

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VIZIO, INC.,
Petitioner

v.

POLARIS POWERLED TECHNOLOGIES, LLC,
Patent Owner

Case IPR2024-00073
U.S. Patent No. 7,843,148

**PATENT OWNER POLARIS POWERLED TECHNOLOGIES, LLC'S
REQUEST FOR DIRECTOR REVIEW OF FINAL WRITTEN DECISION**

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Patent Trial and Appeal Board
U.S. Patent and Trademark Office
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I. INTRODUCTION

Patent Owner Polaris PowerLED Technologies, LLC (“Patent Owner”) respectfully requests Director Review of the panel’s determinations in its Final Written Decision (Paper 32, “the FWD”) that found claims 1, 6-10, 14, 17, and 18-22 of U.S. Patent No. 7,843,148 (“the ’148 patent”) unpatentable on Thomas-based grounds¹ and also found claims 5 and 16 unpatentable in view of Zane.

As to claim 6 and the Thomas grounds, the panel makes three independent errors. First, in the FWD, the panel cobbled together arguments from disparate parts of the record in order to “cure[]” acknowledged deficiencies in Petitioner’s asserted Thomas grounds. The panel agreed with Patent Owner that Petitioner had not met its burden to prove that independent claim 1 was anticipated by or obvious in view of Thomas. But then, relying on arguments made for dependent claims,

¹ The Thomas-based grounds challenge: claims 14, 17, 18, and 20-22 as anticipated by Thomas; claims 1, 6, 7, 9, and 10 as obvious over Thomas; and claims 8 and 19 as obvious over Thomas and Tatewaki. Because the panel bases its determination that independent claim 1 would have been obvious in view of Thomas entirely on the determination that claim 6 would have been obvious, the discussion herein focuses on errors with respect to claim 6. Similar errors infect the panel’s analysis of claim 17 and its corresponding analysis of independent claim 14.

determined that Petitioner has nonetheless shown that claim 1 was obvious in view of Thomas. This is an abuse of discretion, and should be avoided as a policy matter to prevent petitioners from sandbagging patent owners by burying arguments only in discussions of dependent claims. The panel never should have reached claim 6.

Second, the panel's analysis regarding anticipation of claim 17 is infected with legal error. There is no evidence in the record that a POSA would have been motivated to actually operate Thomas's device in the manner necessary to meet the panel's theory that Thomas "sometimes, but not always, embodies [the] claimed method." FWD, 39. The discussion of claim 6 simply incorporates this discussion and does not remedy the error. Thus, this finding must be reversed.

Third, the panel's determination that Thomas's signal E is applied (even indirectly) to the transistor 33 is premised on a clearly erroneous factual finding. In particular, the panel ignores or misapprehends the well-known electrical engineering principle that the output of an AND gate is not either of the inputs individually, but rather is a *different signal* entirely.

As to claims 5 and 16 and the Zane obviousness ground, the panel erred in relying on Dr. Zane's uncorroborated and biased testimony in finding these claims obvious. Petitioner admits Zane (the reference) does not *disclose* that the PWM brightness control signal is connected in the circuit, as claimed. Thus, the missing claim element (i.e., the particular arrangement of the components in the circuit) is

provided solely by Dr. Zane’s testimony. Without Dr. Zane’s testimony, the Petition is based only on unsupported attorney argument, and the panel’s findings as to claims 5 and 16 should be reversed.

II. LEGAL STANDARD

Parties to a PTAB proceeding may request Director review of a final written decision, and such review will be “de novo.” *U.S. v. Arthrex, Inc.*, 141 S. Ct. 1970, 1977-78, 1987-88 (2021); Director Review Process, Section 5.A.ii.c (available at <https://www.uspto.gov/patents/ptab/decisions/director-review-process>, last accessed March 14, 2025). Director review of a Board final written decision may be warranted when the request presents “(a) an abuse of discretion, (b) important issues of law or policy, (c) erroneous findings of material fact, or (d) erroneous conclusions of law.” Director Review Process, Section 2.B.

III. ARGUMENT

A. The panel’s Thomas-based findings should be reversed.

The panel’s finding that Thomas renders claim 6 obvious should be reversed for three independent reasons. These errors dictate reversal for *all claims* held unpatentable on the Thomas-based grounds, because the errors also infect the panel’s determinations regarding independent claims 1 and 14. FWD, 29-35, 47.

