

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HS HYOSUNG ADVANCED MATERIALS CORP.,

Petitioner,

v.

KOLON INDUSTRIES, INC.,

Patent Owner.

Case No. IPR2025-00663

U.S. Patent No. 10,196,765

**PETITIONER'S RESPONSE TO PATENT OWNER'S REQUEST FOR
DISCRETIONARY DENIAL OF INSTITUTION**

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EXHIBIT LIST

EX	Description
1001	U.S. Patent No. 10,196,765 (“the ’765 patent”)
1002	File History of the ’765 Patent
1003	Declaration of Jon Rust, Ph.D.
1004	<i>Curriculum Vitae</i> of Jon Rust, Ph.D.
1005	Japanese Patent No. 2009-68549
1006	Certified Translation of Japanese Patent No. 2009-68549 (“Tamura”), prior art under at least 35 U.S.C. §102(a)(1)
1007	U.S. Pat. No. 5,558,144 (“Nakayasu”), prior art under at least 35 U.S.C. §102(a)(1)
1008	U.S. Pat. No. 4,155,394 (“Shepherd”), prior art under at least 35 U.S.C. §102(a)(1)
1009	Intentionally Left Blank
1010	European Patent Pub. No. 0405887A1 (“Buchanan”), prior art under at least 35 U.S.C. §102(a)(1)
1011	Intentionally Left Blank
1012	Certified Translation of Korean Patent Disclosure No. 10-2006-0126101 (“Chung”), prior art under at least 35 U.S.C. §102(a)(1)
1013	U.S. Pat. App. Pub. No. 2010/071826 (“Yokokura”), prior art under at least 35 U.S.C. §102(a)(1)
1014	Intentionally Left Blank
1015	U.S. Pat. App. Pub. No. 2005/0249949 (“Rowan”), prior art under at least 35 U.S.C. §102(a)(1)
1016	Intentionally Left Blank

1017	Intentionally Left Blank
1018	Intentionally Left Blank
1019	Korean Patent Disclosure No. 10-2006-0126101 (“Chung”)
1020	Intentionally Left Blank
1021	Certified Translation of PCT Publication No. WO 2009/134063 (“Kwon”), prior art under at least 35 U.S.C. §102(a)(1)
1022	Intentionally Left Blank
1023	U.S. Pat. App. Pub. No. 2003/0159768 (“Fritsch”), prior art under at least 35 U.S.C. §102(a)(1)
1024	Intentionally Left Blank
1025	Intentionally Left Blank
1026	Intentionally Left Blank
1027	ASTM International. <i>ASTM D885-01: Standard Test Methods for Tire Cords, Tire Cord Fabrics, and Industrial Filament Yarns Made from Man-Made Organic-Base Fibers</i> . ASTM International, 2001.
1028	ASTM International. <i>ASTM D885-02: Standard Test Methods for Tire Cords, Tire Cord Fabrics, and Industrial Filament Yarns Made from Man-Made Organic-Base Fibers</i> . ASTM International, 2002.
1029	ASTM International. <i>ASTM D885-03: Standard Test Methods for Tire Cords, Tire Cord Fabrics, and Industrial Filament Yarns Made from Man-Made Organic-Base Fibers</i> . ASTM International, 2003.
1030	ASTM International. <i>ASTM D885-04: Standard Test Methods for Tire Cords, Tire Cord Fabrics, and Industrial Filament Yarns Made from Man-Made Organic-Base Fibers</i> . ASTM International, 2004.
1031	ASTM International. <i>ASTM D885-06: Standard Test Methods for Tire Cords, Tire Cord Fabrics, and Industrial Filament Yarns Made from Man-Made Organic-Base Fibers</i> . ASTM International, 2006.

1032	ASTM International. <i>ASTM D885-07: Standard Test Methods for Tire Cords, Tire Cord Fabrics, and Industrial Filament Yarns Made from Man-Made Organic-Base Fibers</i> . ASTM International, 2007.
1033	Excerpts from <i>1997 Annual Book of ASTM Standards, Section 7 Textiles, Volume 07.01 Textiles (I): D 76-D 3218</i> , American Society for Testing and Materials, 1997.
1034	Intentionally Left Blank
1035	PCT Publication No. WO 2009/134063 (“Kwon”)
1036	Japanese Industrial Standard JIS L 1017 (1995)
1037	Japanese Industrial Standard JIS L 1017 (2002)
1038	ASTM D885M, available at https://standards.globalspec.com/std/782145/astm-d885m
1039	ASTM-D885M, available at https://www.documentcenter.com/standards/show/ASTM-D885M
1040	Patent L.R. 4-3 Joint Claim Construction and Prehearing Statement, <i>Kolon Industries, Inc. v. Hyosung Advanced Materials Corp. et al.</i> , 8:24-cv-00415-JVS-JDE (C.D. Cal. Feb. 20, 2025).
1041	Copy of Wood Mackenzie’s webpage providing a summary of a report entitled: “Nylon PA66 tyre yarns and fabrics Insight” and available at https://www.woodmac.com/reports/chemical-markets-nylon-pa66-tyre-yarns-and-fabrics-insight-353783/ .
1042	Copy of tire cord manufacturer Kordsa’s brochure for Twixtra® product, available at https://kordsa.com/kordsa/cdn/uploads/000005251_twixtrav2.pdf
1043	Copy of tire cord manufacturer Toray’s webpage, available at http://www.toray-hybrid.com/en/product/tirecord.html .
1044	Copy of tire cord manufacturer Teijin’s webpage, available at https://www.teijin-frontier.co.th/productdanservice/Detail/2-16-Tire-Cord-Fabric-Products .

