

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

REVVO TECHNOLOGIES, INC.

Petitioner,

v.

CEREBRUM SENSOR TECHNOLOGIES, INC.

Patent Owner.

IPR2025-00632

Patent 11,835,421

**PATENT OWNER'S REQUEST FOR DIRECTOR REVIEW TO VACATE
INSTITUTION AND TERMINATE INTER PARTES REVIEW**

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I. INTRODUCTION

Patent Owner Cerebrum Sensor Technologies, Inc. (“Patent Owner” or “Cerebrum”) respectfully requests Director Review of the PTAB Panel’s second institution in this *inter partes* review regarding the challenged claims of U.S. Patent No. 11,835,421 (“the ’421 Patent”).¹

The Petition – and the PTAB Panel’s second institution decision following remand by the Director – violated the Director’s policy directive regarding the requirement that a petitioner explain any inconsistent claim construction positions to the Board, including indefiniteness. *See Tesla, Inc., v. Intellectual Ventures II LLC*, IPR2025-00340, Paper 18 (Director Nov. 5, 2025) (informative) (“*Tesla*”). In *Tesla*, the Director granted Director Review and vacated the Decision to institute because the petitioner argued inconsistent claim constructions before the Board and the District Court, including petitioner’s argument that the certain claim limitations were indefinite. *Id.* Here, Petitioner did the same thing. Petitioner urged the PTAB Panel to interpret *all* claim terms according to Patent Owner’s claim constructions. In direct contradiction, Petitioner proposed in an ongoing District Court litigation that certain limitations of *all challenged claims* in the ’421 Patent are *indefinite* because a person of ordinary skill in the art *could not discern* their meaning.

¹ This paper uses the term “PTAB Panel” to emphasize that different PTAB panels have reached different results following the Director’s decisions.

Underlying the Director's policy directive in *Tesla* were concerns of inconsistent outcomes on claim construction in district court proceedings and IPRs. This is the situation here, where the District Court denied Petitioner's motion to stay the District Court litigation and is proceeding to a claim construction hearing on April 16, 2026. Petitioner's strategy increases the expense of litigating its inconsistent claim construction arguments in this IPR and in District Court.

II. STATEMENT OF FACTS

A. Patent Owner and the Challenged Patent

Patent Owner Cerebrum is a family-owned company headquartered in Los Angeles, California. Founded in 2019, Cerebrum has grown into a global brand known for its focus on IoT-enabled, vehicle agnostic solution for real-time monitoring, and proactive management of tires. Cerebrum has built a business providing Bluetooth sensors, powerful telematics gateways, web & mobile fleet management software, and integrations with popular third-party telematics, all of which combine to deliver valuable vehicle and tire insights. By leveraging millions of data points collected daily from patented hardware and algorithm technology, Cerebrum enables improved safety, reduced downtime, advanced sustainability, and tangible savings. Cerebrum's solutions reduce tire safety issues, maximize tire uptime, optimize tire maintenance, and improve fuel efficiency and sustainability. Cerebrum is actively working with multiple vehicle manufacturers, tire

manufacturers or other industry partners to offer custom or after-market tires through incorporation of its products related to the '421 Patent, including for example, Rivian, Tesla, Titan, and others. *See generally* EX2024.

The '421 Patent discloses an innovative sensor system designed to be attached, for example, inside the inner surface of a vehicle tire to monitor and report conditions like tire location or tire wear, such as tread depth or alignment. The patent discloses a protective housing for the sensor device, which can wirelessly transmit tire data to a receiver. The sensor may be used to collect data from which tire conditions, e.g., tread depth or and/or alignment, can be determined. EX1001.

Figure 3 discloses one example of a sensor assembly with a housing that includes “surface features” (44) to retain the sensor device in the housing. *Id.* at Fig. 3; 10:24-32. The surface feature of a slot or recessed groove in this example is labeled 44 (pink), in the housing labeled 12 (blue), for receiving the sensor device.

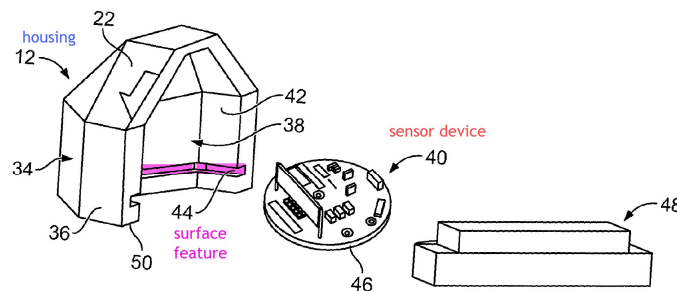


FIG. 3

In another example, the “surface features” can alternatively be “ribs or tabs.” *Id.* at 10:40-46. This is an improvement over the prior art that lacked such surface features and instead solely incorporated an epoxy filling material. *Id.* at 13:56-60.

