

Petitioner's Brief In Opposition to Discretionary Denial
IPR2025-01029 (U.S. Patent No. 8,863,319)

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

REVELYST SALES LLC
Petitioner

v.

BRAINGUARD TECHNOLOGIES INC.
Patent Owner

IPR2025-01029
U.S. Patent No. 8,863,319

PETITIONER'S BRIEF IN OPPOSITION TO DISCRETIONARY DENIAL

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TABLE OF EXHIBITS

Exhibit	Description
1001	U.S. Patent No. 8,863,319 (USP319)
1002	Declaration of Dr. Stefan Duma
1003	Prosecution History for U.S. Patent No. 8,863,319 (Knight-319-FH)
1004	U.S. Patent Pub. 2012/0198604 (Weber)
1005	Int'l Patent App. Pub. No. WO 2001/045526 (VonHolst)
1006	Int'l Patent App. Pub. No. WO 2011/139224 (Halldin)
1007	U.S. Patent Application Publication No. 2013/0122256 (Kleiven)
1008	Reserved
1009	U.S. Patent Application Publication No. 2004/0250340 (Piper)
1010	U.S. Patent Application Publication No. 2006/0059606 (Ferrara-2006)
1011	U.S. Patent No. 6,996,856 (Puchalski)
1012	U.S. Patent No. 10,238,162 (Knight-162)
1013	Prosecution History for U.S. Patent No. 10,238,162 (Knight-162-FH)
1014	U.S. Provisional Application No, 61/462914 (WeberProv)
1015	U.S. Provisional Application No. 61/333817 (HalldinProv)

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1016	U.S. Patent Application Publication No. 2008/0066217 (Depreitere)
1017	U.S. Patent No. 3,872,511 (Nichols)
1018	U.S. Patent Application No 2007/0190293 (Ferrara-2007)
1019	U.S. Patent Application No. 2007/0068755 (Hawkins)
1020	Int'l Patent App. Pub. WO 2008/046196 (Cripton)
1021	Pons-Poblet, <i>The Vierendeel Truss: Past And Present Of An Innovative Typology</i> , 15 Arqitetura Revista 193 (2019) (Pons-Poblet)
1022	M. Kis et al, Rotational Acceleration Measurements –Evaluating Helmet Protection, Can. J. Neurol. Sci. Vol 31, pp: 499-503 (2004) (Kis-2004)
1023	Int'l Patent App. Pub. No. WO 1996/014768 (Phillips)
1024	U.S. Patent Application Publication No. 2001/0032351 (Nakayama)
1025	Newman, Modern Sports Helmet – Their History, Science, and Art (2007) (Newman)
1026	Kleiven, A Parametric Study of Energy Absorbing Foams For Head Injury Prevention, Royal Institute of Technology, Paper Number 07-0385 (Kleiven-2007)

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Exhibit	Description
1027	Reserved
1028	Aare, A New Laboratory Rig for Evaluating Helmets Subject to Oblique Impacts, Traffic Injury Prevention, 4:240–248, (2003) (Aare-2003)
1029	Reserved
1030	Reserved
1031	Bosch, Crash helmet testing and design specifications, Eindhoven University of Technology, 2006 (Bosch)
1032	Mills & Gilchrist, Bicycle Helmet Design, Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications, Vol. 220, No. 4, p. 167 (2006) (Mills-2006)
1033	Smith, Diffuse Axonal Injury in Head Trauma, J Head Trauma Rehab., Vol. 18, No. 4, pp. 307–316, 2003 (Smith-2003)
1034	Jans, Bike Helmet Anatomy, https://www.jans.com/anatomy-of-a-bike-helmet?srsltid=AfmBOooriodHXEC54CbWtD0foK5WSXu8-gN0vaAh1lq96kCKdGHJ68FJ (Jans)
1035	Reserved

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Exhibit	Description
1036	International Polymer Solutions Inc., Polycarbonate, https://www.ipolymer.com/pdf/Polycarbonate.pdf (Intl-Polymer-Solutions)
1037	Universal Foam Products, Physical Properties of Expanded Polystyrene, https://univfoam.com/wp-content/uploads/2015/07/EPS-Data-Sheet.pdf (Universal-Foam-Products)
1038	Duma, <i>Analysis of Real-time Head Accelerations in Collegiate Football Players</i> , 15 Clin. J. Sports Med. 3 (2005) (Duma-2005)
1039	Ommaya, <i>Chapter 13: Biomechanics of Head Injury: Experimental Aspects</i> , in <i>The Biomechanics of Trauma</i> 245 (1985) (Ommaya-1985)
1040	Viano, <i>Injury Biomechanics Research: An Essential Element in the Prevention of Trauma</i> , 22 J. Biomechanics 403 (1989) (Viano-1989)
1041	Reserved
1042	Reserved
1043	Reserved
1044	Reserved

