UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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COLLEGE PRODUCTS, INC.
Petitioner,

v.

INTIRION CORPORATION
Patent Owner

_____

Case PGR2024-00004
Patent No. 11,674,746

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PETITIONER'S REQUEST FOR DIRECTOR REVIEW

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The Board's Final Written Decisions ("FWD") in PGR2024-00004 and PGR2024-00003 are severely flawed and call for Director Review.[1] Petitioner is not asking the Director to reconsider or weigh any evidence. Rather, it is asking the Director to review and reverse the Board's conclusion that claims 6, 13, and 21 of the '746 Patent are not invalid, because the Board abused its discretion and made numerous errors in law.

First, the Board erred in concluding that challenged claims 1-3, 5-6, 8-11, 13-17, and 20-24 of the '746 Patent were "slightly in favor" of obviousness over the prior art. The Board's findings decisively show that prior art references Emma, Smith, and Butt disclose the alleged inventions, and the Board found combining those references requires "***nothing more than simple logic.***" Yet, without any explanation, the Board summarily concluded the claims were only "slightly" obvious. The Board's conclusion was an abuse of discretion and legally erroneous because it was completely divorced from the strong findings of obviousness and the Board's weighing was arbitrary.

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[1] Petitioner challenged the validity of U.S. Patent No. 11,674,746 ("the '746 Patent") in this proceeding, PGR2024-00004. The FWD for this proceeding is referred to herein as the "'746 FWD." Petitioner challenged the validity of U.S. Patent No. 11,674,745 ("the '745 Patent") in PGR2024-00003. The FWD in that proceeding is referred to herein as "'745 FWD." *College Prods., Inc. v. Intirion Corp.*, PGR2024-00003, Paper 48 (P.T.A.B. Apr. 9, 2025).

Second, the Board compounded the errors in its analysis of secondary considerations of non-obviousness. The Board found a POSITA would have combined Emma, Smith, and Butt to find certain claims invalid, but would *not* have combined those same exact references for other claims. The Board provided no explanation why a POSITA would have combined those references in one instance, but not another. Thus, the Board's conclusion of not invalid on those claims was an abuse of discretion and legally erroneous.

Third, the Board abused its discretion and made material errors of law in its analysis of copying. The Board identified a purported point of novelty for challenged claims 6, 13, and 21, but then did not cite or discuss any evidence that Petitioner had access to and copied that purported point of novelty. Moreover, Patent Owner conceded Petitioner's product ***does not*** include the purported point of novelty. Thus, there is no evidence of copying ***at all***, and the Board's finding that copying weighed heavily in favor of non-obviousness was wrong.

Fourth, there was no evidence of record that Patent Owner's commercial success had a connection to the identified point of novelty. The Board did not even mention the purported point of novelty in its analysis of commercial success. That was an abuse of discretion and legally erroneous. Additionally, the Board ignored unrebutted evidence that Patent Owner's commercial success was driven by numerous factors unrelated to the invention. That was also legally erroneous.

For the reasons herein, the Board abused its discretion and made erroneous conclusions of law in the FWD. Petitioner respectfully requests the Director grant review and reverse the Board's findings that claims 6, 13, and 21 of the '746 Patent are not invalid, or alternatively remand for further findings.

I. BACKGROUND

The challenged '746 and '745 Patents disclose combination microwave-refrigerator appliances with smoke sensors. The smoke sensors disable the microwave when they detect a purportedly dangerous level or amount of smoke and reset the microwave when the purportedly dangerous level or amount of smoke clears. The claims are divided into two categories: (i) a microwave with a smoke sensor ("Micro+SS Claims"), or (ii) a combination microwave-refrigerator with a smoke sensor ("Micro+Fridge+SS Claims").[2]

Long before the priority date of the challenged '746 and '745 Patents, Patent Owner disclosed a combination microwave-refrigerator appliance in its patent publication of Emma. Ex. 1011. Emma disclosed a microwave stacked on a refrigerator, where the microwave included a control circuit to modulate power to

