corporation v. Valtrus Innovations Ltd. et al.*, Case No. 2:25-cv-01859 (W.D. Wash., filed September 25, 2025) (the “Starbucks DJ Action”). Nature of Action: Declaratory judgment action alleging invalidity and non-infringement of 12 patents, including the '416 Patent. EX2012. Trial date: To be determined.

- *Google LLC v. Valtrus Innovations Ltd. et al.*, Case No. (N.D. Cal. Filed January 13, 2026) (“the Google Action”). Nature of Action: Declaratory judgment action alleging non-infringement of nine patents, including the ’416 Patent. Trial date: To be determined.

In addition to the foregoing district court proceedings, as discussed in the Discretionary Denial Brief, a request for *ex parte* reexamination that addresses every challenged claim of the ’416 Patent is also pending before the Office. *See* Reexamination Control No. 90/015,685; EX2004.

B. Overview of the ’416 Patent

The ’416 Patent is generally directed to an improvement in the field of clustered computing systems. As explained in the ’416 Patent, “[t]he term ‘clustered computing system’ refers to a computing system formed from a group of loosely coupled computing devices that cooperate to provide the appearance that the devices function as a single system.” EX1001, 1:11-14. The patent goes on to explain advantages of clustering technology, including that “[c]lustering technology permits users to construct a variety of computing system configurations using elemental building blocks, and to change configurations or components of a clustered system as part of maintenance or update routines.” *Id.*, 1:14-18. Systems that utilize clustering technology, however, faced “technical issues,” including challenges associated with “ensuring compatibility between hardware, software and firmware operating on clustered devices and ensuring compliance with licensing terms

associated with individual computing devices and with cluster configurations.” *Id.*, 1:25-30. The ’416 Patent addressed these technical issues by providing systems and methods that, among other things, involve storing license information that includes “a bundle type parameter that identifies a size of the cluster and at least one additional bundle-type characteristic of the cluster,” initializing the cluster at first node, adding more nodes, and then activating the cluster when it includes a number of nodes that “complies with the bundle-type parameter.” *See* EX1001, cl. 1.

C. The Claims of the ’416 Patent

The challenged independent claims of the ’416 Patent are set forth below. For convenience, Patent Owner uses the same claim limitation identification convention used by Petitioners in the Petition.

Independent Claim 1

[1pre] A method of creating a clustered computing system, comprising:

[1a-i] storing license information for a computing cluster in a memory module associated with a computing node,

[1a-ii] wherein the licensing information includes a bundle-type parameter that identifies a size of the cluster and at least one additional bundle-type characteristic of the cluster, and one or more node license parameters that identifies a characteristic of a computing node;

[1b] initializing the computing cluster in a first computing node;

[1c] adding one or more available computing nodes to the computing cluster; and

[1d] activating the computing cluster when the computing cluster includes a number of nodes that complies with the bundle-type parameter.

Independent Claim 9

[9pre] A computing system comprising at least two computing nodes, wherein at least one of the computing nodes comprises:

[9a-i] a cluster module stored on a non-transitory computer readable medium, the cluster module configured to manage compatibility operations associated with a computing cluster,

[9a-ii] the cluster module initializing a computing cluster in the first computing node,

[9a-iii] the cluster module adding one or more available computing nodes to the computing cluster;

[9b-i] a node module stored on a non-transitory computer readable medium, the node module configured to manage compatibility operations associated with the at least two computer nodes,

[9b-ii] the node module storing license information for the computing cluster,

[9b-iii] wherein the licensing information includes a bundle-type parameter that identifies a size of the computing cluster and at least one additional bundle-type characteristic of the computing cluster, and one or more node license parameters that identifies a characteristic of a first computing node; and

[9c-i] a management module stored on a non-transitory computer readable medium, the management module configured to manage compatibility operations with one or more external servers,

[9c-ii] the management module activating the computing cluster when the computing cluster includes a number of nodes that complies with the bundle-type parameter.

Independent Claim 14

[14pre] A computer program product comprising logic instructions stored on a non-transitory computer-readable medium which, when executed by a computer processor, configure the processor to:

[14a-i] store license information for a computing cluster in a memory module associated with a computing node,

[14a-ii] wherein the licensing information includes a bundle-type parameter that identifies a size of the cluster and at least one additional bundle-type

characteristic of the cluster, and one or more node license parameters that identifies a characteristic of a computing node;

[14b] initialize the computing cluster in a first computing node;

[14c] add one or more available computing nodes to the computing cluster;

and

[14d] activate the computing cluster when the computing cluster includes a number of nodes that complies with the bundle-type parameter.

