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.

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Case No. PGR2024-00004

Patent No. 11,674,746

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**PATENT OWNER INTIRION CORPORATION'S SUR-REPLY TO PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE**

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# I. THE CLAIMS ARE NOT INDEFINITE

## A. Petitioner's Indefiniteness Arguments are Untimely and Waived

Petitioner asks the Board to invalidate the challenged claims based on an indefiniteness argument that it did not raise in the Petition. The Trial Practice Guide ("Practice Guide") is clear: "Petitioner may not submit new evidence or argument in reply that it could have presented earlier, e.g. to make out a prima facie case of unpatentability." Practice Guide at 73; *see also, e.g.*, *Teva Pharmas. USA, Inc. v. Corcept Therapeutics, Inc.*, PGR2019-00048, Paper No. 51, at 38-40 (Nov. 18, 2020) (excluding invalidity evidence raised for the first time in Reply).

There is no question that Petitioner knew indefiniteness was an invalidity ground which must have been asserted in the Petition. Petitioner originally asserted ***different*** indefiniteness grounds which its Reply now relegates to a footnote. *See* Petition at 88-90; Reply at 4 n.2. Petitioner conceded to the District Court it had chosen to raise different indefiniteness challenges before the District Court and the Board. *See* Ex. 2037 at 11 ("College Products conceded that it did not challenge the '745 and '746 Patents as invalid for indefiniteness based on the terms 'level of smoke' or 'amount of smoke' in the PGRs."). Having strategically chosen to raise one set of indefiniteness arguments before the Board and a different set before the District Court, Petitioner cannot now raise the grounds it omitted from its Petition for the first time in its Reply.

Nor can Petitioner justify raising new invalidity arguments in its Reply on the theory that "[i]ndefiniteness is a matter of claim construction." Reply at 4. The Practice Guide forecloses that argument, stating "[t]he petitioner may respond to any such new claim construction issues raised by the patent owner, ***but cannot raise new claim construction issues that were not previously raised in its petition***." Practice Guide at 45 (emphasis added). The Petition asserted that "Patent Owner interprets 'level of smoke' and 'amount of smoke' as merely detecting smoke. … Petitioner applies what it understands Patent Owner contends is the meaning of this term in this Petition and shows below the claims are invalid under Patent Owner's construction." Petition at 14. Notably, Petitioner ***did not*** assert these terms were indefinite and incapable of being applied to the prior art.

The Board's Institution Decision held "reading the plain language of the claims in light of the specification, we understand 'level of smoke,' or amount of smoke, in the claims generally as a predetermined level of smoke 'indicative of a dangerous condition' as the specification of the '746 patent explains." Institution Decision at 11. Nothing in the Board's recitation of the claim's plain language opened the door for Petitioner to assert a new invalidity ground it elected not to include in its Petition. And the cases Petitioner cites in support of its new ground are inapposite. *Ericsson, Inc. v. Intellectual Ventures I LLC*, involved "a special case in which Petitioner, Patent Owner, and the Board all initially applied the

broadest reasonable interpretation claim construction standard, and only after institution applied *Phillips* instead." 901 F.3d 1374, 1380 (Fed. Cir. 2018). And in *Axonics, Inc. v. Medtronic, Inc*., the Federal Circuit held "*where a patent owner in an IPR first proposes a claim construction in a patent owner response*, a petitioner must be given the opportunity in its reply to argue and present evidence of anticipation or obviousness under the new construction, *at least where it relies on the same embodiments for each invalidity ground as were relied on in the petition*." 75 F.4th 1374, 1383 (Fed. Cir. 2023) (emphasis added). Neither applies here. Because this argument was not presented in the Petition, Petitioner waived it, and the Board need not consider it.