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[2] In the '746 Patent, the Micro+SS claims are claims 1-3, 5, 8-11, 14-17, 20, and 22-24 and the Micro+Fridge+SS Claims are 6, 13, 21. In the '745 Patent, the Micro+Fridge+SS Claims are 1, 13, 15, 20, 22, and 24-25. There are no Micro+SS claims in the '745 Patent.

the refrigerator when the microwave is in use. *See, e.g.*, *id.* at Abstract, ¶¶[0008], [0025-27], [0030], [0036-37], Figs. 1, 2, 6; Ex. 1002, ¶¶ [0064], [112-15]. Emma also disclosed the microwave had auxiliary outlets for charging low power devices, like cell phones. *See, e.g.*, Ex. 1011 at ¶[0027]; Ex. 1023, ¶[131]. Emma was published before the '745 and '746 Patents and is strong and undisputed primary prior art.

Patent Owner's '746 and '745 Patents are continuations-in-part to Emma. '746 FWD at 3 n.4; '745 FWD at 3 n.4. They disclose and claim exactly what Emma disclosed, plus an off-the-shelf smoke sensor programmed to disable the microwave when there is a purported dangerous level or amount of smoke and reset the microwave when there is no longer a purported dangerous level or amount of smoke.

The issue before the Board was straightforward: whether it was obvious at the time of the alleged invention to incorporate a known smoke sensor with reset functionality into Emma's microwave. As demonstrated below, when the *Graham* factors are properly weighed and all relevant evidence is considered, the answer to that question is a resounding yes.

II. LEGAL STANDARD

Director Review is appropriate when the FWD "present[s] (a) an abuse of discretion, (b) important issues of law or policy, (c) erroneous findings of material

fact, or (d) erroneous conclusions of law." USPTO, Director Review process, §§2.B, 5.A. "An abuse of discretion may be established by showing [the Board] made a clear error of judgment in weighing relevant factors or exercised its discretion based upon an error of law or clearly erroneous factual findings." *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1350 (Fed. Cir. 2001) (quoting *Novo Nordisk of N. Am., Inc. v. Genentech, Inc.*, 77 F.3d 1364, 1367 (Fed. Cir. 1996)) (internal quotation marks omitted).

III. ARGUMENT

A. The Board's Weighing of the First Three *Graham* Factors was Arbitrary, Erroneous, and Without Explanation

In the '746 FWD, the Board provided a detailed analysis demonstrating that the combination of Emma (Ex. 1011), Butt (Ex. 1015), and Smith (Ex. 1014) taught each and every limitation of claims 1-3, 5-6, 8-11, 13-17, and 20-24. '746 FWD at 22-46. The Board's analysis mainly focused on three limitations, limitations [1c], [1g], and 1[h], because those were the only limitations Patent Owner disputed. *Id.* at 35. The Board decisively rejected all of Patent Owner's arguments for why the combination of Emma, Butt, and Smith does not teach those limitations. *Id.* at 35-46.

The Board also found there was a motivation and reasonable expectation of success to combine Emma, Butt, and Smith. *Id.* at 38-42. It determined that not only would a POSITA have been motivated to combine Emma, Butt, and Smith, but

"anyone" would have been motivated to combine those references because doing so requires nothing more than simple logic. *Id.* at 41-42. Specifically, the Board found as follows:

> Considering the references together, Dr. Horenstein testifies that a person of ordinary skill in the art would have "modif[ied] Emma with Butt and Smith to include Smith's smoke sensor in 'operative connection' with the microwave oven, and including the reset functionality disclosed by Butt for the added benefit of reusing the microwave oven." Ex. 1023 ¶ 127. We find these reasons to combine persuasive. It is well known to a person of ordinary skill in the art, if not anyone, that smoke and fire are a dangerous and unwanted condition of any oven. Ex. 1002 ¶¶ 91, 95. The ability or desire to reset the microwave to run, after for example, someone burns their popcorn, to work again ***is nothing more than simple logic***. *Id.* ¶¶ 184, 192.