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1046	United States District Courts' National Judicial Caseload Profile from 2025
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1048	Order Granting Hyosung Advanced's Motion to Stay Pending <i>Inter Partes</i> Review, <i>Kolon Industries, Inc. v. HS Hyosung Advanced Materials Corp., et al.</i> , Case No. 8:24-cv-415-JVS-JDE, Dkt. 149.
1049	English and Korean Copy of the Korean high court's invalidity ruling.
1050	Order Granting Motions to Dismiss, <i>Kolon Industries, Inc. v. HS Hyosung Advanced Materials Corp., et al.</i> , Case No. 8:24-cv-415-JVS-JDE, Dkt. 82.

I. INTRODUCTION

The Director should not deny institution here, as all relevant factors strongly counsel against discretionary denial. Importantly, the District Court has already stayed the parallel proceeding, which never progressed past early fact discovery. The Court's stay pending the IPR proceeding quells any concerns about inefficiencies, duplicative efforts, and conflicting decisions. And the merits are particularly strong, especially in view of Patent Owner's weak arguments presented in their POPR. Patent Owner is effectively banking on the Director's discretion to deny institution here, which would serve only to foster enforcement of an otherwise invalid patent.

Moreover, Patent Owner devotes most of its brief to mischaracterizing the prosecution history to allege substantial similarity between Nakayasu and Fritsch, references that were never before the examiner, and the examination art, Love. But Patent Owner ignores how Nakayasu and Fritsch disclose the very limitations that overcame Love, and instead focuses on trivial similarities that were well-known in the art

Finally, settled expectations are not applicable here. The '765 patent was issued about six years ago, which is not enough time for any expectations to be settled. Additionally, as the District Court found, Patent Owner has not shown that Petitioner even participated in the U.S. market with respect to hybrid fiber cords since the '765 patent has been in force. And critically, the fact that Patent Owner

delayed filing suit for **three** years after sending Petitioner a “notification letter” that it now claims settled expectations, underscores the true expectations of both parties—*i.e.*, that there was no infringement.

The record substantiates the parties’ expectations of no infringement: The complaint has been dismissed twice for failure to state a claim. The Patent Owner stipulated to stay discovery pending a ruling on the third motion to dismiss. And the District Court granted Petitioner’s motion to stay pending IPR. It would be manifestly unfair to, on the one hand, apply settled expectations against a petitioner for not challenging the validity of a patent that it does not infringe, and on the other hand, allow a patent owner to sit on its purported patent rights for **three** years after contacting the petitioner. Equity counsels a finding of no settled expectations.

On these facts, the Director should decline to exercise the Director’s discretion to deny institution and allow the validity issues to unfold at the PTAB.

II. FACTUAL BACKGROUND

Patent Owner sued Petitioner on February 28, 2024, in the Central District of California, alleging infringement of the ’765 patent. Ex. 1039 (Original Complaint, Dkt. 1). Notably, Patent Owner waited **three years** to file its infringement suit after sending its initial letter. This alone objectively indicates that Patent Owner’s expectations were in line with Petitioner’s—that the 2021 letter provided no indication that any of Petitioner’s products infringed the ’765 patent. On May 20,

2024, Petitioner moved to dismiss for failure to state a claim. In response, Patent Owner amended its complaint. On June 17, 2024, Petitioner moved again to dismiss for failure to state a claim. The district court agreed and granted Petitioner’s motion on July 26, 2024. Ex. 1040 (Dkt. 65). According to the Court, Patent Owner’s amended complaint failed to plausibly allege that Petitioner made, sold, offered for sale, or imported into the United States any infringing product. *Id.*, 7-9.

On August 9, 2024, Patent Owner filed a second amended complaint. Petitioner again moved to dismiss for failure to state a claim. The District Court dismissed the second amended complaint on September 27, 2024. Ex. 1050 (Dkt. 82). This time, the Court explained that Patent Owner “offer[ed] only threadbare recitals of the elements of a cause of action, supported by mere conclusory statements that do not suffice.” *Id.* (Dkt. 82) (internal quotation marks and citations omitted).

Patent Owner filed a third amended complaint on October 11, 2024 (Ex. 1040, Dkt. 85), which Petitioner countered with yet another motion to dismiss. Around this time, the parties agreed to stay all discovery pending the Court’s ruling on the motion. Meanwhile, Petitioner sought IPR of all asserted patents and moved to stay the District Court litigation. The Court granted the stay on April 4, 2025. Ex. 1048 (Dkt. 149). Petitioner’s motion to dismiss remains pending.

These series of events further underscore that even at the complaint stage, Petitioner was correct on its expectations that the '765 patent was not infringed. Patent Owner's complaint has now been dismissed twice for failure to state a claim. Rather than face a third dismissal, this petition thus presents a clear case where the parties expect the invalidity of the '765 patent to be adjudicated by the PTAB.