1. The panel abused its discretion in considering the patentability of dependent claims when Petitioner did not meet its burden for the independent claims.

A “petitioner’s petition, not the Director’s discretion, is supposed to guide

the life of the litigation.” *SAS Inst., Inc. v. Iancu*, 584 U.S. 357, 366 (2018); *see Intelligent Bio-Sys. v. Illumina Cambridge*, 821 F.3d 1359, 1369 (Fed. Cir. 2016) (“It is of the utmost importance that petitioners in the IPR proceedings adhere to the requirement that the initial petition identify ‘with particularity’ the ‘evidence that supports the grounds for the challenge to each claim.’”). Panels, which derive their discretion from the Director, are not “free to adopt arguments on behalf of petitioners that could have been, but were not, raised by the petitioner during an IPR.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1381 (Fed. Cir. 2016).

Here, the panel abused its discretion by piecing together arguments from disparate sections of the Petition to “cure” Petitioner’s showing for the independent claims. Specifically, the panel began by correctly determining that “Petitioner has failed to demonstrate that Thomas anticipates claim 1.” FWD, 47; *id.*, 29-34 (discussing Petitioner’s anticipation challenge). It then correctly stated, “Given Petitioner’s argument that claim 1 would have been obvious over Thomas because it is anticipated by Thomas, Petitioner’s failure to demonstrate anticipation would ordinarily be a failure to demonstrate obviousness as well.” FWD, 47; *see also* Pet., 45 n.8 (arguing “anticipation is the epitome of obviousness” in challenging claim 1 as obvious in view of Thomas); POR, 21-25 (arguing Petitioner’s obviousness contention as to claim 1 is “facially deficient,” and “cannot remedy the anticipation deficiencies”).

The panel’s analysis of the Thomas obviousness ground for claim 1—and any claims depending therefrom—should have stopped there because “[d]ependent claims are nonobvious . . . if the independent claims from which they depend are nonobvious.” *In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988). Instead, the panel went beyond the theories presented in the Petition and, admittedly, “cure[d]” Petitioner’s analysis of independent claim 1 by applying arguments for dependent claim 6.² *See* FWD, 47 (“Petitioner’s analysis of claim 6, discussed below, demonstrates how Thomas discloses these limitations and ‘cures’ the defect in Petitioner’s claim 1 analysis”). Worse, the panel’s analysis for dependent claim 6 relies, in turn, on arguments directed to dependent claim 17. FWD, 51-52.

The panel’s cherry-picking approach is an abuse of discretion. *See Magnum Oil*, 829 F.3d at 1381 (“[W]hile the PTO has broad authority to establish procedures for revisiting earlier-granted patents in IPRs, that authority is not so broad that it allows the PTO to raise, address, and decide unpatentability theories never presented by the petitioner and not supported by record evidence.”). Panels

² The panel also “cure[d]” deficiencies in Petitioner’s analysis of independent claim 14, relying on arguments presented only for dependent claim 17. FWD, 34-40. That the FWD needed to “cure[]” multiple deficiencies in the Petition highlights the impropriety of the panel’s approach.

are not allowed to reach into the Petition’s analysis of the dependent claims to piece together arguments to apply to the independent claims. The statute requires that a “petition identif[y], in writing and *with particularity*, each claim challenged, the grounds on which the challenge to each claim is based, and the evidence that supports the grounds for the challenge *to each claim*.” 35 U.S.C. § 312(a)(3) (emphasis added). It hardly meets the “particularity” requirement for “each claim” if the Board must look to the arguments for the dependent claims in order to cobble together positions for the independent claims. And, as a policy matter, because patent owners often focus their efforts on defending the independent claims at trial, this strategy—hiding arguments in the discussion of the dependent claims and then later pulling them out in support of the independent claims on reply—is fundamentally unfair to patent owners. It allows petitioners to sandbag patent owners with arguments not actually presented for the independent claims.