**B. The District Court's Indefiniteness Decision was Erroneous**

Setting the issue of waiver aside, the Board should not adopt the District Court's indefiniteness rulings because they are erroneous and based on a fundamental misunderstanding of the claim scope. Indeed, the District Court has stayed a decision on Intirion's motion to reconsider its indefiniteness rulings, noting:

> The Court values the expertise of the USPTO, and the Court finds that...the Court would benefit from the PTAB's final written decision on those patents….
>
> Because the outcome of the PGRs will inform the Court's respective decisions on Intirion's motion for reconsideration of claim construction and College

> Products' motion for partial summary judgment (the latter being potentially affected, or even mooted, either by the PTAB's final written decision and/or the Court's ruling on Intirion's motion for reconsideration), the Court finds the matters at issue would be simplified by staying the case until the PTAB issues its final written decision.

Ex. 2037 at 12-13.

In determining what weight to accord a district court claim construction, the Practice Guide notes that "[i]t may also be relevant whether the prior claim construction is final or interlocutory." Practice Guide at 47. Here, the claim construction is interlocutory, and the District Court has expressly stayed the litigation so that it may ***reconsider*** its construction in light of the Board's guidance (including a decision that Petitioner waived this new indefiniteness challenge in the PGR).

The District Court's indefiniteness rulings were based on the faulty premise that the patent specification must identify "a specific smoke detector or range of smoke points" and "the appropriate measurement by which smoke crosses a threshold into a 'dangerous condition.'" *See* Ex. 1025 at 16, 21. The specification was not required to include that information, because the challenged claims are not directed toward a novel method for setting the trip point for a smoke sensor.

Smoke detectors are not new, nor is using a smoke detector to identify a dangerous condition caused by burning food. Lay people have long understood that smoke detectors are intended to trigger when they sense an amount or level of smoke consistent with burning food. *C.f.* Ex. 1001 at 15:57-62; *see also* Ex. 2001, ¶ 67

Against this background, Intirion properly used descriptive language to claim a system in which integrated smoke sensors are triggered by a level or amount of smoke 'indicative of a dangerous condition' as explained in the specification and recognized by the Board's claim construction. *See* Institution Decision at 11; *see also, e.g.*, *Immunex Corp. v. Sandoz, Inc.*, 964 F.3d 1049, 1064 (Fed. Cir. 2020) ("It is well-established that a patent specification need not re-describe known prior art concepts."); *Power-One, Inc. v. Artesyn Techs., Inc.*, 599 F.3d 1343, 1349–50 (Fed. Cir. 2010) (holding the patent specification did not need to describe "well known devices" that "a person having ordinary skill in the art would know… how to use")). The law is clear that Intirion was under no obligation to "define [its] invention with mathematical precision in order to comply with the definiteness requirement." *Niazi Licensing Corp. v. St. Jude Med. S.C., Inc.*, 30 F.4th 1339, 1347 (Fed. Cir. 2022) (citing *Guangdong Alison Hi-Tech Co. v. Int'l Trade Comm'n*, 936 F.3d 1353, 1359 (Fed. Cir. 2019)). As the Federal Circuit recognized in *Niazi*, "patentees often use descriptive words to avoid a strict numerical boundary to the specified parameter." *Id.*

That is the case here. Rather than limit its claims to a specific numerical threshold measurement for how much smoke is too much, Intirion used descriptive words that are well understood by a person skilled in the art. Inirion supported that descriptive claim language by providing guideposts to practitioners in the field, such as the smoke points of oils present in the foods likely to be cooked in the microwave. For example, the '745 specification explains:

> The exemplary safety circuit may use the smoke point of oil or similar food products as the basis for its threshold amount, so that normal smoke emitted during the cooking or heating of food or beverages will not cause the infrared sensor 326 to deactivate cooking operation.

Ex. 1001 at 15:52–57. This disclosure provides sufficient guidance for a POSITA to determine with a reasonable degree of certainty what sensor configurations are, and are not, designed to detect a "level" or "amount" of smoke that is "indicative of a dangerous condition." *See Niazi*, 30 F.4th at 1348 (explaining that claims lacking "mathematical precision" are not indefinite where "the intrinsic evidence provided guideposts for a skilled artisan to determine the scope of the claims") (citing *Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1335 (Fed. Cir. 2010)); *see also* Ex. 2001, ¶ 64-67.