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1045	Reserved
1046	Reserved
1047	U.S. Patent Application Publication No. 2004/0117896 (Madey)
1048	Reserved
1049	EPSOLE, <i>What Is EPS Material: The Complete Guide to EPS Material</i> (April 15, 2024), https://epssole.com/what-is-eps-material/ (Epsole)
1050	Reserved
1051	Notice of Petitioner's <i>Sotera</i> Stipulation
1052	Order Granting Renewed Motion to Stay Pending IPR, Longitude Licensing Ltd. v. Amazon.com, Inc., No. 8:23-cv-00039-JWH-DFMx, D.I. 80 (C.D. Cal. Feb. 26, 2024).
1053	Order Granting Defendants' Motion to Stay Pending Completion of USPTO Inter Partes Review Proceedings and Denying Defendants' Motion to Sever Non-Patent-Related Claims, C.R. Laurence Co. v. Frameless Hardware Co., No. 2:21-cv-01334-JWH-RAO, D.I. 122 (C.D. Cal. Dec. 9, 2022)

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1054	Order Conditionally Granting Comcast's Motion to Stay, Entropic Commc'ns LLC v. Cox Commc'ns Inc., No. 2:23-cv-01049-JWH-KES, D.I. 366 (C.D. Cal. Feb. 12, 2025)
1055	Order Granting Stipulation Regarding Dismissal of Claims Related to U.S. Patent No. 8,863,319, BrainGuard Technologies, Inc. v. Revelyst Sales LLC, No. 8:24-cv-2652-JWH-ADS, D.I. 55 (C.D. Cal. Oct. 2, 2025)
1056	Defendant's Civil L.R. 7.1-1 And Fed. R. Civ. P. 7.1 Notices of Interested Parties, BrainGuard Technologies, Inc. v. Revelyst Sales LLC, No. 8:24-cv-2652-JWH-ADS, D.I. 26 (C.D. Cal. Mar. 8, 2025)
1057	U.S. App. No. 15/394567 IDS (Dec. 30, 2016)
1058	U.S. App. No. 15/394567 IDS (Aug. 25, 2017)
1059	Bell Sports Inc. Patent Publication List
1060	Reserved
1061	The History of Mips, https://mipscorp.com/about-mips/history/

I. INTRODUCTION

The strong anticipation and obviousness Grounds of the Petition warrant institution to address material error at the Office in allowing the challenged claims of U.S. Patent No. 8,863,319 (the “’319 Patent” or “Challenged Patent”). The Office rejected similar claims *five times* in a family prosecution, but failed to issue even a single prior art rejection in prosecution of the Challenged Patent. As the six Grounds of the Petition make clear, the Challenged Claims were taught in the prior art, including disclosure of Von Holst that was before the Office but the Examiner overlooked. Patent Owner’s (“PO”) merits arguments are not only conclusory but expressly contradicted by the art, and it would be an efficient use of the Board and parties’ resources to correct the Office’s material error and evaluate the unpatentability of the Challenged Patent in IPR.

None of the *Fintiv* factors PO invokes favors denial. The ’319 Patent is not currently subject to parallel litigation because PO dismissed its claims against Revelyst with prejudice. PO has refused, however, to extend a covenant not to sue to real-party-in-interest Mips AB (“Mips”), which has customers other than Revelyst and thus a clear interest in challenging the patent. The ’319 Patent is also related to four other patents that are subject to that litigation and challenged in parallel IPRs, and parallel review of it would be an efficient use of the Board’s resources. In the pending litigation, there is no trial date, the district court is very likely to grant a stay

upon institution, the case is in its early stages, and Petitioner has provided a *Sotera* stipulation. And Petitioner timely filed this IPR (and four related IPRs) more than five months before its statutory deadline and within three months of PO's identification of claims and infringement contentions. PO's discussion of the *Fintiv* factors relies on skewed or incomplete information and cannot overcome the simple fact that an early-stage parallel district court case does not justify discretionary denial.