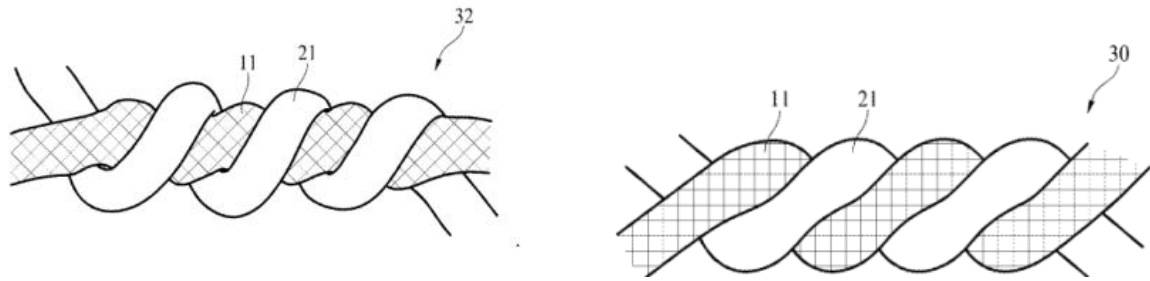
III. SECTION 325(D) WEIGHS AGAINST DENIAL

Section 325(d) weighs against denial because the Patent Office never considered the Petition's primary references, Nakayasu and Fritsch. Moreover, Patent Owner does not even dispute that Nakayasu and Fritsch disclose the very limitations that allowed the claims over the art that was considered—a “merge structure having a partial covering structure.” Patent Owner instead devotes most of its brief to discussing how Nakayasu and Fritsch are allegedly similar to the prosecution art Love in their disclosure of different yarn lengths, a limitation that the examiner repeatedly found disclosed in Love, ignoring the actual limitations that overcame the prosecution art: a “merge structure having a partial covering structure” that is a result of ***different twist numbers***. But Nakayasu and Fritsch are unlike the prosecution art because of their disclosure of different twist numbers and a merge structure having a partial covering structure, including figures that depict said structure. *See Advanced Bionics, LLC v. MED-EL Elektromedizinische Gerate GmbH*, IPR2019-01469, Paper 6 at 15 (Feb. 13, 2020) (precedential) (PO must

establish that “Petitioner relies on [the IPR art] in substantially the same manner as the Examiner cited [the prosecution art] during prosecution such that [the IPR art] discloses substantially the same information as [the prosecution art] in relevant part.”).

A. The Prosecution History

The Petition provided a detailed summary of the prosecution history. Pet. 7-12. While the application’s original claims recited an aramid yarn having a longer length (1.005 to 1.025 times) and lower twist number (0.1% to 5%) compared to the nylon yarn, the claims did not recite that the tire cord has “a merge structure having a partial covering structure.” In both the first and second rejections, the examiner noted that while Love “fails to specifically teach” that the aramid and nylon yarns have the claimed different twist numbers, the examiner found it would have been obvious “through routine experimentation.” Ex. 1002, 82, 61-62. Following the second rejection, the Applicant amended the claims to add a “merge structure having a partial covering structure” and argued that such a structure is a result of the aramid yarn having both the claimed different length *and* twist number than the nylon yarn. *Id.*, 40-45. In its response, the Applicant included two figures to distinguish from a merge structure having a partial covering structure: the left figure that has a merge structure with a fully “covering” structure and the right figure that has a merge structure where the yarns have “identical structure.” *Id.*, 39-40.



Following this amendment and response, the claims were allowed. *Id.*, 22.

Accordingly, the claims were allowed not because they merely claimed a specific range for the difference in yarn lengths, but because they claimed that the hybrid tire cord had a specific “partial covering structure” that is the result of both the difference in yarn lengths **and** twist numbers.

Patent Owner’s focus on the different yarn lengths as described in Love is therefore misleading, as it does not focus on the material differences between Nakayasu and Fritsch on the one hand and Love on the other with respect to the different twist numbers and the partial covering structure, as those were the limitations that overcame Love.

B. Nakayasu and Fritsch are not substantially the same as Love

Nakayasu and Fritsch were neither cited nor discussed by the examiner during prosecution. Patent Owner instead argues that “Petitioner’s arguments relying on Fritsch recycle the examiner’s argument based on Love that was overcome during prosecution,” specifically that Fritsch and Love allegedly provide similar disclosures

with respect to difference in yarn lengths. Request at 15-18.¹ Yet Patent Owner’s argument fails because it does not at all address Nakayasu’s disclosure of different twist numbers, and also does not address Petitioner’s arguments that both Nakayasu and Fritsch disclose a partial covering structure. Pet. 28-32. This is significant, because Love does not disclose different twist numbers nor a merge structure having a partial covering structure, which was the reason why the claims were allowed over

¹ Patent Owner also argues that Shepherd was discussed during prosecution and Chung was cited in an IDS. Request at 12 n.3. These are secondary references only relied on for Ground 2’s challenge of claim 4. And as the Petition already explained, the examiner only relied on Shepherd as a secondary reference and the applicant did not dispute the examiner’s use of Shepherd. Pet. 61. Moreover, Chung was “not a basis for rejection during examination” and, as explained in the Petition and not disputed by Patent Owner, includes specific teachings “impact[ing] patentability of the challenged claims.” *Ecto World, LLC v. RAI Strategic Holdings, Inc.*, IPR2024-01280, Paper 13 at 5; *Tesla, Inc. v. Charge Fusion Technologies, LLC*, IPR2025-00152, Paper 11 at 1 (finding examiner erred by overlooking a reference where Patent Owner does not dispute that it teaches the limitation that overcame the prior art during examination)

Love. Thus, Nakayasu and Fritsch are not substantially the same art as Love “in relevant part.” *Advanced Bionics* at 15.