The '421 patent also discloses, for example, that the sensor device may be placed in the internal cavity such that there is a designed-in open space above and/or below the sensor device, to accommodate a sensor device that responds to kinetic energy. *Id.* at 15:12-14. For example, Figure 10 depicts sensor device labeled 40 (red) placed in cavity labeled 38 (blue), as below.

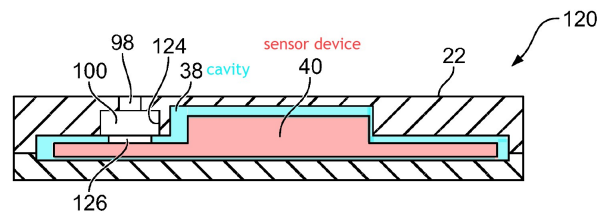


FIG. 10

This open space is a subject of some of the claims. *See, e.g., id.* at claim 31 (“the internal cavity comprises an open space above or below the electrical sensor device disposed within the internal cavity”). This open space above or below the electrical sensor device is a deliberate design choice, *id.* at 4:24-25 (“wherein an open space exists above and below the electrical sensor device within the internal cavity”), for example, to respond to kinetic energy. *Id.* at 15:12-14.

B. The Petition and the PTAB's Initial Institution Decision

After Patent Owner filed suit in District Court for patent infringement on February 23, 2024, Petitioner filed the petition in this matter nearly a full year later

on February 21, 2025. In its Petition, Petitioner challenged claims 1, 2, 5, 7–12, 20–24, 28, 31–34, 41, 43, 44, 48, and 50–53 of the '421 Patent, which includes challenged independent claims 1, 28 and 41. On June 24, 2025, Cerebrum filed its Patent Owner Preliminary Response, including based on Petitioner's inconsistent claim constructions. Paper 9 at 1 (“[T]he Petition fails to explain why Revvo is pursuing IPR institution based on claim constructions that Revvo has contended are wrong in co-pending federal district court litigation.”). Nevertheless, the PTAB Panel instituted this IPR. Paper 13.

C. Petitioner's Inconsistent Claim Construction Positions Before the PTAB Panel and the District Court, Including Indefiniteness

In its Petition, Petitioner argued that “Petitioner accepts Patent Owner's proposed constructions from the underlying district court litigation for purposes of this proceeding.” Paper 1 at 9-10. In its initial decision instituting this IPR, the PTAB Panel did not construe the disputed claims terms. Paper 13 at 6-7 (“Patent Owner argues that [Petitioner's] differences in proposed interpretations constitute ‘gamesmanship’ that warrants denying institution for a failure to interpret claims as required in 37 C.F.R. § 42.104(b)(3).”). Nevertheless, the PTAB Panel ignored such “gamesmanship” by Petitioner, seemingly merely because it does not involve means-plus-function claim language. *Id.* at 7-8. As discussed further herein, the Director found that the PTAB Panel accordingly erred. Paper 20 at 3.

In the District Court litigation, Petitioner made the *opposite* claim construction arguments to the District Court. On January 22, 2025, Petitioner argued in District Court that all of the challenged claims – including all challenged independent claims 1, 28 and 41 – are allegedly indefinite by including the term “internal cavity,” among other limitations. EX1017 at 5-6; *see also id.* at 7 (“unfilled open space” in claim 1 is allegedly indefinite); EX1017 at 19, 20, and 22-23 (terms labeled R15, RR18, RR22, and RR25 are allegedly indefinite). Petitioner’s recently filed claim construction brief in the District Court litigation confirms that Petitioner is arguing for indefiniteness of the “internal cavity” claim term found in all challenged claims of the ’421 Patent. EX2025 at 27-28.

The Petition did not inform the PTAB Panel that Petitioner would argue indefiniteness in District Court.