The flexibility of the claims' descriptive language captures the full scope of the invention, which is not limited to detecting the burning of a specific type of food, the physical configuration of a particular microwave cooking cavity, or the choice

of a particular smoke sensor. Those are all choices a POSITA knew how to make, and they all fall within the invention's scope. *See, e.g.*, *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1117 (Fed. Cir. 2004) ("[P]articular embodiments appearing in the written description will not be used to limit claim language that has broader effect.").

The District Court's indefiniteness rulings were also premised on an incorrect application of *Teva Pharmaceuticals USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335 (Fed. Cir. 2015), which the District Court believed was analogous to the challenged claims. *See* Ex. 1025 at 21. *Teva*, however, is ***not*** analogous because the claims in *Teva* recited a specific mathematical range of values with ambiguous units of measurement, rather than using broad, readily-understood descriptive language. The claims in *Teva* recited a chemical reaction "result[ing] in copolymer-1 having a *molecular weight of about 5 to 9 kilodaltons*." *Teva*, 789 F.3d at 1338 (emphasis in original). While the mathematical range in the *Teva* claims appears clear on its face, the Federal Circuit pointed out that "[t]here are three different measures of molecular weight" (identified as $M_p$, $M_n$, and $M_w$) and [t]he claim [did] not specify which measure to use and in a typical polymer sample[.], $M_p$, $M_n$, and $M_w$ have different values." *Id.* Importantly, the three different measures of molecular weight allowed for very different claim scopes. *Id.* at 1341. Thus, by claiming a specific mathematical range without clearly identifying how that range was to be measured,

the patent in *Teva* created genuine ambiguity as to whether or not particular polymers resulting from the reaction fell within the patent claims. *Id.*

The descriptive language used in the '746 Patent deliberately ***avoids*** the pitfalls created when a patentee claims a precise mathematical range like the claims in *Teva*. The scope of the '746 Patent's claims is clear and unambiguous – the claims require sensors that are configured to detect "amounts" or "levels" of smoke consistent with the "dangerous condition" of smoldering or burning food, rather than food cooking normally. Petitioner did not introduce any evidence that a POSITA would be unable to distinguish between a smoke sensor configured to detect burning food and a sensor configured to detect normal cooking activity. Intirion may have claimed this aspect of its invention broadly, "[b]ut a claim is not indefinite just because it is broad." *Niazi*, 30 F.4th at 1347.

The District Court's claim construction order would require Intirion to unnecessarily disclose specific details of well-known electronic components in the specification and then limit the breadth of the claims to those specific disclosed embodiments. *See* Ex. 1025 at 16, 21. This approach runs afoul of two fundamental canons of patent law. First, "[t]he law is clear that patent documents need not include subject matter that is known in the field of the invention and is in the prior art." *S3 Inc. v. NVIDIA Corp.*, 259 F.3d 1364, 1371 (Fed. Cir. 2001) (citing *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 804 (Fed. Cir. 1999)). That is

particularly true in a predictable art such as electronics, where "a lower level of detail is required to satisfy the written description requirement than for unpredictable arts." *Hologic, Inc. v. Smith & Nephew, Inc.*, 884 F.3d 1357, 1361 (Fed. Cir. 2018). Second, "reading a limitation from the written description into the claims" is "one of the cardinal sins of patent law[.]" *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1340 (Fed. Cir. 2001). By holding that definiteness requires the specification to disclose specific values for smoke sensor alarm trip points, and that the claims must be limited to those values, the District Court would both require Intirion to disclose information that was already known in the art and then read that information as limitations into the claims.

Because the District Court's indefiniteness rulings misapplied the applicable legal standards, the Board should not adopt them. Instead, the Board should continue to apply its own reasoned understanding of the plain meaning of the terms "level of smoke," "amount of smoke," and "dangerous condition" as used in the claims in light of the specification and as reflected in the Institution Decision.

### C. Claim 14 Is Not Indefinite and Does Not Lack Written Description.

Claim 14 has adequate support.[1] Petitioner's argument relies on ignoring and misconstruing the specification citations Intirion provided. The specification explicitly provides:

> When cooking power is demanded by the microwave the compressor is disabled by having electrical power thereto withdrawn by the at least one control circuit for a preset minimum period. When power demand to the magnetron ceases, refrigerator compressor power is restored provided that the preset minimum period has expired.