Additional factors likewise favor institution. The Petition's merits are exceptionally strong—with multiple anticipation and two-reference obviousness Grounds. And though the Challenged Patent is 11 years old, PO has known for nearly 10 years that the Office rejected substantially similar claims. PO's brief also asserts an economic and public health benefit in the claimed technology, but ignores that Mips is the true innovator. As reflected in the Von Holst and Halldin prior art in the Grounds, Mips scientists have been researching and developing solutions in this field since well before the Challenged Patent, and Mips' customers (which include Revelyst) have commercialized products and been market leaders for over a decade. PO, in contrast, has no commercial product, no history of marking, no prior assertion, and no use of the Challenged Patent. PO had no settled expectation of avoiding IPR; if anything, Revelyst and Mips reasonably expected not to face assertion of such invalid claims.

Petitioner respectfully requests the Director reject PO's request for denial.

II. MATERIAL ERROR DURING PROSECUTION WEIGHS STRONGLY AGAINST DENIAL

This IPR should be instituted because the Office committed material error during prosecution. This alone supports institution, as “it is an appropriate use of Office resources to review [such] potential error,” even if other factors favor denial. *Taiwan Semiconductor Mfg. Co. v. Marlin Semiconductor Ltd.*, IPR2025-00847, Paper 11, 4 (P.T.A.B. Sept. 3, 2025); *see Anthony Inc. v. ControlTec LLC*, IPR2025-00559, Paper 12, 2 (P.T.A.B. July 16, 2025).

As the Petition makes clear through *six Grounds*, the Challenged Claims should not have been allowed. The alleged problem—*injury from rotational forces—and solution—helmets that allow relative sliding to absorb such forces—*were extensively discussed and disclosed in the prior art. *See, e.g.*, Pet. 4-20. Notwithstanding, prosecution of the Challenged Patent was limited, with *zero* prior art rejections. *See* Ex.1003, 97-100, 106-111, 160-163. The patent issuing from Von Holst (a published PCT application) was on an IDS and includes the same disclosure of shell layers and “sliding layers” as the claims. Ex.1003, 83 (IDS citing U.S. Pat. No. 6,658,671); Pet. 44-58. But the Examiner failed to substantively consider this disclosure, which was material error. *See, e.g., Carbyne, Inc. v. Tritech Software Sys.*, IPR2025-00959, Paper 11, 2 (P.T.A.B. Oct. 3, 2025) (material error

where Examiner did not analyze IDS reference disclosing limitations purportedly missing from prior art).

Material error by the Examiner of the Challenged Patent is confirmed by the fact that two different Examiners rejected nearly identical claims PO pursued in a separate family *five times* before allowing materially narrower claims. Like the Challenged Patent, U.S. Patent Application No. 13/554,563 (“the ’563 Application”) claimed priority to U.S. Patent Application No. 61/510,401 (“the ’401 Provisional”). And like with the Challenged Patent, in the ’563 Application, PO pursued claims to helmets with outer, middle, and inner shell layers connected through “energy and impact transformer layer[s]” “configured to absorb energy” and “allow[] the [outer/middle] shell layer to rotate relative to the [middle/inner] shell layer.” Ex.1013, 68 (cl. 2). The initial claims of the application that led to the Challenged Patent recited *substantially similar* limitations with minor variations such as reciting layers “operable to” versus “configured to” absorb energy and that “slide” versus “rotate.” Ex.1003, 68 (cl. 1).

But *unlike* the Examiner of the Challenged Patent, two different Examiners of the ’563 Application rejected those similar claims *five times*, citing *nine* prior art references and advancing *four* anticipation grounds and *twelve* obviousness grounds. Ex.1013 at 118-126, 171-174, 232-237, 257-263, 314-321. PO thereafter had to materially narrow its claims to recite specific structural and functional

features that PO has not accused Petitioner of infringing, including a particular arrangement of diagonal and parallel elastomeric trusses and layers filled with fluid or gel. *See, e.g.*, Ex.1012, cl. 1.