D. The District Court Litigation

Petitioner filed a motion to stay the District Court litigation which included the same ’421 Patent at issue in this IPR. But the District Court denied Petitioner’s motion to stay. EX2026. Following that denial, the parties filed an agreed schedule with claim construction briefing leading up to a claim construction hearing on April 16, 2026. EX1036 at 14. As mentioned above, Petitioner’s recently filed claim construction brief in the District Court litigation confirms that Petitioner is arguing

for indefiniteness of the “internal cavity” claim term found in all challenged claims of the '421 Patent. EX2025 at 27-28.

E. The Director's Vacatur and Remand Decision

The Director *sua sponte* recognized the problems with the inconsistencies in Petitioner's claim construction arguments. Paper 20. The Director therefore vacated the PTAB Panel's initial institution decision and remanded to the PTAB Panel. *Id.* The Director's decision found that “The Board erred by limiting its consideration of a petitioner's differing claim construction positions to instances that implicate means-plus-function interpretation under Section 112(f).” *Id.* at 3. The Director also stated that “Simply noting that the petitioner is adopting a patent owner's claim construction proposals from district court, however, is not a sufficient reason for advancing different positions in the two forums.” *Id.* at 5. The Director authorized additional briefing on remand. *Id.* at 5-6.

At the time the Director issued the *sua sponte* decision remanding back to the PTAB Panel, the Petitioner had not informed the Director or the PTAB Panel that Petitioner is arguing for indefiniteness of the “internal cavity” claim term found in all challenged claims of the '421 Patent, contrary to the Director's *Tesla* decision. EX2025 at 27-28; EX1017 at 5-6 (alleging that all challenged independent claims 1, 28 and 41 – are allegedly indefinite by including the term “internal cavity”); *see also*

id. at 7 (“unfilled open space” in claim 1 is allegedly indefinite); EX1017 at 19, 20, and 22-23 (terms labeled R15, RR18, RR22, and RR25 are allegedly indefinite).

F. Briefing On Remand to the PTAB Panel

After the Director's remand order, the parties submitted their respective briefs. Paper 23; Paper 25. Petitioner's only acknowledgement of the Director's *Tesla* decision was its argument, without any explanation, that “an ordinarily skilled artisan would understand that the asserted art satisfies [the ‘internal cavity’ claim limitation] notwithstanding the alleged indefiniteness.” Paper 23 at 12. Petitioner's claim construction brief in the District Court litigation admits the irreconcilable inconsistency between Petitioner's claim constructions in the District Court litigation and before the PTAB: Petitioner argues that “Plaintiffs’ proposed construction gives no meaning to the term ‘internal,’ rendering it so ambiguous as to be essentially indefinite.” EX2025 at 27-28. In contrast, the Petition argues in this IPR that “Petitioner accepts Patent Owner's proposed constructions from the underlying district court litigation for purposes of this proceeding.” Paper 1 at 9-10.

Patent Owner's brief on remand spotlighted and extensively discussed this inconsistency for the PTAB panel. Patent Owner argued that “The Director recently rejected an IPR petition on the same grounds where Petitioner took indefiniteness positions in the District Court, yet applied meaning to the terms in the IPR.” Paper 25 at 6. Quoting the Director's decision in *Tesla*, the Patent Owner argued that

Petitioner's reasoning "fails for the same reason explained in *Tesla* as it merely 'amounts to an assertion that a Petitioner should be permitted to raise inconsistent invalidity challenges in [] two forums.'" *Id.* at 6-7. Patent Owner further argued that the Petition does not acknowledge that "Petitioner is taking incoherent indefiniteness positions in the District Court and in this IPR. Thus, the Director's remand order cannot be viewed as implicitly accepting those incoherent indefiniteness positions, particularly in view of *Tesla*." *Id.* at 8 n.2.

III. ARGUMENT

A. The PTAB Panel's Second Institution Decision Ignores the Director's *Tesla* Decision

Inexplicably and indefensibly, upon remand, the PTAB Panel's second institution decision does not mention the Director's *Tesla* decision, the Petitioner's inconsistent indefiniteness arguments, or the Director's express concern in *Tesla* that a Petitioner should not be "permitted to raise inconsistent invalidity challenges in [] two forums." Instead, contrary to *Tesla*, the PTAB Panel's decision leans into and accepts that Petitioner be permitted to raise inconsistent invalidity challenges in the two forums – District Court and the IPR – and do so in parallel timing. Of great concern, the PTAB Panel's decision states the Petitioner "will have every opportunity to present additional argument and cite other evidence to support a

different claim interpretation during the *inter partes* review.”² Paper 30 at 9. Thus, according to the PTAB Panel, the Petitioner can hedge its bets – it can seek indefiniteness of all of the challenged claims in District Court and if unsuccessful, it can pivot to arguing for invalidity in this IPR on a different claim construction. It is thus impossible to see how the PTAB Panel could be correct that this is “the quickest and least expensive way to resolve the issue of patentability.” *Id.* The PTAB Panel’s approach means that this IPR and the District Court will proceed in parallel on disparate claim constructions and invalidity arguments, particularly indefiniteness.