D. Overview of the Prior Art

1. Sparks (EX1005)⁶

Sparks is directed to a “distributed computing system [that] conforms to a multi-level, hierarchical organizational model.” EX1005, Abstract. According to Sparks, “[t]he model includes four distinct levels: fabric, domains, tiers and nodes that provide for the logical abstraction and containment of the physical components as well as system and service application software of the enterprise.” *Id.* Sparks does not discuss clusters or licensing.

⁶ “Sparks” refers to U.S. Pat. No. 7,590,653.

2. Bram (EX1006)⁷

Bram is entitled “Methods And Systems For Licensing Computer Software.” EX1006. Bram is generally directed to “a method of determining whether a component defined in a computer program is authorized to activate,” based on the contents of a “license control file.” EX1001, ¶ [0004].

E. The IPR Petition’s Alleged Unpatentability Grounds

Grounds	Claims	Statutory Basis	Prior Art
1	1-18	§103	Sparks, Bram

III. PETITIONERS HAVE NOT SHOWN A REASONABLE LIKELIHOOD OF PREVAILING ON ANY CHALLENGED CLAIMS

A. Petitioners’ Contrary Claim Construction Positions Before Different Tribunals Warrant Denial of the Petition

In the Petition, Petitioners take the position that they are capable of interpreting the challenged claims of the ’416 Patent under the *Phillips* standard. Specifically, while Petitioners do not propose any specific terms for construction, Petitioners allege that “[t]he analysis below in Section V proves the Challenged Claims obvious under any interpretation reasonably advanced according to the

⁷ “Bram” refers to U.S. Pat. Pub. No. 2006/0179058.

Phillips standard.” Pet. 8.⁸ Petitioners’ expert attests to his understanding that “for purposes of my analysis in this *inter partes* review proceeding, the terms appearing in the patent claims should be interpreted according to their ‘ordinary and customary meaning.’” EX1003 ¶ 31. In short, the Petition hinges on Petitioners’ position that Petitioners and their expert can interpret the claims under the *Phillips* standard and apply the prior art to the interpreted claims accordingly.

In the parallel district court litigation, however, Petitioners take a very different view of their ability to interpret the claims. Specifically, in invalidity contentions that Petitioners served on November 19, 2025, Petitioners allege that ***no fewer than eleven terms of the ’416 patent are indefinite***, claiming that each term is “invalid under 35 U.S.C. § 112 because [the term] fails to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” EX2016, 103-104.⁹ These include seven terms that appear in (or are substantially identical to terms in) all challenged independent claims. In other words, in this proceeding Petitioners purport to be able to interpret the claims based on the *Phillips* standard with reasonable certainty, and Petitioners unpatentability theories hinge on a POSITA’s

⁸ “*Phillips*,” of course, refers to the Federal Circuit’s *en banc* decision in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005).

⁹ Citations are to the stamped page numbers at the bottom right of the exhibit.

understanding of the claim terms and how the prior art allegedly discloses or renders those terms obvious. At the same time, in the district court litigation, Petitioners argue that the very same claim terms “fail[] to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Id.*

These positions are plainly inconsistent. “If a claim is indefinite, the claim, by definition, cannot be construed.” *Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1332 (Fed. Cir. 2010). Consequently, as a general rule a claim cannot be both indefinite and invalidated by the prior art. *Id.* (“a claim cannot be both indefinite and anticipated”). And there is no indication whatsoever that one of the narrow exceptions to this general rule—such as the presence of *IPXL*-type¹⁰ indefiniteness (*i.e.*, ambiguity as to whether the claim recites a method or apparatus)—is applicable here. *See Samsung Elecs. Am., Inc. v. Prisia Eng'g Corp.*, 948 F.3d 1342, 1355 n.5 (Fed. Cir. 2020) (recognizing *IPXL*-type indefiniteness as a limited exception to the general rule that indefiniteness precludes mapping of the claims to the prior art).

On these facts, the Director’s recent informative decision in *Tesla, Inc. v. Intellectual Ventures II LLC*, IPR2025-00340, Paper 18 (Director Squires November 5, 2025) (“*Tesla*”) establishes that the Petition should be denied. In *Tesla*, the

¹⁰ “*IPXL*” refers to *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1384 (Fed. Cir. 2005).