As the Office has repeatedly explained, actual or even potential material error such as this—where a reference on an IDS was not substantively discussed but discloses the claims, and other parts of the Office found similar claims unpatentable—favor referral to the Board. *See, e.g., Carbyne*, IPR2025-00959, Paper 11, 2; *ClearCorrect Operating LLC v. Align Tech., Inc.*, IPR2025-00814, Paper 14, 3-4 (P.T.A.B. Aug. 29, 2025) (evidence of material error where Board found similar claims unpatentable in IPR and where claims similar to broad claims allowed in parent were rejected over prior art in children); *Padagis US LLC v. Neurelis, Inc.*, IPR2025-00464, Paper 12, 2-3 (P.T.A.B. July 16, 2025) (material error concern where examiner reached different conclusion regarding priority date than Board in IPR finding unpatentability of related patent); *Alliance Laundry Systems, LLC*, PGR2025-0027, Paper 9, 2 (P.T.A.B. July 17, 2025) (Examiner “did not apply any art or reference during prosecution, despite the existence of PTAB proceedings of related patent”); *Samsung Elecs. Co. Ltd. v. Wilus Institute of Standards & Tech. Inc.*, IPR2025-00933, Paper 11, 3-4 (P.T.A.B. Oct. 10, 2025) (evidence of material error where Examiner overlooked disclosures of references); *FreightCar America, Inc. v. National Steel Car Ltd.*, IPR2025-01046, Paper 20, 2-3

(P.T.A.B. Oct. 10, 2025) (finding material error where Examiner overlooked teachings of IDS reference). Here, like in those cases, the Examiner's overlooking of material prior art and inconsistent decisions at the Office strongly support referral.

III. THE *FINTIV* FACTORS WEIGH IN FAVOR OF REFERRAL

None of the six factors from *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (P.T.A.B. Mar. 20, 2020), supports discretionary denial in this case. Patent Owner's arguments to the contrary misrepresent or ignore the facts.

A. *Fintiv* Factor 1: A stay is likely if this IPR is instituted

Petitioner will move for a post-institution stay, and the District Court is likely to grant it, so Factor 1 weighs strongly against discretionary denial. Judge Holcomb, who is presiding over the parallel district court litigation, has found “[t]here is a ‘near uniform line of authority [in C.D. Cal. supporting that] after the PTAB has instituted review proceedings, the parallel district court litigation ordinarily should be stayed.’” Ex.1052, 5 (quoting *Versata Software, Inc.v. Configit A/S*, 2022 WL 3598158, at *3 (C.D. Cal. Apr. 27, 2022)). Consistent with this, Judge Holcomb routinely grants post-IPR-institution stays. *E.g., id.* at 5-6, 8 (granting stay when IPR reached only subset of claims); Ex.1053 (granting stay of patent and non-patent claims); Ex.1054 (post-Markman stay when IPR instituted on subset of claims).

Patent Owner states Petitioner had not yet sought to stay nor indicated it would request one. Paper 10 at 3. But Patent Owner never asked Petitioner's position:

Petitioner *will seek* a stay if IPR is instituted, and it is very likely to be granted.

B. *Fintiv* Factor 2: Any district court trial is likely to occur after a final written decision

There is no trial date set in the parallel litigation, so Factor 2 also weighs against discretionary denial. PO's claim there "is" a trial date (Paper 10, 5) is wrong. As of this brief, there is *no schedule* in the parallel litigation.

Relevant median C.D. California trial statistics confirm trial is unlikely to occur before FWDs, and PO's contentions otherwise are incorrect. Paper 10, 3. Over the past three years, the average median time to trial in C.D. California was 27.7 months. *See* Ex.2003 $((25.8 + 29.6 + 27.8)/3 = 27.7 \text{ months})$.¹ This would place trial around March 2027, after the expected January 2027 final written decision date. PO cites statistics from the last six years that include an outlier during the pandemic of only 17.4 months (12-month period ending March 1, 2021) and ignores that median time to trial has increased each year by multiple months. Paper 10, 3-4; Ex.2003. Using more recent data, trial is likely to occur after FWD and Factor 2 weighs against denial.² *Røde Microphones, LLC v. Zaxcom, Inc.*, IPR2025-00557,

¹ Average of the past two years' median is greater, at 28.7 months. Ex.2003.

² PO also ignores that the proper starting point is the date of the Second Amended Complaint, which PO filed over four months after the original complaint to correct

Paper 11 at 2 (P.T.A.B. July 17, 2025) (no denial where no trial date and statistics estimated trial one month after FWD); *Alliance*, PGR2025-0027, Paper 9, 2 (no denial where “no scheduled trial date,” little investment, and high likelihood of stay).

C. *Fintiv* Factor 3: The district court case is in its early stages and Petitioner filed its IPR early in the case

Very little investment has been made in the district court litigation to date, and the district court has issued no substantive orders. The parties have exchanged contentions and made initial document productions, but discovery has just begun, no depositions have been noticed, and there have been no hearings or contested motions before the court. The parties began briefing claim construction for just two terms of the '319 Patent, but they did not file responsive briefs or hold a Markman hearing because the subject patent was dismissed from the case against Revelyst. Ex.1055.