Ex. 1001 at 4:55-61 (coloring added to correspond with claim 14).

Claim 14 requires:

> wherein the at least one power control circuit is operative to cause electrical power to be unavailable to the at least one electrical connector while the magnetron is operative and for at least a minimum period after the magnetron becomes inoperative.

Ex. 1001, claim 14 (coloring added).

Contrary to Petitioner's assertion, the specification discusses, like the claim, reenablement of power to the electrical connector (in the specification, the

[1] For the reasons stated in Intirion's Response, Petitioner has not met its burden of showing Claim 10 is invalid for lack of written description. *See* Response at 66-67.

refrigerator compressor) following the expiration of the preset minimum period *after* the magnetron "ceases" or "becomes inoperative." Claim 14 more than meets the written description standards.

## II. PETITIONER'S COMBINATIONS DO NOT RENDER THE CLAIMS OBVIOUS

### A. Emma and Smith (Ground 2)

#### 1. "Smoke Sensor"

Smith does not disclose or describe a smoke sensor. Instead, Smith teaches a sensor used for automatic cooking that "responsive to the cumulative concentration of water vapor and various organic gases"—i.e., Smith discloses a humidity sensor. Ex. 2001, ¶ 135; Ex. 1014 at 1:32-50; 1:15-16. In the Petition, rather than rely on Smith's own teaching, Petitioner argued there was a "typo", that the TGS-816 sensor (not disclosed in Smith – Smith discloses a TGS No. 186) was a smoke sensor, and thus Smith meets this limitation. *See* Petition at 48-50 (describing the undisclosed Figaro Model TGS No. 816 sensor as the basis for meeting the smoke sensor claims). With Intirion demonstrating that argument holds no water (e.g., the TGS 816 sensor is not disclosed, inconsistent with Smith, not a smoke sensor, and not usable within a microwave), Petitioner now pivots away from its reliance on the TGS-816, and instead, for the first time, argues that "such evidence is not required" and Smith in of itself discloses the smoke sensor. *See* Reply at 5, n.3.

Petitioner's about-face does not change that Smith is not a smoke sensor. Smith makes it clear that the humidity it senses (water vapor and organic gases) in the "pre-combustion phase" are ***the same gases*** that were detected in the "normal cooking phase" and the "drying out phase"—all that changes between the different phases is the ***concentration*** of the water vapor and various organic gases the sensor detects. *Id.* at 3:3-26; 3:27-4:62 & Fig. 3 (describing the humidity associated with normal cooking phase, drying out phase, and pre-combustion phase). Thus, the Smith sensor is not detecting smoke emitting from burning food. It is detecting a rate change in the emission of ***the same*** gases that the food has emitted throughout cooking, in order to "anticipate" when combustion will occur ***before*** a significant amount of smoke is emitted.

The word "smoke" only appears once in Smith. Smith states that "before actually reaching the ignition point, the food begins to char, smoke or smolder, resulting in a second period of relatively rapidly increasing gas concentration in the circulating air, *comparable to that rate of increase which characterizes the normal cooking period*." *Id.* at 3:51-56 (emphasis added). Dr. Tanbour correctly challenged the assertion that food was "beginning" to smoke in the pre-combustion phase, because without combustion there is no smoke. *E.g.*, Ex. 1027 at 60:3-5; Ex. 2001, ¶ 84. Petitioner has introduced no evidence that pre-combustion food emits a measurable amount of smoke, or that a POSITA would have believed that it does.

Regardless, what the Smith sensor is measuring is a rate of gas concentration change "comparable to… the normal cooking period." Ex. 1014 at 3:54-56. The sensor is clearly not measuring an amount of smoke indicating a dangerous condition—it is measuring "drying out", a second period in which food emits gases "comparable to" the emissions of "normal cooking," pre-combustion.