Thus Patent Owner is simply wrong that Fritsch is “at best cumulative to the examiner’s consideration and reliance on Love” or that Petitioner “raises art and arguments that are substantially the same.” Request at 18. As discussed above, the examiner found that Love discloses the difference in yarn length. But the claims were allowed after the Applicant added the claim limitation “a merge structure having a partial covering structure” and argued that such a structure is the result of the claimed difference in yarn length **and** twist numbers. Ex. 1002, 39-45. The Petition thoroughly explains how Nakayasu teaches the claimed different twist numbers and how Nakayasu and Fritsch disclose a “merge structure having a partial covering structure.” Pet. 28-32. These are material differences that Patent Owner does not address.

Patent Owner’s (incorrect) argument that both Fritsch and Love do not specifically disclose the claimed range of 0.5% to 2.5% length difference for aramid and nylon is therefore irrelevant under *Advanced Bionics*. Request at 13-18. Again, the examiner twice expressly found that such a claimed length difference as disclosed by Love, which the Applicant responded by adding the “merge structure with a partial covering structure” limitation and arguing such a structure is the result of the claimed different twist numbers **and** yarn length. The aramid-nylon length

difference is therefore not “the critical claim feature” and was not the limitation that allowed “Love [to be] overcome during prosecution.” Request at 18. The claimed feature that overcame Love is instead the claimed difference in twist numbers and the resulting partial covering structure, none of which Patent Owner disputes is found in the Petition’s new art.

Patent Owner further argues that Fritsch’s disclosure of PEN/PET hybrid tire cord with a 0.9% length difference would not obviously be applied to Nakayasu’s disclosure of nylon-aramid hybrid tire cords. Request at 18-208. Again, this argument is irrelevant under *Advanced Bionics* because having different yarn lengths was not the limitation that overcame the prosecution art, instead it was the partial covering structure and claimed difference in twist numbers.

In any case, Patent Owner is wrong. Patent Owner first argues that Petitioner “brush[es] aside the criticality of the claimed materials.” Request at 18. But it is Fritsch itself that expressly states aramid-nylon hybrid tire cords will be improved by having unbalanced yarn lengths preferably between -25% and 25%, which includes the claimed range. Pet. 26-27; Ex. 1023, ¶29, Ex. 1003, ¶110. And Dr. Rust explained that the improved characteristics of Fritsch’s PEN/PET hybrid tire cord when using 0.9% length difference would also apply to nylon-aramid hybrid tire cords, including Nakayasu’s. Ex. 1003, ¶¶88-95. Fritsch therefore provides

sufficient motivation to a POSITA to apply the 0.9% length difference to aramid-nylon hybrid tire cords.

Patent Owner next argues that Dr. Rust’s opinions should be discarded in their entirety because Dr. Rust merely “parrots ... attorney arguments in the Petition.” Request at 18-19. Dr. Rust’s opinions are not parroting “attorney arguments”—just the opposite, as the Petition’s arguments were heavily reliant on Dr. Rust’s input and testimony. Dr. Rust was deeply involved in ensuring the arguments in his declaration and the petition were technically accurate and reliable. The petition arguments reflect his own knowledge and expertise.

Moreover, Dr. Rust’s opinions are not conclusory or unsupported. He relies on Fritsch and provides detailed explanations for his opinions. There is simply no basis to discard his opinions. *PLR Worldwide Sales Limited v. Flip Phone Games, Inc.*, IPR2024-00171, Paper 31 at 41 (Apr. 24, 2025) (“[W]e find that the assertions in the Petition are supported by the teachings of Hays and thus are not conclusory, thus distinguishing this situation from the one described in Xerox.”).

C. The examiner erred by overlooking the Petition art

Because Nakayasu and Fritsch were never before the examiner, and because Patent Owner does not dispute that they disclose the very limitations that overcame Love and Shepherd—*i.e.*, the claimed difference in twist numbers and a partial covering structure—the examiner erred by overlooking such art. *Ecto World, LLC*

v. RAI Strategic Holdings, Inc., IPR2024-01280, Paper 13 at 5 (May 19, 2025) (precedential) (“[A] petitioner may argue that it satisfies the second prong of *Advanced Bionics* because the asserted prior art ... includes specific teachings that impact patentability of the challenged claims.”); *Tesla, Inc. v. Charge Fusion Technologies, LLC*, IPR2025-00152, Paper 11 at 1 (finding examiner erred by overlooking a reference where Patent Owner does not dispute that it teaches the limitation that overcame the prior art during examination).