The Court did not schedule deadlines past the now-cancelled October 22, 2025 Markman hearing, and there is currently no schedule. Ex.2006, Ex.1055. The parties will not submit schedule proposals until October 22, and the Court will hold a conference October 31, 2025. PO's schedule estimates (Paper 10 at 6) are thus speculative. Regardless, even if discovery progresses, PO cites no reasonable possibility of expending significant judicial and party resources before an institution

personal jurisdiction and venue issues, delaying initiation of the case. Measuring from this date (March 2025) extends expected trial later by at least four months.

decision in January 2026, and far more resources (through fact and expert discovery, briefing, and trial) will be expended after that date. As discussed in Factor 1, if IPR is instituted, a stay is likely after January 2026 in any event.

Particularly in this context, PO's allegations of "delay[]" ring hollow. Paper 10, 7. This Petition (along with four others challenging a total of 67 claims) was filed five months *before* the one-year deadline of 35 U.S.C. § 315(b), approximately four months after PO filed the operative amended complaint, and less than three months after PO's identification of asserted claims and infringement contentions. *See* Ex.1052, 7 (granting stay where petitions timely filed six months after litigation). Far from delaying, Petitioner filed this IPR early in the case, and at a time that has avoided substantial overlap or expenditure of resources.

Nor can PO rely on purported "delay" or "settled expectations" based on a single citation of the Challenged Patent by one of Petitioner's affiliates in an IDS to support discretionary denial. Paper 10, 7, 17-18. Bell Sports Inc.'s citation of the '319 Patent in an IDS in 2016 among dozens of other references (and in just one of its hundreds of patent applications) did not give PO any settled expectation that it would not be challenged. Ex.1057; Ex.1058; Ex.1059 (Bell Sports patent applications). Indeed, PO has offered no evidence Bell did or should have expected assertion of the '319 Patent before BrainGuard filed suit. This is confirmed by the fact that PO recently *dismissed its infringement claim with prejudice* and

unilaterally granted Petitioner and its Affiliates a covenant not to sue on that patent. Ex.1055. PO cannot reconcile its effective acknowledgement it had no meritorious infringement claim with its suggestion Petitioner should have anticipated suit.³

D. *Fintiv* Factor 4: The claim, grounds, arguments and evidence in the IPR proceeding do not overlap with the litigation

After filing its discretionary denial brief, PO voluntarily dismissed with prejudice the '319 Patent from the district court litigation. There are accordingly *no overlapping* claims/Grounds between this IPR and the district court proceeding. *ETN Capital, LLC v. FBA Operating Co.*, IPR2024-01445, Paper 14, 11 (P.T.A.B. Feb. 28, 2025) (where patent dismissed from litigation “concerns about inefficiency and duplication of efforts are not merely allayed, but are instead obviated”); *Nokia of Am. Corp. v. Iarnach Techs. Ltd.*, IPR2024-00899, Paper 19, 61 (P.T.A.B. Dec. 13, 2024) (dismissal of patent in litigation ensures no overlap and favors institution).

E. *Fintiv* Factor 5: There is not complete overlap of the parties

Petitioner Revelyst Sales LLC is a defendant in district court litigation, but real-party-in-interest Mips AB (“Mips”) is not. Mips is a supplier and licensor of Petitioner Revelyst and is indemnifying Revelyst in the parallel litigation. Ex.1056. Mips has licensed its technology, which BrainGuard accuses of infringement, to

³ As discussed below, IPR is still warranted because the covenant does not resolve all disputes related to the '319 Patent for all real-parties-in-interest.

other helmet manufacturers, and therefore has an interest in confirming the unpatentability of the Challenged Patent in this IPR.