B. The Director’s *Tesla* Decision Justifies Vacatur of Institution

Director Review of the PTAB panel’s second institution decision in this proceeding is justified. The Petitioner’s inconsistent claim construction positions – including indefiniteness in the District Court litigation – independently justify Director Review, vacatur of the PTAB panel’s second institution decision, and termination of the IPR, in view of the Director’s *Tesla* and other decisions.

In the *Revvo Technologies* decision, the Director noted that, “although the Board’s trial rules ‘do not necessarily prohibit petitioners from taking inconsistent claim construction positions before the Board and a district court,’ when a petitioner

² It is of great concern that the PTAB Panel may be suggesting, contrary to the AIA and the implementing rules, that Petitioner can change its arguments for invalidity in this IPR if the District Court’s forthcoming claim construction – expected this Spring or Summer – is different from what the Petition presents.

takes alternative positions before the Board and a district court, that petitioner should, at a minimum, explain why alternative positions are warranted.” *Revvo Techs.*, IPR2025-00632, Paper 20 at 3-4 (quoting *Cambridge Mobile Telematics, Inc. v. Sfara, Inc.*, IPR2024-00952, Paper 12 at 8-9 (PTAB Dec. 13, 2024)). Building on this precedential requirement in *Revvo Technologies*, the Director in *Tesla* vacated institution and terminated the IPR proceeding because the petitioner had failed to notify and explain to the Board that it was arguing indefiniteness to the district court. *Tesla*, Paper 18 at 3-4. The Director explicitly rejected the petitioner’s statement that “it cannot raise indefiniteness challenges in an *inter partes* review” as an insufficient explanation. *Id.* at 3. Rather, the Director noted that this statement amounts to an improper assertion that a petitioner “should be permitted to raise inconsistent invalidity challenges in the two forums.” *Id.*

Here, the Petitioner has taken exactly the same improper approach that the Director prohibited in *Revvo Technologies* and *Tesla*. As explained above, Petitioner urged the PTAB Panel to adopt the Patent Owner’s claim constructions for all claim terms while proposing to the District Court that the “internal cavity” limitations in all challenged claims of the ’421 Patent is indefinite and therefore *has no plain and ordinary meaning*. These are exactly the same circumstances that led the Director in *Tesla* to vacate institution and terminate the *inter partes* review. *Tesla*, IPR2025-

00632, Paper 18 at 3-4. Patent Owner respectfully submits that the Director should reach the same conclusion here.

The concerns about Petitioner's inconsistent claim constructions, including indefiniteness, are even more pronounced, where as here, the District Court litigation is proceeding with claim construction briefing followed by a claim construction hearing on April 16, 2026. EX1036 at 14. The Director has instructed that "The Board's claim construction rules are designed to ensure that the Board correctly construes claim terms and to minimize inconsistency in claim construction between forums." *Revvo Techs.*, IPR2025-00632, Paper 20 at 4. In view of Petitioner's inconsistent claim constructions in this IPR and the District Court litigation proceeding contemporaneously, including Petitioner's indefiniteness argument in District Court, this IPR proceeding should be terminated. *See Tesla*, IPR2025-00632, Paper 18 at 3-4; *accord Revvo Techs.*, IPR2025-00632, Paper 20 at 4.

C. Other PTAB Panels Have Followed *Tesla*, Unlike This PTAB Panel

Since the Director's *Tesla* decision, other PTAB panels have followed *Tesla* and denied institution of IPRs where the petitioner was pursuing indefiniteness in district court litigation. *See Orca Security Ltd. v. Wiz, Inc.*, IPR2025-01086, Paper 13 at 8 (PTAB Dec. 15, 2025) ("[T]he fact that Petitioner cannot raise its indefiniteness challenge in an *inter partes* review is not a sufficient reason to allow