Patent Owner argues that the petition “does not explain how the examiner’s acknowledgement that Love’s failure to disclose the recited length difference was erroneous in any respect.” Request at 19. But Petitioner does not assert the examiner’s analysis of Love was erroneous (since the examiner repeatedly found the length difference disclosed in Love), but instead that the petition art is materially different from Love given its disclosure of different twist numbers and a partial covering structure. Patent Owner also argues “Petitioner presents no tenable evidence or argument that the prior art is different from the art the examiner applied or includes specific teachings that ‘impact patentability of the challenged claims.’” Request at 21 (quoting *Ecto World*). To the contrary, the petition explained in detail how Nakayasu and Fritsch disclose limitations that are not found in Love, and Patent Owner’s brief does not address these material differences. Pet. 28-32.

Accordingly, *Advanced Bionics* weighs against denial.

IV. *FINTIV* WEIGHS AGAINST DENIAL

The *Fintiv* factors all weigh strongly against denial because with all deadlines in the district court stayed, there is simply no risk of duplicative efforts and inconsistent outcomes. *Snap, Inc. v. SRK Technology LLC*, IPR2020-00820, Paper 15 (Oct. 21, 2020) (precedential) (“[T]he District Court’s stay of the litigation pending denial of institution or a final written decision allays concerns about inefficiency and duplication of efforts. See *Fintiv* at 6. The granting of a stay pending *inter partes* review has weighed strongly against exercising discretion to deny institution under *NHK*.”). As detailed below, the District Court stayed the litigation in its early stages, ***pending resolution of the IPR***—before any depositions, before any claim construction briefing, and well before the close of fact discovery. Even more compelling, Patent owner ***stipulated*** to stay discovery, after its complaint was dismissed ***twice*** for failure to state a claim. The litigation stalled because Patent Owner’s facially-deficient complaints were dismissed twice and amended thrice. Then, in October 2024, the parties **jointly** agreed to stay all discovery pending resolution of Petitioner’s motion to dismiss Patent Owner’s still-facially-deficient third amended complaint. That motion is still pending.

With no trial date in sight and much work lying ahead (*e.g.*, fact and expert discovery, the *Markman* process, dispositive motions, etc.), the Board as a practical matter would resolve the parties’ validity dispute long before the District Court

could. But even if the district court trial theoretically would occur before the statutory deadline for a final written decision, the District Court has already given the PTAB the right-of-way.

A. Factors 1 and 2: The Parallel Proceeding is Stayed and No Trial is Scheduled

Factor 1 substantially weighs against denial, and Patent Owner does not argue otherwise. *Fivtiv* at 6; *Snap* at 9. Factor 2 also substantially weighs against denial because there is no trial date. Patent Owner speculates that if the Director **denies** institution, trial in the district court would ensue before a final written decision would have been due in October 2026. Request at 24. That is irrelevant, since if institution is denied, there will not be any Final Written Decision. What matters is if institution is **granted**, in which case trial would not commence because the litigation is stayed.

Regardless, even entertaining Patent Owner's speculation, time-to-trial statistics for the Judge Selna indicate trial would not occur until mid-2027, as his median time-to-trial is 39 months. Ex. 1047; Ex. 1046 (Central District of California time-to-trial median is 28.6 months). That is substantially behind the Board's statutory Final Written Decision date of October 2026. Moreover, as the District Court explained in its Order granting Petitioner's motion to stay, the district court litigation "is in its early stages" and "there is more work ahead of the parties and the Court than behind." Ex. 1048 at 2-3. Not only has fact discovery scarcely begun,

but Petitioner has not answered a complaint because they have all been facially-deficient. Further, no depositions have been scheduled (much less taken), claim construction briefs have yet to be exchanged, and expert discovery is many months away. All told, Patent Owner's district court case would not realistically be trial-ready before October 2026, particularly because Patent Owner still has not filed a complaint stating a claim for which relief can be granted. Thus, Factor 2 counsels against discretionary denial.

B. Factor 3: Little Investment Has Been Made in the Now-Stayed Parallel Proceeding

For Factor 3, as the District Court recognized in granting a stay, the parties have **not** made substantial investments, which weighs against denial. Ex. 1048 at 2-3. Petitioner has yet to even serve its Answer to Patent Owner's complaint—not least because the Court has now twice found Patent Owner's complaint facially defective. Regardless, while contentions have been served in the parallel litigation, fact discovery had been minimal before the parties agreed to stay all discovery back in October 2024 pending motions to dismiss (Patent Owner has produced a paltry 125 documents, Defendants have collectively produced 368 documents, and no depositions have taken place), claim construction briefing had yet to begun, and no claim construction hearing will be held pending the outcome of the IPR proceedings. The Board has consistently found similar situations to weigh against denial. *See, e.g., Mercedes-Benz Group AG v. The Phelan Group, LLC*, IPR2025-00413, Paper

13 (finding that “[t]he parties have invested relatively little resources” where contentions were served but claim construction briefing had not yet begun); *Toyota Motor Corp. v. Emerging Automotive LLC*, IPR2024-00786, Paper 11 at 47 (factor 3 weighs against denial where contentions served but claim construction briefs not yet filed). Patent Owner’s claims of investment are largely based on “three rounds of motion to dismiss.” Request at 28. But those were costs imposed by Patent Owner’s own failings that explains the litigation’s lack of progress.