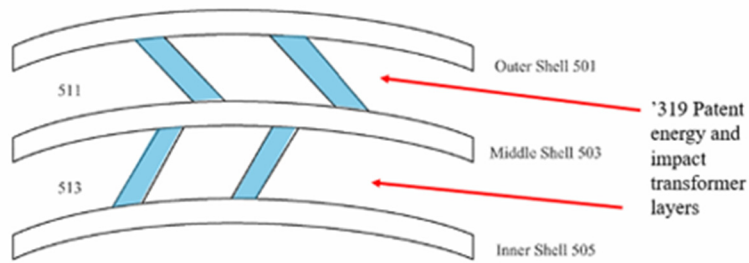
PO's recent dismissal of the '319 Patent from the parallel litigation against Revelyst evidences why discretionary denial is not appropriate. After filing its discretionary denial brief here but before the district court could consider Revelyst's claim construction position on two claims of the patent, BrainGuard elected to unilaterally dismiss its claims of infringement of the '319 Patent and to grant Revelyst and its Affiliates a covenant not to sue to resolve its counterclaims. *See* Ex.1055. But BrainGuard *declined* to extend such a covenant to *Mips* with respect to Mips' other customers. Factor 5 thus weighs strongly against discretionary denial, because real-party-in-interest Mips is not a party in the parallel litigation.

F. *Fintiv* Factor 6: The merits of Petitioner's challenge are exceptionally strong

Factor 6 strongly weighs against discretionary denial because the merits of the Petition are exceptionally strong. The Petition identifies *six Grounds*, supported by a preeminent expert in the field, confirming that every Challenged Claim is unpatentable. These Grounds—including anticipation and two-reference obviousness Grounds—are consistent with the fact that different examiners rejected similar claims in another of PO's applications, evidencing material error. *See* § II.

For example, the '319 Patent claims helmets with *outer*, *middle*, and *inner*

shell layers and “energy and impact transformer layers” that allow sliding.



Ex.1001, Fig. 5⁴; Pet., 76. The prior art discloses the *same thing*:

Weber, Ex.1004, Fig. 4	Von Holst, Ex.1005, Fig. 3b	Kleiven, Ex.1007, Fig. 2(d)
Fig. 4	FIG.3b	

The merits arguments in PO’s discretionary denial brief tellingly omit multiple material disclosures of the prior art and arguments in the Petition.

First, Weber (Grounds 1 and 2) discloses the claimed “sliding.” Weber explains its dampers allow for “lateral or rotational displacement,” or “controlled internal omnidirectional relative displacement...including relative rotation and translation....” Ex.1004, [0047], [0010]. This is fully consistent with the ’319

⁴ All annotations added unless stated.

Patent itself, which includes an example of “dampers” that allow relative sliding without further implementation details. *See* Pet. 21, 31, Ex.1001, 10:58-60, 10:41-48, 2:28-32. PO argues Weber's reference to dampers that allow shells to “move relative to” each other is insufficient because, purportedly, “[m]ov[ing] relative to each other’ is not sliding.” Paper 10 at 12. Tellingly, however, PO does not explain the basis for its contention or, in the context of the '319 Patent, how sliding purportedly differs from relative movement under the claims. In fact, PO's conclusory assertion is inconsistent with the '319 Patent, which uses “move relative to” and “slide relative to” synonymously. Pet., 11 n.2; Ex.1001, 8:62-9:3; 9:4-12. Regardless, PO's brief does not address the full Grounds, including parts of Weber that disclose lateral or rotational displacement (sliding) consistent with the claims. Pet., 31-32.⁵

Second, as the Petition makes clear, Von Holst's (Grounds 3 and 4) sliding layers both connect other layers and absorb energy. Von Holst's shell layers are

⁵ PO also references that Weber's dampers are “fixedly-attached to the liners” and vaguely suggests that means “Weber's system does not slide.” Paper 10, 12.

Again, PO does not explain its argument. In any event, the '319 Patent describes Figure 5 as both having trusses attached to the layers ***and*** allowing sliding, and PO identifies no inconsistency between the two. *See* Ex.1001, 8:39-9:12, Fig. 5.

“connected... through” the “sliding layers” that are positioned between them. Pet., 48, 50. As the '319 Patent explains, “connection...through” for purposes of the patent can be direct or indirect, and includes through intermediate layers. Pet., 28; Ex.1001, 8:33-38, 10:27-32, Fig. 5. PO's note that Von Holst *also* has what it calls “connecting members,” does not change this disclosure, as PO nowhere explains why Von Holst's layers cannot be connected in multiple ways. Paper 10, 13; *see* Pet., 48 (“additional[]” disclosure of connecting members). In fact, the Challenged Patent acknowledges there may be “supplement[al]... connection” in *addition* to an energy and impact transformer layer that connects shell layers. Ex.1001, 8:33-38.