Director granted Director Review, vacated a grant of institution, and ordered that institution be denied, all because of Petitioners' inconsistent positions regarding indefiniteness. *Tesla*, 2-4. As the Director explained in *Tesla*, "when a petitioner advances different positions before the Board and a district court, that petitioner is *required* to explain why those different positions are warranted." *Id.*, 3 (emphasis in original). Here the Petition contains no explanation for the contrary claim construction positions.¹¹

Further, in *Tesla* "Petitioner argued indefiniteness in the district court and then adopted Patent Owner's plain and ordinary meaning construction from the district court litigation in its Petition." *Id.*, 4. The facts are materially similar here. In the Petition, Petitioners applied *Phillips* and effectively adopted plain meaning constructions for all terms, while in district court Petitioners argued that the same

¹¹ That Petitioners' invalidity contentions were served after the Petition was filed should not change the analysis. Petitioners presumably were aware of their indefiniteness position when they filed the Petition. Further, the invalidity contentions in which Petitioner FedEx Office and Print Services, Inc. alleged indefiniteness were filed on November 19, 2025—16 days after the Director issued the *Tesla* decision. Thus Petitioners knew or should have known of the implications of their decision to argue indefiniteness in district court.

claim terms were indefinite. As the Director pointed out in *Tesla*, “[a]llowing a petitioner to advance a claim construction before the Board when that petitioner has made inconsistent indefiniteness arguments in district court fails to further, but instead detracts from, the Office’s goal of providing greater predictability and certainty in the patent system.” *Id.* (citation omitted). Consequently, the Director concluded that “denial of institution is appropriate in this case.” *Id.*

So too here. Petitioners are required by rule to identify “[h]ow the challenged claim is to be construed.” 37 C.F.R. § 42.104(b)(3). Here, however, Petitioners have failed to meet that requirement by conditioning their Petition on a *Phillips* interpretation, while simultaneously arguing that the same claim terms fail to provide reasonable notice of their scope and thus are indefinite.

Petitioners should not be heard to argue, moreover, that they can remedy this situation via stipulation—as they have belatedly offered to do in related IPRs. First, Petitioners have had every opportunity to offer any stipulations that they think are relevant to the Director’s decision to institute. In fact, they have already filed a stipulation in this proceeding, and that one expressly leaves open the opportunity for Petitioners’ to continue to argue indefiniteness in district court. EX1013. Petitioners have long been on notice that Patent Owner would use Petitioners’ inconsistent positions as a reason not to institute, yet choose not to file a more robust stipulation. It would be deeply unfair and prejudicial to Patent Owner if Petitioners’ were

permitted to withhold their genuine positions and serially change the issues in the case through belated concessions when things do not appear to be going their way.

Second, there is no indication that Petitioners would ever agree to a stipulation that would actually resolve the central inconsistency between their district court and IPR positions. Instead, in related IPRs, Petitioners have offered to surrender invalidity arguments under § 112 (in the related district court case involving Petitioners) *only if the Board agrees to institute the IPR*. In other words, Petitioners are not unconditionally giving up either of their inconsistent positions—they are still reserving the right to tell the district court that a POSITA would not be able to understand the claims, even as it tells the Board the opposite. Rather than resolving the issue, such a self-serving stipulation only further underscores Petitioners' gamesmanship. The Petition should be denied for this independent reason.

B. Petitioners' Conclusory Arguments Fail to Establish That The Prior Art Discloses The Claimed "Clustered Computing System"

All challenged claims require a "clustered computing system" or "computing cluster." *See generally*, EX1001, cls. 1, 9, 14.¹² Petitioners' vague and conclusory

¹² For that reason, the arguments in this section apply to all claims challenged in Ground 1, the only ground in the Petition.

arguments, however, never establish that the relied upon Sparks prior art reference actually discloses these limitations.¹³

The Petition states that Sparks discloses a “distributed computing system 10” that “maybe viewed as a collection of nodes operating in cooperation with each other to provide high-performance processing.” Pet. 22 (quoting EX1005, 3:7-11). It then proceeds to assert that “[a] POSITA would have recognized that Sparks discloses, or at least renders obvious, a clustered computing system” because “it was known

¹³ The Petition also includes vague allusions to Bram’s disclosures in the analysis of the “clustered computing system” limitation. *See* Pet. 23. But the claim mapping in the Petition indisputably relies on “Spark’s distributed computing system” and the “tiers” within it to supply all “cluster” limitations. *See, e.g.*, Pet. at 15 (“It would have been obvious to a POSITA to modify Sparks’s distributed computing system based on Bram’s disclosures on licensing...”); 27 (“Sparks describes a computing node—a control node—that provides a user interface to define *properties of a tier (computing cluster)*, as explained above for [1pre] and [1a-i] (emphasis in original)); 35 (“A POSITA would have recognized that Sparks teaches initializing the computing cluster in a first computing node based on Sparks’s assignment of a first computing node to a tier (computing cluster).”).

to those of skill in the art that a distributed computing system is an example of a clustered computing system.” Pet. 22. The evidence cited, however, does not support Petitioners’ position and its conclusory arguments amount to a violation of the July 31 Memo.