'746 FWD at 41 (emphasis added).

In reaching those determinations, the Board never once stated or implied that Petitioner's arguments were only slightly better than Patent Owner's arguments. *Id.* at 22-46. Rather, the Board rejected all of Patent Owner's rebuttal arguments because, *inter alia*, Patent Owner falsely stated Petitioner did not offer motivations to combine the references, misstated Petitioner's combination, improperly attacked the references individually, and improperly demanded the combination teach a limitation *in haec verba*. *Id.* Everything about the Board's findings, which completely favored Petitioner's arguments and rejected all of Patent Owner's

arguments wholesale, leads to the conclusion that Petitioner established a strong and decisive prima facie showing of obviousness.

Yet, notwithstanding those determinations, in weighing the *Graham* factors, the Board summarily concluded without explanation that "considering the combination of Emma, Butt, and Smith, we determine that Petitioner's evidence weighs **slightly in favor** of a conclusion of obviousness" for the challenged claims. *Id.* at 46 (emphasis added). The Board's "slightly" obvious conclusion contradicts the Board's strong findings of obviousness and was thus an abuse of discretion. The Director should therefore reverse the Board's conclusion, hold Petitioner made a strong prima facie showing of obviousness, and find the first three *Graham* factors weigh strongly in favor of obviousness.

Further, the Board failed to provide any explanation whatsoever for how or why it assigned such a low weight to such a strong prior art combination. Under Federal Circuit law, that was clear legal error. *Volvo Penta of the Ams., LLC v. Brunswick Corp.*, 81 F.4th 1202, 1213-16 (Fed. Cir. 2023). When the Board assigns a weight to the *Graham* factors, it must explain how and why it assigned that weight. *See Nearmap US, Inc. v. Eagle View Techs., Inc.*, IPR2022-00734, 2024 WL 922247, *4 (P.T.A.B. Feb. 20, 2024) (granting request for Director Review and vacating the Board's FWD because the Board failed to explain how and why it assigned weight to the *Graham* factors in its obviousness analysis). Accordingly,

there is clear legal error in the Board's obviousness conclusion and it must be reversed. Alternatively, the Director should remand the proceedings to have the Board explain its weighing of the *Graham* factors.

B. The Board's Secondary Consideration Analysis was Irreconcilable and Flawed

Although secondary considerations must be considered, they do not overcome a strong prima facie showing of obviousness. *See, e.g.*, *Asyst Techs., Inc. v. Emtrak, Inc.*, 544 F.3d 1310, 1316 (Fed. Cir. 2008) (holding secondary considerations inadequate to overcome strong primary showing); *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007) (same). Here, the secondary considerations should not have overcome Petitioner's strong invalidity arguments because the Board's analysis of those considerations was an abuse of discretion and legally erroneous.

Petitioner, Patent Owner, and Board all agreed Emma discloses a combination microwave-refrigerator appliance with refrigerator power modulation. In other words, everyone agreed Emma teaches all limitations of the Micro+SS Claims and Micro+Fridge+SS Claims, except for the smoke sensor limitations. For the Micro+SS Claims, which the Board correctly found invalid, the Board concluded that a POSITA would have found it obvious to combine Emma's microwave with Butt's smoke sensor reset function and Smith's smoke sensor. '746 FWD at 22-46, 72-73. But for the Micro+Fridge+SS Claims, the Board found them not obvious

over the exact same references because of secondary considerations of non-obviousness. *Id.* at 71-72; '745 FWD at 69-72. That difference in conclusions is illogical.