The Petition also demonstrates Von Holst's sliding layers absorb energy through the claimed relative sliding and friction. *See* Pet., 49; Ex.1005, Abstract, 4:15-17, 5:31-34, 6:35-7:10, Figs. 4-6, cls. 1, 4, 4:32-34, 6:8-10, 7:38-8:2. PO wrongly argues *only* Von Holst's connecting member absorbs energy. Paper 10, 13. That the connecting member absorbs energy, however, does not mean the sliding layer does not. Von Holst teaches its sliding layer (made with, e.g., fluids like oil or air) allows relative movement and causes friction, which those of ordinary skill in the art understood absorbs energy. Ex.1005, 4:32-34, 6:8-10, 7:38-8:2; Pet., 49; Ex.1002, ¶¶164-165. This is supported by Von Holst, which teaches these well-known energy-absorbing techniques. *See* Pet., 49; Ex.1005, 6:8-10 (“One possibility, for example, is to have lower friction in the outer sliding layer than in

the inner.”). PO’s contrary argument is inconsistent with the ’319 Patent, which acknowledges that sliding movements can absorb energy as heat (i.e. via friction) and fluid can absorb energy. *See, e.g.*, Ex.1001, 8:67-9:3 (transforming energy to heat via sliding); 6:35-37 (fluid as absorptive/dissipative material). Regardless, to the extent Von Holst does not disclose connection or absorption (it does), Ground 4 combines it with Halldin’s fixation members, which directly connect layers, allow relative sliding, and “absorb energy by deforming in an elastic semi-elastic or plastic way.” Pet., 60-61 (quoting Ex.1006, [0043]). PO does not address this disclosure.

Third, Kleiven (Ground 5 and 6) also discloses the claimed sliding. Far from “reject[ing]” Von Holst, Paper 10, 14, Dr. Von Holst is a named inventor on Kleiven, and his later patent filing further developed the art. Kleiven thus teaches layers separated by spikes/beams—in the same manner as Figure 5 of the ’319 Patent—that allow “layers [to] move relative to each other.” Pet., 73; Ex.1007, [0048]; Ex.1001, Fig. 5. PO contends that these spikes/beams only “deform...to absorb energy, not to allow sliding,” Paper 10, 14, but offers no basis for this conclusory contention. In fact, as the Challenged Claims make clear, layers that transform energy can *also* include means to allow relative sliding. *E.g.*, Ex.1001, cl. 6. (“wherein the outer energy and impact transformer layer includes means to allow the outer shell layer to slide relative to the middle shell layer”).

PO also argues Kleiven’s trusses are not like those in Figure 5 of the patent

because they are “plasticizing” or “yielding,” Paper 10, 14, but ignores Kleiven’s disclosure of “flexible” spikes/beams like the “elastomeric” trusses of Figure 5 of the Challenged Patent. Pet., 73, 76, Ex.1007, [0048], [0062].

IV. NO ADDITIONAL FACTOR FAVORS DENIAL

None of the other factors Patent Owner identifies supports denial here.

First, as described in § III.F, the merits of this petition are very strong.

Second, Petitioner’s reliance on expert testimony is proper. Dr. Duma, a preeminent expert in the field who leads the largest helmet testing laboratory in the United States, offers relevant background of the knowledge of a POSITA with citations to evidence supporting his statements, as required. See 37 C.F.R. § 42.65(a); Ex.1002, ¶5. PO’s criticism of the length of his declaration, Paper 10, 15, is misplaced, both because the declaration includes Dr. Duma’s credentials, legal principles, technology background, and overview of the relevant art, and because the length reflects the depth of and support for his analysis. And PO’s separate criticism of Dr. Duma’s declaration as purportedly being “duplicative” or “circular” is unsubstantiated and wrong. PO’s brief offers *no example* of any such testimony and makes no attempt to apply its cited cases to the facts here.

PO’s accusation that Dr. Duma is “filling gaps,” Paper 10, 16, in the art is also wrong. With respect to both the sliding of Weber and the absorption of Von Holst, the references themselves establish unpatentability, and Dr. Duma explains what *the*

disclosures of the references taught those of ordinary skill in the art; he nowhere attempts to argue a claim limitation would simply be supplied by the knowledge of a POSITA. *See, e.g.* Ex.1002, ¶¶110-113 (explaining Weber's disclosure of sliding); ¶¶164-165 (explaining Von Holst disclosure of absorption); § III.C.