**2. "Set End Time"**

Petitioner's Reply does not identify any discussion of a "set end time" in Smith because there is none. *Cf.* Reply at 7-8. Instead, Petitioner appears to try to sidestep automatic cooking sensors and imply a set end time is somehow inherent in Smith—without addressing the actual elements of the claim limitation, legal requirements for inherency, or Smith's teachings. *See* Reply at 7-8. An automatic sensor ending a session upon sensing cooked food—as Smith discloses—does not disclose withdrawing cooking power prior to a set end time. Instead, as discussed in the Response, automatic cooking does not necessarily have an end "time"—or may change the end "time" to the time it senses cooking completed, as taught by Ueda. *See* Ex. 2001, ¶ 154-55. In other words, the power is withdrawn *at* the time of completion, which is determined by the low-cost automatic cooking sensor (i.e., humidity sensor).

### 3. Reset

There is likewise no discussion in Smith of resetting the delivery of power to the microwave. Petitioner's Reply argues that it would have been easy for a POSITA to implement a reset function, *cf.* Reply at 8-9, but the argument that a missing element could have been easy to implement does not mean that missing element was obvious. *Ex Parte Gerlach and Woerner*, 212 U.S.P.Q. 471, 1980 WL 30192 (PTAB 1980) ("There is nothing in the statutes or the case law which makes 'that which is within the capabilities of one skilled in the art' synonymous with obviousness."); *Leo Pharm. Prod., Ltd. v. Rea*, 726 F.3d 1346, 1354 (Fed. Cir. 2013) ("If the[] discoveries and advances were routine and relatively easy, the record would undoubtedly have shown that some ordinary artisan would have achieved th[e] invention").

### 4. Motivation to Combine

As explained in Intirion's Response, a POSITA would not have been motivated to combine Emma and Smith. *See* Response, 41-42. Petitioner offers no *evidence* a POSITA would look to Smith (which does not disclose a smoke sensor) and combine Smith with the power cycling ability of Emma. *Teleflex, Inc. v. Ficosa N. Am. Corp*., 299 F.3d 1313, 1334 (Fed. Cir. 2002) ("The showing of a motivation to combine must be clear and particular, and it must be supported by actual evidence"). And Petitioner makes no attempt to explain why (or how) a POSITA

would combine Smith with Emma, when doing so would exceed the maximum allowed power consumption for a microwave. Ex. 2001, ¶ 166, Ex. 2002, 124:8-20; *see also* Response at Section XIV.D.

### B. Emma and Butt (Ground 3)

#### 1. "Smoke Sensor"

The combination of Emma and Butt does not disclose a smoke sensor in operative connection with a microwave oven's cooking area. Each of the independent claims of the '746 Patent requires the smoke sensor "is positioned in operative connection with a cooking area." *See* Ex. 2001, Claims 1, 15, 22. Petitioner attempts to side-step the claim language by arguing the claims do not require the smoke sensor to be inside the microwave. Reply at 11. But this limitation requires the smoke sensor to be either inside the interior cooking area of the microwave or in a connecting air passage or region connected to the interior cooking area. *See* Ex. 1001, 14:27–33; *see also* Institution at 44. Petitioner's misguided reliance on Butt ignores the claim language and the teachings of Butt and fails to provide any notice of how Butt meets this claim language.

Butt teaches a smoke detector that is wireless or wired into the home. Ex. 1015, 4:27-52, 5:1-6; 14:27–33; 16:62–17:5. Petitioner's Reply does not identify any teaching of Butt that would indicate Butt's detector is inside the microwave because there is none. Butt does not teach a smoke sensor in operative connection

with a cooking area of a microwave—or even a microwave at all. Ex. 1015; Ex. 2001, ¶ 171.

Further, Butt contains no teaching or suggestion supporting Petitioner's alternative contention that the smoke detector of Butt could be moved within a microwave. Ex. 2001, ¶¶ 174-75; Ex. 1015, 4:27-52. Instead, Butt identifies a generic wireless detector that may be used but only if it is far away from a cooking area. Ex. 1002, Appx. E ("Detectors should be located as close to the center of the ceiling as possible," and "not install[ed] near forced-air...ducts"; further noting ADEMCO product should not be located in "KITCHENS" or even "IN AIRSTREAMS PASSING BY KITCHENS"). Put simply, Butt teaches the detector *cannot* be positioned within an appliance. Ex. 2001, ¶ 214. And while Petitioner complains this improperly limits Butt to the disclosed ADEMCO product, it is significant that *nowhere* in Butt (or Butt's disclosed smoke detectors) is a detector disclosed anywhere *other than* away from a source of heat. *See* Ex. 1015 at Fig. 1A (wireless detector separate from appliances); Fig. 1B (wired detector separate from appliances).