Secondary considerations determine whether a POSITA would have combined references, inoculating the obviousness analysis against hindsight. *Graham v. John Deere Co.*, 383 U.S. 1, 36 (1966) (holding secondary considerations "guard against slipping into use of hindsight and to resist the temptation to read into the prior art the teachings of the invention in issue"). The Board acknowledged that combining Emma with Butt and Smith was a matter of "simple logic," and found those references invalidated the Micro+SS Claims. '746 FWD at 41-42, 72-73. There is no reason the Board should have concluded differently for the Micro+Fridge+SS Claims, particularly given that Emma's entire disclosure is about a microwave combined with a refrigerator. The Board did not offer any explanation as to why a POSITA would have combined one teaching of Emma (i.e., the microwave) with Butt and Smith, but not another teaching of Emma (i.e., the combination microwave-refrigerator) with Butt and Smith. The failure to do so was legal error.

For the above reasons, the Board's conclusion that the Micro+Fridge+SS Claims are not invalid due to secondary considerations was an abuse of discretion and legally erroneous. Secondary considerations should not have overcome

Petitioner's strong showing of obviousness. The Director should therefore grant Petitioner's request for review and overturn the Board's non-obviousness determination for the Micro+Fridge+SS Claims.

C. The Board's Weighing of Copying Was Meritless and Unsupported

The Board found Patent Owner's evidence of copying persuasive and strong evidence of nonobviousness for the Micro+Fridge+SS Claims. '746 FWD at 65-71. However, the weight the Board assigned to copying was erroneous because, by the Board's own omission, there is no evidence Petitioner copied what the Board identified as the purported novel feature of the alleged invention.

Specifically, the Board states that the purported "novel aspect of [the alleged] invention is the internal smoke sensor in 'operative connection with a cooking area' that includes a reset function." *Id.* at 66 (citations omitted).

While Petitioner disagrees that the alleged inventions have any novel aspects, assuming arguendo the Board is correct, there is no evidence that Petitioner copied the claimed reset functionality. At most, the evidence shows that Petitioner tried to add a known smoke sensor into the microwave of its MicroChill product because universities wanted that feature. *See, e.g.*, Ex. 2008 at 1; Ex. 2014 at 2-3; Ex. 2015 at 1. There is nothing in the record that shows Petitioner copied the reset function of the smoke sensor in Patent Owner's MicroFridge product. There is no evidence that Petitioner even had access to Patent Owner's software (object or source code)

such that it was able to mimic that purportedly novel aspect of the claims. Access is a requirement to establish copying. *Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1325 (Fed. Cir. 2004).

The Board cites Patent Owner's expert's comparison of Patent Owner's MicroFridge product to Petitioner's MicroChill product to conclude features were copied. '746 FWD at 67-71. However, nowhere does the Board cite to any evidence in the record that shows Petitioner copied from the MicroFridge product what is purportedly novel—i.e., a smoke sensor with reset functionality. In fact, neither the Board nor Patent Owner's expert even mentioned the claimed reset functionality when comparing the features of the MicroFridge and MicroChill products. *Id.* at 67-70; Ex. 2001 at App'x C.

Further, Patent Owner admitted to the Board that Petitioner's product ***does not*** have the reset functionality. The claimed reset function prevents the microwave from turning back on until the smoke that was detected in the microwave is no longer purportedly dangerous. In its N.D. Iowa Complaint, filed with the Board, Patent Owner included claims of false advertising and unfair competition under the Lanham Act. Ex. 1022, §XIII. As a basis for those claims, Patent Owner alleged that Petitioner has made false and misleading statements to universities by representing that the Smart Stop Internal Smoke Sensor of the MicroChill product will turn off power to microwave at the first detection of smoke, when that is not actually true.

Id., ¶¶34-35. Further, Patent Owner acknowledged that Petitioner has represented the microwave of the MicroChill product can be turned back on immediately even if there is still smoke in the microwave. *Id.*, ¶35. That dooms Patent Owner's copying argument because it shows Petitioner's MicroChill product does not have the reset functionality, and certainly did not copy Patent Owner's smoke sensor reset functionality.