Patent Owner primarily focuses on Petitioner’s purported “unreasonabl[e] delay[]” in filing this petition, accusing Petitioner of engaging in gamesmanship despite timely filing its petition. Request at 25-29. Yet Factor 3’s concern with the timing of a petition must be considered in the context of the parties’ investment in the parallel proceeding. *Fintiv* at 11 (“[I]t may impose unfair costs to a patent owner if the petitioner ... waits until the district court trial ***has progressed significantly***”). And where there is no substantial investment, the timing of the petition is moot. Indeed, Patent Owner does not cite to a single Board decision holding that the timing of a petition alone is enough for Factor 3 to weigh in favor of denial. Moreover, Patent Owner does not identify any tactical advantage that Petitioner gained, and even concedes it did not why Petitioner waited. Request at 27. Here, Petitioner had hoped to avoid burdening the Board with *inter partes* review when there was little chance Patent Owner’s claims would survive. However, when it became apparent

that Patent Owner intended to continue filing deficient complaints until it received a dismissal *with prejudice*, Petitioner began diligently searching for prior art and preparing its Petition. Further, as the Patent Office has recognized, “it is often reasonable for a petitioner to wait to file its petition until it learns which claims are being asserted against it in the parallel proceeding.” *Fintiv* at 11. Petitioner filed its Petition just 5 months after receiving Patent Owner’s infringement contentions in September 2024, and 2 months after filing its Invalidity Contentions in December 2024.

C. Factor 4: There Are Substantial Differences Between the Proceedings

Factor 4 also weighs against denial because “due to the stay of the parallel District Court proceeding, the Board will likely address patentability issues prior to the District Court reaching invalidity issues at trial, thereby obviating concerns of inefficiency and conflicting decisions while providing the possibility of simplifying issues for trial in the parallel District Court proceeding.” *Snap* at 15-16. Simply put, there is no overlap of issues because the District Court will not consider patentability of the ’765 patent while this proceeding remains pending. This of course is the very reason why Petitioner has not made any stipulations, because a stipulation would ***have no effect*** with the district court stayed. Thus, the stay of the district court is equivalent to a broad stipulation—which substantially weighs against denial. In addition, this proceeding involves art that is not asserted in the District Court, and

Petitioner is asserting art in the District Court that is not at issue in this proceeding, which weighs against denial. *Snap* at 16 (finding non-overlapping art to be a “material difference[]”).

D. Factor 5: That Petitioner and Defendant are the Same Entity is Neutral

With respect to Factor 5, with the District Court stayed, this factor is “neutral or, at most, weighing slightly in favor of exercising discretion to deny institution.” *Snap* at 16. The weight of the other factors significantly outweighs Factor 5.

E. Factor 6: The Remaining Factors Weigh Against Denial

Finally, with respect to Factor 6, Patent Owner asserts the Petition’s merits are weak, but does not provide any explanation. Request at 31. Accordingly, Patent Owner has failed to “direct attention to an anticipated POPR and evidence for a discussion of the merits.” FAQ 25.

In any case, as a review of the POPR shows, Patent Owner’s arguments against the merits are weak. Patent Owner first argues a lack of motivation to combine Nakayasu and Fritsch despite clear, undisputed disclosures from Fritsch about the benefits of unbalanced nylon-aramid tire cords. Patent Owner also argues that a POSITA would not be motivated to use Fritsch’s 0.9% Coring level with aramid-nylon, even though Fritsch itself states that a preferable Coring level range for aramid-nylon is -25% to 25% and Patent Owner fails to dispute or disprove that an aramid-nylon cord with a 0.9% Coring level would be an improvement over a

balanced aramid-nylon cord, in line with Fritsch’s very own teachings about the desirability of unbalanced cords. Ex. 1023, ¶29. Finally, Patent Owner admits that Nakayasu discloses an aramid-nylon tire cord with the claimed difference in twist numbers, but merely argues that Nakayasu describes problems with it. That alone is not enough to disprove obviousness.

Patent Owner also accuses Petitioner’s expert of “regurgitat[ing] its attorney arguments.” Request at 33. To the contrary, the expert declaration and Petition have similar wording because the Petition was based on Dr. Rust’s input and testimony. Dr. Rust was deeply involved in ensuring the arguments in his declaration and the petition were technically accurate and reliable. The petition arguments reflect his own knowledge and expertise. In addition, parties are forbidden from incorporating by reference other papers into their briefs. 37 C.F.R. § 42.6(a)(3); *Cisco Systems, Inc. v. C-Cation Techs., LLC*, IPR2014-00454, Paper 12 (Aug. 29, 2014) (informative). Thus, arguments made by an expert but not made in the Petition will likely not be considered by the Board. Petitioner properly focused the expert declaration on the arguments in the Petition that are appropriately illuminated by expert testimony.

As the Board made clear in *Xerox*, it is the expert’s repeating of **conclusory** arguments that is entitled to little weight. *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9 at 15 (Aug. 24, 2022) (precedential) (“Dr. Jones does not cite to any

additional supporting evidence or provide any technical reasoning to support his statement. Thus, the cited declaration testimony is conclusory and unsupported, adds little to the conclusory assertion for which it is offered to support, and is entitled to little weight.”). Here, Dr. Rust did not make conclusory arguments—he provided detailed explanations and citations for his opinions. *See, e.g., PLR Worldwide Sales* at 41 (“[W]e find that the assertions in the Petition are supported by the teachings of Hays and thus are not conclusory, thus distinguishing this situation from the one described in Xerox.”).