**2. "Shutdown Function" / "Reset Enable Function" / "Control Circuit"**

Nothing in Butt teaches or suggests the control circuit causes cooking power to the magnetron to be withdrawn to end a current cooking session prior to a set end time in response to the smoke sensor sensing smoke in the cooking area. This is

unsurprising given Butt does not even disclose a microwave. Nor does it disclose a set end time. It also does not disclose sensing smoke in the cooking area of a microwave. What Butt *does* teach is a removing *all* power at an outlet, including a range plugged into the outlet, in the event of a fire, low battery notification, panic, or other general hazard such as an earthquake so "the energy that would otherwise act as an accelerant for the fire is eliminated." Ex. 1015, 4:35-38, 55-60. Petitioner's Reply attempts to side-step the actual claim limitation—requiring withdrawal of cooking power—by arguing having a wall outlet remove *all* power to prevent electricity from fueling an actual fire meets this limitation. *See* Reply at 12.

But claim language matters—and Butt does not teach the shutdown function within a microwave. Ex. 2001, ¶ 185. Butt is not tied to operating or delivering cooking power, nor withdrawing cooking power prior to a set end time in a microwave. Ex. 2001, ¶ 185. The smoke sensor of Butt is not even made to be in the same room as the appliances Butt references. *See id.*, ¶¶179-180, 185. Petitioner cannot avoid the actual claim requirements by broadening the claims to read "withdraw all power to any appliance."

Butt also does not disclose the reset enable function. Again, there is no disclosure of a cooking session, a set end time, stopping the cooking session prior to the set end time, or enabling a magnetron to cook in the next subsequent cooking session. Butt does *not* teach resetting except to re-enable power after a user panics

or following an alarm unrelated to the appliance plugged into the outlet containing Butt. Ex. 2001, ¶ 206. Instead of addressing this, Petitioner focuses instead on Butt's alleged disclosure of a power cord. Reply at 13. Even that is a mislead. Butt teaches that the controller of Butt would be permanently wired as part of the house and receive power cords; Petitioner does not explain how the reset enable limitation could be met by Emma with Butt, and instead cross-references to pages 76-81 of the Petition, even though those pages do not explain how Emma and Butt would meet these limitations. Ex. 2001, ¶ 186; Petition at 74-80.

**3. Motivation to Combine**

Petitioner's allegations that a POSITA would be motivated to combine Emma and Butt relies not on the teaching of Butt, but rather, again, on some assumption that a POSITA would seek to add additional functionality to Emma. *See* Ex. 2002, 65:18-73:19. Butt's safety motivation is simple and distinct: the smoke detector in Butt is wired into the home or outlets to ensure that, if there is a fire (or earthquake, or panic button), electrical power cannot act as an accelerant to the pre-existing fire safety issue. Ex. 1015, 4:35-37, 7:62-65. Butt is directed to a portion of a "smart house." The '746 Patent, on the other hand, removes power from a microwave's magnetron before a fire may occur, to prevent false fire alarms in high-occupancy buildings, such as dorms. For the reasons discussed in the Response, a POSITA

would not be motivated to combine Emma and Butt, as doing so would undercut the principles and operation of Butt. Response at 48-52; Ex. 2001, ¶ 188-96.

### C. Emma/Smith/Butt (Ground 4)

Neither Smith nor Butt, combined with Emma, disclose the missing elements of the independent claims. More importantly, clear (and unrebutted) evidence weighs against any combination including both of Smith and Butt.