Upon finding that Petitioner did not meet its burden as to claim 1, the panel should have stopped its inquiry because panels do not have discretion to “adopt arguments on behalf of petitioners that could have been, but were not, raised by the petitioner during an IPR. Instead, the Board must base its decision on arguments that were advanced by a party, and to which the opposing party was given a chance to respond.” *Magnum Oil*, 829 F.3d at 1381 (citing *SAS*). *Hartness Int’l, Inc. v. Simplimatic Eng’g Co.*, 819 F.2d 1100, 1107–08 (Fed. Cir. 1987), is instructive.

There, the Federal Circuit reversed a district court’s holding that a dependent claim was invalid where the district court also held that the patent challenger had *failed to prove* the corresponding independent claim was obvious. *Id.*; *see also MEMS Tech. Berhad v. Int’l Trade Comm’n*, 447 Fed. App’x 142, 157-159 (Fed. Cir. 2011) (affirming ITC’s nonobviousness determination; relying on *Hartness*, finding “because claim 1 was nonobvious over [references], so too were claims 2, 9, 15, 17, 20, 28, and 29, which depend from claim 1”); *Echelon Fitness Multimedia, LLC v. Peloton Interactive, Inc.*, IPR2020-01541, Paper 54, 64, 86 (P.T.A.B. Mar. 2, 2022) (not reaching the parties’ arguments regarding dependent claims where petitioner did not meet its burden for the independent claims).

The cases that the panel cites in support of the opposite proposition—namely, that invalidity of a dependent claim extends to the claims from which it depends—are easily distinguishable. FWD, 53 (citing *Soverain Software LLC v. Victoria’s Secret Direct Brand Mgmt., LLC*, 778 F.3d 1311, 1315 (Fed. Cir. 2015); *Callaway Golf Co. v. Acushnet Co.*, 576 F.3d 1331, 1344 (Fed. Cir. 2009); *Ormco Corp. v. Align Tech., Inc.*, 498 F.3d 1307, 1319 (Fed. Cir. 2007)). All of the panel’s cited cases arose from district court cases, not from “expedited” administrative proceedings in which patent challengers have the “obligation to make their case in their petition.” *Intelligent Bio-Sys.*, 821 F.3d at 1369 (“*Unlike district court litigation* — where parties have greater freedom to revise and

develop their arguments over time and in response to newly discovered material — the expedited nature of IPRs bring with it an obligation for petitioners to *make their case in their petition* to institute.” (emphasis added)).

In *Soverain*, the court had previously affirmed a determination that the relevant dependent claim was invalid, and thus held that issue preclusion prevented patent owner from relitigating the validity of its respective independent claim. 778 F.3d at 1315. Likewise, in *Ormco*, the court applied the law-of-the-case doctrine based on a prior finding that the relevant dependent claims were invalid, thus affirming the lower court’s holding that the respective independent claims were also invalid. 498 F.3d at 1319-20. And in *Calloway Golf*, the court vacated the district court’s JMOL order, where the jury verdict “reflect[ed] an irreconcilable inconsistency”—based on the determination that the relevant dependent claim was obvious while finding that the corresponding independent claim was not—that prevented entering judgement. 576 F.3d at 1344-45.

None of these cases address whether a tribunal can *sua sponte* review the dependent claim where the patent challenger does not meet its burden as to the independent claim, let alone whether *a panel* can do so *in an IPR*. Here, the question is not whether collateral estoppel requires a finding of invalidity of the independent claim, or whether a jury came to an inconsistent conclusion as to the unpatentability of challenged claims. Rather, the proper question is *did Petitioner*

meet its burden in proving the challenged claims are unpatentable. The panel correctly found that as to claim 1, Petitioner unquestionably did not. FWD, 29-34, 47. Because IPRs are expedited proceedings, the analysis should have ended there.

The panel's attempt to "cure" deficiencies in Petitioner's case as to claim 1, based on the arguments for dependent claim 6 (and, in turn, dependent claim 17), is an abuse of discretion. The panel unequivocally determined that Petitioner has not shown independent claim 1 is unpatentable. Thus, the panel's finding of unpatentability as to dependent claim 6 should be reversed.

2. The panel's determination that claim 6 would have been obvious is also based on legal error in the incorporated analysis for claim 17.