Patent Owner also argues that the expert testimony “is not ‘focused’” because “it simply duplicates the Petition and adds nothing.” Request at 34. Yet if the scope of Dr. Rust’s declaration is similar to that of the Petition, then the testimony is indeed “focused” on the key issues. Indeed, Dr. Rust’s testimony is sharply focused on explaining why a POSITA would have had a rationale to combine the references, and how the combination renders the limitations obvious.

Patent Owner further argues that the Petition should be denied because it relies on Dr. Rust’s testimony to “supplement teachings missing from the references themselves.” Request at 33. Though it is unclear what “missing teachings” Patent Owner refers to (as there are none), Dr. Rust’s testimony appropriately explains how a POSITA would have understood the prior art and what a POSITA would have deemed obvious in light thereof. Longstanding Supreme Court precedent holds that

an obviousness inquiry need not rely solely on the express teachings in the prior art but can instead rely on the knowledge of an ordinary artisan. *KSR Intern. Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). Whether Dr. Rust’s testimony satisfies *KSR*’s flexible approach is more appropriately determined at the merits stage, especially since Patent Owner has not disputed the motivations to combine discussed in the Petition and Dr. Rust’s Declaration.

Finally, Patent Owner argues that because Petitioner has asserted in the District Court that certain terms are indefinite, it would be more efficient to resolve all issues of invalidity “in one forum, rather than piecemeal between here and the District Court.” Request at 34-35. To the contrary, with the District Court stayed, institution of this proceeding would provide significant efficiencies, including those Congress intended in enacting the AIA. If the Board were to find the challenged claims unpatentable, the District Court would have no need to consider indefiniteness—or even infringement. But even if the Board were to find some or all claims patentable, estoppel would greatly limit the scope of Petitioner’s invalidity case in the District Court, where Petitioner has asserted significantly more prior art than presented in this proceeding.

The cases on which Patent Owner relies are inapposite. Request at 35. In *Arthrex, Inc. v. MedShape, Inc.*, the petition purported “to rely on a construction of an allegedly indefinite claim term” and reflected the petitioner’s “best guess” as to

what the patent owner might have been arguing in the parallel proceeding. IPR2025-00053, Paper 11 at 14-15 (PTAB Apr. 25, 2025). Unlike in *Arthrex*, the Petition here does not rely on any proposed claim constructions for indefinite terms. Patent Owner also offers *Nokia of Am. Corp. v. Pegasus Wireless Innovation, LLC* for the unremarkable proposition that adjudicating § 112 disputes is the District Court’s prerogative. IPR2025-00037, Paper 14 at 13 (PTAB Apr. 25, 2025). But just as the *Nokia* Board concluded, here too, *Fintiv* militates *against* discretionary denial, even despite the outstanding § 112 issues. *Id.* at 13

For these reasons, the *Fintiv* factors significantly weigh against denial.

V. THE REMAINING FACTORS WEIGH AGAINST DENIAL

A. The Petition’s Merits are Strong

The Petition’s merits are strong as evidenced by the weakness of Patent Owner’s arguments, including in its POPR. Patent Owner argues that the Petition “recycle[s] the same ground covered during prosecution and relies extensively on an expert declaration that does nothing but parrot Petitioner’s attorney arguments.” Request at 37. As explained above, neither is true.

B. The Parties Lacked Settled Expectations

The ’765 patent was issued February 5, 2019, about 6 years before this petition was filed. The ’765 patent has therefore “not been in force for a significant period of time” and thus “has not developed strong settled expectations that favor discretionary denial.” *Cambridge Industries USA, Inc. v. Applied Optoelectronics*,

Inc., IPR2025-00434, Paper 11 at 2-3 (finding patent issued in 2019 lacked settled expectations). Moreover, Patent Owner forfeited any argument that the age of '765 patent has settled expectations. Despite the fact that the Director's first application of settled expectations issued on June 6, 2025, *iRhythm, Inc. v. Welch Allyn, Inc.*, IPR2025-00363, -00374, -00376-78, Paper 10 at 3 (PTAB June 6, 2025), Patent Owner did not even mention the age of the '765 patent or how long it had been in force.

There are additional factors that indicate the parties lacked a settled expectation.

First, Petitioner's actions reveal its settled expectations. Upon receiving Patent Owner's so-called "notification letter" listing a bevy of patents and no accused products, Petitioner immediately challenged the validity of one of the Korean patents directed to hybrid aramid-nylon tire cords because it expected the patent to be invalidated. However, Petitioner refrained from launching a preemptive strike against the '765 patent in the United States because it had no expectation of being sued for patent infringement since it had yet to enter that market. Over the next ***three years of radio silence*** regarding the '765 patent, Petitioner's belief that Patent Owner would not attempt to enforce the patent against Petitioner solidified. And when Patent Owner ultimately filed suit in February 2024, Petitioner immediately sought to dismiss Patent Owner's baseless claims. The two dismissals

(a third pending) and Patent Owner's agreement to stay fact discovery confirms Petitioner's expectations. Though Petitioner had expected to resolve the parties' dispute without burdening the Board, Patent Owner repeatedly filed facially-deficient complaints even as the time bar approached. Petitioner could wait no longer.