Third, the expectations of the parties favor review, not denial. PO argues the Challenged Patent is 11 years old, but not *why* that led it to any expectation. It omits that, in fact, PO has been aware since 2015 that the Office rejected similar claims in a different application, material error that outweighs any alleged settled expectations. *Supra* § II; *e.g. Ensung Global Corp. v. Hydrafacial LLC*, IPR2025-00445, Paper 14 (P.T.A.B. July 10, 2025) (material error weighed against denial even where patent 8 years old); *Xencor, Inc. v. Merus N.V.*, IPR2025-00604, Paper 12 (P.T.A.B. July 17, 2025) (same for 9-year-old patent). And PO's brief does not allege the patent was ever commercialized, any product was marked with it, it was asserted or licensed, or it was otherwise applied. PO, in fact, has no commercial product, provides no evidence of marking, did not assert it before the parallel case here, and has not otherwise applied it. In fact, having asserted the '319 Patent against some real-parties-in-interest in this IPR, PO ***voluntarily dismissed its infringement claim with prejudice*** rather than justify its claims at Markman. Ex.1055. This lack of use and withdrawal overcomes any expectations PO may have had based solely on the patent's age. *See, e.g., Shenzhen Tuozhu Tech. Co., Ltd. V. Stratasy, Inc.*,

IPR2025-00438, Paper 10 (P.T.A.B. July 17, 2025); *Intel Corp. v. Proxense LLC*, IPR2025-00327, Paper 12 (P.T.A.B. June 26, 2025).

In contrast, Petitioner and its RPIs should not have been expected to be faced with assertion of a patent with claims nearly the same as those rejected by another examiner. *Supra* § II. Instead, Mips and its customer Revelyst should reasonably be entitled to rely on their expectation that PO would not assert invalid patents on technology Mips scientists and engineers—including the inventors of Von Holst (Ex.1005) and Halldin (Ex.1006)—developed first and commercialized. As discussed in Section III.C, Bell Sports' citation of the Challenged Patent once nearly 9 years ago, among dozens of references across hundreds of applications, does not overcome this expectation. To the contrary, PO's decision **not** to assert the Challenged Patent for over a decade supports Petitioner's expectations.

Fourth, PO identifies no compelling economic or health interest that would weigh against discretionary denial. That PO is in debt, Paper 10, 18, is no reason to deny the IPR in this case. PO cites no law or reason to support the idea that a patent should be shielded from meritorious challenge solely because the inventor wishes to “recoup at least some of its investment.” Paper 10, 18.

And though Petitioner agrees there is a compelling public health interest in protecting people from rotational forces, Petitioner—**not** PO—is serving that interest. PO has **never** brought a product to market or licensed its technology.

Instead, Revelyst and Mips have innovated and commercialized technology to protect against rotational forces and mitigate brain injuries. *See* Ex.1005 (*Mips's* prior-art Von Holst publication); Ex.1061 (25-year history of Mips innovation and development). If anything, the Office should consider the economic interests of Petitioner and its affiliates, which have thousands of U.S.-based employees and are developing and commercializing these important helmet technologies, including its interest in challenging meritless patent assertions.

Last, the '319 Patent is related to four other patents challenged by Petitioner in parallel IPRs. *See* IPR2025-01030, -01031, -01032, -01033. Even though the '319 Patent has been dismissed from parallel litigation, it would be an efficient use of Board resources to consider this related patent. *See, e.g., Freightcar*, IPR2025-01046, Paper 20, 3 (referring IPR on divisional to Board with IPR on parent).

V. RESERVATION OF RIGHTS

Petitioner hereby preserves the argument that the discretionary denial procedures adopted by the Director in Exs.2001, 2002, 2006, and 2007—and any future procedures that may be promulgated without notice and comment rulemaking and be found to apply to this proceeding—are improper and contrary to law. The Director's institution criteria, and in particular the “settled expectations” rule, violate the Due Process Clause of the Constitution and the Administrative Procedure Act.

VI. CONCLUSION

PO's request for discretionary denial should be denied, and the Petition should be instituted.

Respectfully Submitted,

Dated: October 20, 2025

/David L. Cavanaugh/
David Cavanaugh
Registration No. 36,476

CERTIFICATE OF SERVICE

I hereby certify that on October 20, 2025, I caused a true and correct copy of
the foregoing materials:

- Petitioner's Brief in Opposition to Discretionary Denial
- Exhibit List
- Exhibits for Petitioner's Brief in Opposition to Discretionary Denial
(Exs.1052-1059, 1061)

to be served on Patent Owner via electronic mail to:

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