Even if it was proper to consider the patentability of claim 6 (it was not), the panel's determination is based on legal error. For claim 6, both Petitioner and the panel refer back to their analysis of claim 17 in analyzing whether Thomas discloses the claim 6 limitation: "PWM brightness control transistor being connected to the PWM brightness control signal generator for receiving a staggered PWM brightness control signal." *See* FWD, 51-52; Pet., 48. But the panel's analysis of claim 17 contains legal error in finding that Thomas anticipates the corresponding limitation of claim 17: "applying each staggered PWM brightness control signal[] to an associated transistor connected in series with the one or more LEDs in an associated parallel path."

In particular, the panel found that “when control signal W is high, AND gate 32 is enabled to output the signal at its other input (i.e., PWM signal E) to transistor 33. When enabled, AND gate 32’s output has the same functional form or modulation as PWM signal E.” FWD, 38. The panel further found that “the output of AND gate 32 is the PWM signal E at least some of the time, which is all that is required for anticipation.” FWD, 39. It relied on *Hewlett-Packard Co. v. Mustek Sys., Inc.*, which held that “a prior art product that sometimes, but not always, embodies a claimed method nonetheless teaches that aspect of the invention.” *Mustek*, 340 F.3d 1314, 1326 (Fed. Cir. 2003); FWD, 39.

But the Federal Circuit distinguished *Mustek* in *ParkerVision, Inc. v. Qualcomm Inc.*, 903 F.3d 1354, 1363 (Fed. Cir. 2018). In particular, the court noted that, “in *Mustek*, the jury received evidence that a prior art scanner would satisfy the relevant claim limitation in its *default* setting, and we rejected the patentee’s argument against invalidity premised on the fact that the scanner would not practice the claimed method if a default setting were changed.” *Id.* (citing *Mustek*, 340 F.3d at 1326). The *ParkerVision* court affirmed the Board’s decision upholding the patentability of the method claim where “[Petitioner] failed to put forth any argument or evidence in its petitions as to whether [the prior art’s] device, even if capable of doing so, actually would [perform the claimed method], or why a person of ordinary skill in the art would have been motivated to [operate

the device to do so].” *ParkerVision*, 903 F.3d at 1363.

Likewise, here, there is no argument or evidence in the record that a POSA would have been motivated to operate Thomas’s device with the control signal W remaining high, such that the PWM signal E (allegedly) is output from the AND gate.³ Petitioner merely asserts that “[t]he AND gates 32 feed control signals to turn on the transistors 33 when the AND gates receive both a high control signal (W, X, Y, or Z) for turning on the LED and a high pulse from a modulating signal (E, F, G, or H).” Pet., 43. Petitioner did not argue that a POSA would have been motivated to keep the control signal(s) high. Dr. Zane’s declaration likewise lacks such evidence. *See* EX1003, ¶¶94-97. Petitioner therefore did not meet its burden to show that method claim 17 would have been anticipated by Thomas, and it was legal error under *ParkerVision* for the panel to find otherwise.

Neither the Petition, nor the panel’s decision, includes analysis specific to claim 6 for this limitation, and thus the deficiencies of the analysis for claim 17 likewise infect the analysis for claim 6. Therefore, the panel’s determination that

³ As discussed in the next section, the PWM signal itself is not output from the AND gate, but rather a *different* signal is output from the AND gate. For purposes of the discussion in this section, however, Patent Owner assumes the panel’s premise is correct.

Thomas renders obvious claim 6 should be reversed.

3. The panel's determination that claim 6 would have been obvious is premised on a clearly erroneous factual finding.

Further, the panel's determination regarding Thomas's alleged teaching of the "PWM brightness control transistor being connected to the PWM brightness control signal generator for receiving a staggered PWM brightness control signal" limitation of claim 6 is premised on clearly erroneous factual findings.

For this limitation, the panel refers back to its discussion of claim 17. FWD, 51-52. There, the panel determined that the claim "does not require *directly applying* the PWM brightness control signal" and "does not prohibit *indirectly applying* a PWM brightness control signal (e.g., E) to transistor 33 via AND gate 32." FWD, 38 (emphasis in original). According to the panel, "the output of AND gate 32 is the PWM signal E at least some of the time." FWD, 39.

But this finding is premised on the clearly erroneous factual finding that the signal output from the AND gate *is the same signal* as that input into the AND gate. That is not how AND gates work. Rather, the output of AND gate 32 is a *different signal* than either input signal. It is, instead, a logical *combination of the signals* input into the AND gate (e.g., PWM signal E and control signal W). *See* Tr. 38:10-17.