Thus, Patent Owner's assertion of settled expectations based on the letter rings false. Request 39-40. Yet Petitioner never had any expectation that such rights were enforceable, not least because Petitioner was a foreign company who had yet to enter the U.S. market and so the '765 patent was not "applied in a petitioner's particular technology space" for at least several years of the patent's enforcement period. *Intel Corp. v. Proxense LLC*, IPR2025-00327, Paper 12 at 3. And as the District Court has held, the February 2021 letter was insufficient to put Petitioner on notice of Patent Owner's rights to sustain a claim of indirect or willful infringement. Ex. 1050 at 5 (dismissing Patent Owner's indirect infringement, willfulness, and pre-suit damages claims). Moreover, four years is not enough time for any expectations to have formed. *See Cambridge*.

Second, Patent Owner asserts that Petitioner knew of the related '663 patent because it was cited and discussed during prosecution of an application by Petitioner that was later abandoned. Request at 37-38. Yet the prosecution of Petitioner's application created unsettled expectations for the '663 patent. In particular,

Petitioner's application similarly claimed a nylon-aramid tire cord with unequal lengths. Ex. 2011, 56-58. On March 18, 2022, the examiner rejected Petitioner's claims in view of both the '663 patent and Fritsch. *See, e.g.*, Ex. 2011, 67-69. This led Petitioner to expect that the '663 patent was likewise invalid due to the teachings of Fritsch.

Third, as Patent Owner acknowledges, Petitioner filed a challenge in 2022 against the Korean counterpart of Patent Owner's '731 patent asserting Tamura, Fritsch, and Rowan. Request at 24-25 (citing Ex. 2006). The Korean High Court has since agreed with Petitioner and found the Korean counterpart invalid. Ex. 1049. While the '731 patent and its Korean counterpart are not related to the '765 patent, they similarly claim a hybrid nylon-aramid tire cord where the individual nylon and aramid yarns are primarily twisted, and then secondarily-twisted together. The '765 patent further claims different yarn lengths, which are described in Fritsch. Thus, Petitioner's early and successful challenge to the '731 patent shows a lack of settled expectations as to the validity of the '765 patent.

Finally, compared to other industries for which patents are challenged, the tire cord industry is relatively less competitive and experiences fewer invalidity and infringement disputes. As a result, expectations take longer to become established compared to other fields. Indeed, prior to the litigation brought by Patent Owner, both Petitioner and Patent Owner had never been parties to a patent infringement

lawsuit or an IPR proceeding. And the other suppliers of tire cord in the market, including Shenma, Kordsa, Toray, Teijin, and Indorama Ventures, have likewise never appeared before the PTAB. Exs. 1041-45. The tire cord industry is simply not one where expectations are easily settled by robust enforcement of patent rights.

C. Compelling economic interests weigh against denial

Lastly, Patent Owner argues that institution will “unnecessarily delay Patent Owner in enforcing its intellectual property rights and allow Petitioner to continue to attempt to take business away from Patent Owner and plague the U.S. market with infringing products.” Request at 40.

Patent Owner’s allegations are not supported by any evidence. The District Court has already found that Patent Owner’s complaint is facially deficient in alleging that Patent Owner directly and indirectly infringes the ’765 patent, or even participates in the U.S. market. Ex. 1050 (“The Court already found that the import records do not show that the Hyosung Defendants imported HTC comprising aramid and nylon, as Kolon alleges.”).

Moreover, Patent Owner merely alleges purely private economic interests based on an unsupported assumption that its patents are valid and infringed—this is not a compelling public interest. Second, Patent Owner cannot claim that it is prejudiced from any supposed delay in enforcement, as Patent Owner did not even seek a preliminary injunction at the outset of the district court litigation to address

any concern about lost profits. Third, in October 2024, Patent Owner *agreed* to stay fact discovery pending a ruling on Petitioner's fourth motion to dismiss. Fourth, the inability to assert a plausible claim against Petitioner has been the main source of delay in Patent Owner's enforcement attempt. Finally, any alleged prejudice from continued competition between Petitioner and Patent Owner is mitigated by the fact that there are other suppliers of tire cord in the market, including Shenma, Kordsa, Toray, Teijin, and Indorama Ventures. Exs. 1041-45.

Indeed, there are compelling economic interests in adjudicating the validity of patents that allegedly target Petitioner's products. To allow Patent Owner to extract licensing fees on an invalid patent against Petitioner would be a significant, unjustified cost to not only Petitioner, but Petitioner's customers who would bear the brunt of such fees.

VI. CONCLUSION

For these reasons, the Director should not exercise her discretion to deny and should submit this Petition to the panel for review of its merits.

Date: July 16, 2025

Respectfully submitted,

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**CERTIFICATE OF COMPLIANCE WITH
TYPE-VOLUME LIMITATION, TYPEFACE REQUIREMENTS,
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1. This paper complies with the type-volume limitation of 14,000 words, comprising 5,987 words, as counted using the Microsoft Word software that was used to prepare this paper, excluding the parts exempted by 37 C.F.R. § 42.24(a).

2. This Petition complies with the general format requirements of 37 C.F.R. § 42.6(a) and has been prepared using Microsoft® Word in 14-point Times New Roman.

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that on July 16, 2025, true and correct copies of the foregoing document were served via electronic mail to Patent Owner's counsel of record:

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