Petitioners’ principal evidentiary support for its assertion that distributed computing systems are types of clustered computing systems is paragraph 76 of the declaration of Declaration of Dr. Chandrajit Bajaj (EX1003). But paragraph 76 of Dr. Bajaj’s declaration essentially parrots back the attorney argument in the Petition. EX1003 ¶ 76. It is well-settled that such conclusory expert opinion that merely parrots the petition is unreliable and insufficient to support institution. *See Xerox Corp. v. Bytemark Inc.*, IPR2022-00624, Paper 12, at 2 (PTAB Feb. 10, 2023) (designated precedential) (denying institution when expert declaration merely parroted petition and “was conclusory and added little to the assertions the testimony was offered to support); *TikTok Inc. v. NTech Properties, Inc.*, IPR2024-01339, Paper 9 (PTAB Feb. 25, 2025) (giving “little or no weight” to the testimony of the petitioner’s expert as the declaration was wholly “conclusory,” “repeat[ing], almost verbatim, the language in the Petition without any further explanation or supporting reasoning or evidence”); *American Airlines, Inc. et al. v. Intellectual Ventures I LLC*, IPR2025-01055, Paper 11 at 18 (PTAB November 21, 2025) (“Petitioner’s only cited support for this conclusory statement is testimony of its own declarant, Dr.

Easttom, which merely repeats the conclusory statement verbatim, without any explanation or additional citations to evidence. We give such conclusory, unsupported assertions by Petitioner’s declarant little or no weight.”).

Petitioners also cite two technical dictionaries and suggest that they support Petitioners’ position. Pet. 22. But Petitioners never quote the definitions or explain how they support the proposition that distributed computing systems are a type of clustered computing system. Nor does Dr. Bajaj (his treatment of the dictionaries is verbatim identical to the Petition). EX1003 ¶ 76. And the dictionaries themselves are consistent with the inverse of what Petitioners assert—*i.e.*, that clustered computing is a species of distributed computing, rather than the other way around (as Petitioners assert and rely upon in the Petition).

Further, Petitioners acknowledge that the ’416 Patent itself provides specific information on what a “clustered computing system” is, but never apply the patent’s teaching to explain how Sparks allegedly discloses such a system. Specifically, the ’416 patent states that “the term ‘clustered computing system’ refers to a computing system formed from a group of loosely coupled computing devices that cooperate *to provide the appearance that the devices function as a single system.*” EX1001, 1:11-22. Petitioners acknowledge this statement but never state whether it amounts to lexicography that defines “clustered computing system.” Pet. 22-23. Further, Petitioners assert that it “would have been apparent, or obvious, to a POSITA, [that]

each tier (including its nodes) in Sparks is likewise itself a computing cluster within the greater distributed system,” (Pet. 22) but the Petitioner never explains how the nodes within each tier “provide the appearance that the devices function as a single system” consistent with the ’416 Patent’s description of a “clustered computing system.” Instead, Petitioners merely cite the same paragraph 76 of Dr. Bajaj’s declaration, which repeats back the Petition’s arguments in circulate fashion.

In short, rather than clearly explaining what the terms “clustered computing system” and “computing cluster” mean, and showing where they can be found in the prior art, the Petition merely relies on conclusory, unreliable expert testimony. This is a violation both of Petitioners’ obligations under both 37 C.F.R. §§ 42.104(b)(3) and 42.104(b)(4), as reflected in the July 31 Memo. The Petition should be denied for this independent reason.

IV. CONCLUSION

For all of the reasons explained in the Discretionary Denial Brief and this POPR, Patent Owner respectfully submits that the Director should deny institution of the Petition.

Dated: January 22, 2026

Respectfully submitted,

/Raymond B Churchill Jr/

Ramond B. Churchill Jr. (Reg. No. 44,617)
Counsel for Patent Owner

CERTIFICATE OF SERVICE

I hereby certify that the foregoing PATENT OWNER'S PRELIMINARY RESPONSE TO THE PETITION was served on January 22, 2026, via electronic mail upon counsel of record for Petitioner at the following email addresses:

IPR39898-0049IP1@fr.com
Kenneth W. Darby, Jr.
David Hoffman

Dated: January 22, 2026

/Raymond B Churchill Jr /

Raymond B. Churchill, Jr. (Reg. No.
44,617)
Counsel for Patent Owner

CERTIFICATE OF COMPLIANCE

I hereby certify that the foregoing PATENT OWNER'S PRELIMINARY RESPONSE TO THE PETITION consists of 3,773 words, excluding the table of contents, certificate of service, this certificate of compliance, or table of exhibits. The POPR complies with the type-volume limitation of 14,000 words as mandated in 37 C.F.R. § 42.24. In preparing this certificate, counsel has relied on the word count of the word-processing system used to prepare this paper (Microsoft Word).

Dated: January 22, 2026

/Raymond B Churchill Jr/

Raymond B. Churchill, Jr (Reg. No. 44,617)
Counsel for Patent Owner