The panel's explanation for its holding shows its flawed logic. In finding that "the output of AND gate 32 is the PWM signal E at least some of the time,"

the panel explained that “when control signal W is high, AND gate 32 is enabled to output the signal at its other input (i.e., PWM signal E) to transistor 33. When enabled, AND gate 32’s output has the same functional form or modulation as PWM signal E.” FWD, 38.⁴ But the panel’s logic applies equally to the other input signal—that is, when PWM signal E is high, AND gate 32 is enabled to output the signal at its other input (i.e., control signal W). So, when both signals (PWM signal E and control signal W) are high, which signal is applied to transistor 33 via AND gate 32? The correct answer is neither because the output of AND gate 32 is a *different signal entirely*. The panel’s logic is plainly flawed.

⁴ The panel incorrectly treated AND gate 32 as a multiplexer, which is a different type of circuit. *See* EX2010, 29 (“**AND gate** a device that implements the Boolean AND operation”; “**AND** the Boolean operator that implements the conjunction of two predicates...”), 459 (“**multiplexer** a combinational logic device with many input channels and usually one output, connecting one and only one input channel at a time to the output”). EX2010 is a full copy of EX2008 (“Comprehensive Dictionary of Electrical Engineering,” Taylor & Francis Group, LLC, 2nd Edition (2005)), and was previously served on Petitioner. Concurrent with the filing of this Director review request, Patent Owner has emailed the Director review email box requesting authorization to file EX2010 (or at least the relevant pages thereof).

Accordingly, Thomas does not teach applying a PWM brightness signal to transistor 33, either directly or indirectly. Rather, Thomas teaches applying a *different signal* (i.e., the output of AND gate 32) to transistor 33. Therefore, the panel's determination that Thomas renders obvious claim 6 should be reversed because it is premised on a clearly erroneous factual finding.

B. The panel erred in relying on Dr. Zane's uncorroborated and biased testimony in finding claims 5 and 16 obvious.

Petitioner admits "*Zane does not disclose* that the PWM brightness control transistor is [connected in the circuit as recited in claims 5, 16]." Pet., 77 (emphasis added)). Rather, this missing claim element (i.e., the particular arrangement of components in the circuit) is provided *solely* by Dr. Zane's entirely uncorroborated testimony. Pet., 77-79; POR, 33-34, 36-40; 37 C.F.R. § 42.65(a). The lack of corroboration is particularly concerning where, as here, Dr. Zane's testimony about *Zane* is (intentionally or not) infused with bias. POR, 30-34; Sur-reply, 20-23. Dr. Zane's self-serving testimony that his opinions are provided "from the perspective of a POSITA," EX1003, ¶32 (cited at FWD, 14), is insufficient to remedy the concern of unintentional bias. POR, 34.

In dismissing Patent Owner's bias argument, the panel found that Dr. Zane's "testimony concerns what is already disclosed in Zane." FWD, 13-14; *see also id.*, 14-15 ("Dr. Zane's *anticipation testimony* does not go beyond how a POSITA would have understood Zane's *actual* disclosures." (first emphasis added)). But

this logic applies only to the *anticipation* ground; for the *obviousness* ground, where the missing claim element is not found in *Zane*, Petitioner necessarily relies also on Dr. Zane's testimony. Despite recognizing the dispute between the experts on the obviousness of Petitioner's proposed modification for claims 5 and 16, FWD, 14 n.4, the panel did not reconsider the impact of Dr. Zane's bias in the context of obviousness when discussing these claims. *See* FWD, 20-25. Without Dr. Zane's testimony, this ground relies entirely on unsupported attorney argument and must fail. POR, 33-34. The panel's finding that *Zane* renders obvious claims 5 and 16 should, therefore, be reversed.

IV. CONCLUSION

For the foregoing reasons, Patent Owner respectfully requests that the Director grant this request for Director Review and reverse the panel's decision in the FWD as to claims 1, 6-10, 14, 17, and 18-22 on the Thomas-based grounds and as to claims 5 and 16 based on *Zane*.

Respectfully submitted,

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CERTIFICATE OF SERVICE (37 C.F.R. § 42.6(e))

I certify that the above-captioned **PATENT OWNER POLARIS
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