Petitioner to take inconsistent claim construction positions before the Board and the district court.”); *American Airlines, Inc. v. Intellectual Ventures I LLC*, IPR2025-01055, Paper 11 at 13 (PTAB Nov. 21, 2025) (“[A]ccording to Petitioner, many limitations in claim 1 (and other claims) are indefinite ... Petitioner provides no explanation for its different claim construction positions in the two forums. This alone favors denial of institution.”). Where other PTAB panels have instituted IPRs following *Tesla*, it is because the petitioners have abandoned indefiniteness and their disparate claim constructions in district court litigation. *Samsung Electronics Co., Ltd. v. Wilus Institute Of Standards And Technology Inc.*, IPR2025–00988, Paper 14 at 6 (PTAB Jan. 5, 2026) (“In reliance upon Petitioner’s representation that it has not, and will not, argue for inconsistent claim construction in district court, we determine that it is appropriate for us to grant the Request and vacate our Decision denying institution.”); *Samsung Electronics Co., Ltd. v. Wilus Institute Of Standards And Technology Inc.*, IPR2025–00933, Paper 14 at 6 (PTAB Dec. 31, 2025) (same). Far from abandoning its claim constructions, including indefiniteness, on January 14, 2026, Petitioner filed its claim construction brief in the District Court litigation that confirms that Petitioner is arguing for indefiniteness of the “internal cavity” claim term found in all challenged claims of the ’421 Patent. EX2025 at 27-28.

The Director has recently reiterated that the *Tesla* decision is Director policy, to avoid inefficiency of proceeding in two different forums on different invalidity

challenges. *Tiktok, Inc. v. Shopsee, Inc.*, IPR2025-01485, Paper 13 at 2–3 (Director Jan. 16, 2025) (“*Tiktok*”) (“Petitioner has stipulated that it will continue to pursue different constructions and abandon the inconsistent construction in district court if the IPR is instituted. This is not in keeping with our precedent, and I decline to modify it to permit this approach ... Petitioner’s stipulation not to continue to advance different claim construction positions lacks similar benefits. At best, it replaces one argument in district court for another argument at the Board. Accordingly, the Petition is denied under 35 U.S.C. § 314(a).”).

The PTAB Panel’s second institution decision in this IPR is out of line not only with the Director’s decisions, but also other PTAB panel decisions applying those Director decisions. The PTAB Panel’s second institution decision in this IPR permits the Petitioner to pursue both different claim constructions and indefiniteness in the District Court litigation, potentially without limitation. Paper 30. That leans into all of the inefficiencies that the Director tries to avoid, such as in *Tesla* and *Tiktok*.

IV. CONCLUSION

In its Petition, Petitioner chose not to explain to the PTAB Panel (or the Director) why Petitioner made inconsistent claim construction and invalidity arguments (e.g., indefiniteness) before the PTAB Panel and the District Court. As the Petitioner failed to notify the PTAB and the Director of the Petitioner’s

indefiniteness arguments for all challenged claims in the District Court, the Director remanded to the PTAB Panel to consider Petitioner's inconsistent claim constructions generally between the two forums. But, upon remand from the Director, the PTAB Panel ignored the Director's *Tesla* decision, contrary to other PTAB panels which have followed *Tesla*. In light of the Director's recent *Tesla*, *Tiktok*, and *Revvo Technologies* decisions, Patent Owner respectfully submits that these deficiencies in the Petition, and the PTAB Panel's second institution decision, independently merit vacating the PTAB Panel's second institution decision and terminating this *inter partes* review proceeding.

V. TIMELINESS OF THIS PETITION

The PTAB Panel's second institution decision is dated January 14, 2026. Paper 30. This Petition for Director review of that decision is timely according to 37 CFR § 42.71. Please charge any fees due for this Request for Director Review to Deposit Account No. 19-2814.

Respectfully submitted,

Dated: January 24, 2026

By: /Christopher D. Bright/
Christopher D. Bright
Reg. No. 46,578
Counsel for Patent Owner

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), I certify that on January 24, 2026 I caused to be served on the counsel for Petitioner a true and correct copy of the foregoing by electronic means on Counsel for Petitioner at the following addresses of record:

Marc David Peters (Lead Counsel)

USPTO Reg. No. 46,988

mdpeters@turnerboyd.com

Victoria A. Moffa (Back-up Counsel)

USPTO Reg. No. 80,901

moffa@turnerboyd.com

Dated: January 24, 2026

Respectfully submitted,

By: /Christopher D. Bright/

Christopher D. Bright

Reg. No. 46,578

Counsel for Patent Owner