For the above reasons, the Board's finding of copying is meritless because there is no evidence Petitioner copied the alleged novel reset function feature. The Board should have found that copying does not weigh in favor of nonobviousness for the Micro+Fridge+SS Claims and certainly not enough to tip the scales to overcome Petitioner's strong prima facie showing of obviousness. *See, e.g.*, *Asyst*, 544 F.3d at 1316; *Leapfrog*, 485 F.3d at 1162. The Director should therefore grant Petitioner's request for Director Review, reverse the Board's nonobviousness determination, and find the Micro+Fridge+SS Claims of the '746 Patent unpatentable.

D. The Board's Weighing of Commercial Success was Erroneous because There was No Nexus and the Board Ignored Relevant Evidence

For commercial success to be accorded substantial weight, there must be a nexus between the evidence and novel aspects of the alleged invention. *Wm. Wrigley Jr. Co. v. Cadbury Adams USA LLC*, 683 F.3d 1356, 1363-64 (Fed. Cir. 2012); *Asyst*,

544 F.3d at 1316. Here, the Board found commercial success weighed heavily in favor of non-obviousness for the Micro+Fridge+SS Claims. '746 FWD at 72. That finding was legally erroneous because no nexus exists.

First, the Board found a nexus existed because universities started making the claimed features, specifically an internal smoke sensor in operative connection with the microwave cooking area and a single power cord, requirements of their RFPs. *Id.* at 57. However, the Board never stated universities made the claimed reset functionality, i.e., the purported novel feature of the alleged invention, a requirement of their RFPs. *Id.* at 54-60. Nor could it. None of the RFPs in evidence specifically mention that a smoke sensor with a reset function is a requirement. *See generally* Ex. 2009; Ex. 2010; Ex. 2011; Ex. 2012; Ex. 2013.

Second, the evidence shows the RFPs included extensive requirements unrelated to the products, such as rental service contracts, direct marketing, fulfilment and installation services. *See, e.g.*, Ex. 2009; Ex. 2012; Ex. 2013. The Board dismissed that evidence. '746 FWD at 59. It determined that, even if sales were due in part to the non-product requirements, it does not lessen the evidence that RFP requirements included features of the alleged invention. *Id.* That determination, however, was arbitrary and improper. The non-product requirements show that Patent Owner's alleged commercial success is not tied solely to the purported novel aspect of the alleged invention because other factors influenced

contract awards.

As an example, the evidence shows Patent Owner is not winning a contract for microwave-refrigerator appliances solely because it is offering the MicroFridge product. One university informed Petitioner that Patent Owner won a bid over it in part because of warranty length and location of repairs that Patent Owner offered. Ex. 2020 at 1. Those requirements have nothing to do with the alleged invention, let alone the purported novel aspect. Patent Owner's ability to meet non-product requirements of RFPs helps drive Patent Owner's sales and revenue.

Had the Board properly considered Petitioner's relevant evidence, it should have found commercial success carries little weight. *See Geo M. Martin Co. v. Alliance Mach. Sys. Intern. LLC*, 618 F.3d 1294, 1304 (Fed. Cir. 2010) (assigning "little weight" to commercial success factor because much of the plaintiff's market share was unrelated to the claimed invention). This is yet another reason for the Director to grant Director Review and overturn the Board's faulty obviousness analysis on the Micro+Fridge+SS Claims.

IV. CONCLUSION

For the foregoing reasons, Petitioner respectfully requests the Director grant its request for Director Review, reverse the Board's non-obviousness determination, and find the Micro+Fridge+SS Claims, claims 6, 13, and 21 of the '746 Patent, unpatentable.

Dated: May 9, 2025

Respectfully submitted,

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CERTIFICATE OF PAGE COUNT

I hereby certify that the foregoing Request for Director Review complies with the page limits of § 42.24(a)(1)(v) because it does not contain more than 15 pages. I also certify that the foregoing Request for Director Review 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 font.

/Domingo M. LLagostera/
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CERTIFICATE OF SERVICE

Pursuant to 37 CFR §§ 42.6(e), the undersigned certifies that a copy of the foregoing **REQUEST FOR DIRECTOR REVIEW** was served on counsel of record on May 9, 2025, by electronic mail at the following address, as authorized by Patent Owner in its Mandatory Notices:

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