#### 1. "Smoke Sensor" / "Shutdown Function" / "Reset Enable Function"

Neither Smith nor Butt discloses the claimed smoke sensor (and Smith does not disclose a smoke sensor at all). Petitioner cannot remedy Smith's failure with Butt because the smoke detector of Butt *cannot be placed within a microwave*—and there is no teaching of Butt suggesting it can or should be. Ex. 2001, ¶ 214.

Similarly, where neither Smith nor Butt disclose the shutdown function or reset enable function, the combination of both similarly fails to meet these elements. The shutdown function requires *cooking power* to be disabled before a set end time; thus, Butt does not disclose the shutdown function. Ex. 2001, ¶ 215. And as the Board recognized, Smith also does not disclose the shutdown function. Institution Decision at 31; *see also* Ex. 2001, ¶ 156; *see Trintec Indus. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1297 (Fed. Cir. 2002). As for the reset enable function, Petitioner cannot rely only on an allegation that it would be "easy" to add it in to support its

obviousness case. *Ex Parte Gerlach and Woerner*, 212 U.S.P.Q. 471, 1980 WL 30192; *Leo Pharm. Prod., Ltd.*, 726 F.3d at 1354.

**2. There Is No Motivation to Combine Emma, Smith, and Butt.**

For the reasons described previously, *see* Section II.B.4 and II.C.3, there is no motivation to combine Emma and Smith, Emma and Butt, or Emma, Smith, and Butt. Tellingly, what that combination would actually look like is still (at best) unclear. And Petitioner *still* has not identified a basis or teaching in Emma, Smith, or Butt to move a smoke detector *into* the microwave such that it would be in functional and in operative connection with a cooking area. *See* Ex. 2001, ¶¶ 204; Ex. 1015, 1:26-27. That motivation is improperly supplanted, using hindsight bias, from the '746 Patent—not any actual teaching of Emma, Butt, or Smith.

**D. Emma/Smith + POSITA Knowledge or Quezada (Grounds 6, 8)**

Petitioner now identifies its basis for failing to identify how dependent claims 12, 14, 19, 23, and 26 are invalid over Emma and Smith and the knowledge of a POSITA: in Petitioner's view, because it discussed Emma's auxiliary outlets when evaluating the challenged *independent* claims, it met its burden to challenge the *dependent* claims—despite never contending that the combination of Emma, Smith, and the knowledge of a POSITA would disable power to a USB port when the magnetron draws cooking power. *See* Reply at 23-24 (citing Petition's discussion of Emma and the *independent* claims of the '746 Patent). Petitioner does not meet

its burden. And regardless, Petitioner does not identify a basis to limit the functionality of Emma's auxiliary outlets to only USBs.

Further, Quezada does not fill the gaps of Emma and Smith. Any alleged motivation to combine Emma and Smith with Quezada *is not found in the references*. Ex. 1023, ¶ [131]. Quezada is wholly unrelated to microwaves. Ex. 2001, ¶ 226.

## III. OBJECTIVE INDICIA CONFIRM NON-OBVIOUSNESS

### A. Commercial Success

Intirion has provided clear evidence of commercial success tied to the patented features. *See* Ex. 2004, ¶ 3-9. This is strong evidence of non-obviousness. *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1337 (Fed. Cir. 2016). In response, Petitioner complains—solely through attorney argument—that such commercial success is attributable to Intirion's Emma prior art. And when faced with an *increase* in sales following implementation of the patented features, Petitioner waves its hands and says there is no evidence "the sales increase would not have occurred but for the claimed invention." Reply at 26. And when Intirion's customers began explicitly requiring the patented features in their RFPs, in Petitioner's view, that's simply irrelevant because the RFPs also contained "requirements unrelated to the products." *Id.* Petitioner's take on obviousness is not the law—rather, as here, where there is strong commercial success demonstrably tied to the patented feature,

the commercial success counsels against a finding of obviousness. *See Demaco Corp. v. F. Von Langsdorff Licensing Ltd*., 851 F.2d 1387, 1391 (Fed. Cir. 1988).

### B. Long Felt Need

Petitioner side-steps *its own* attempts (and failures) to arrive at Intirion's exact invention to downplay the clear long felt need for the claimed invention. Petitioner's five-year attempt to bring its own combination unit (with smoke sensor) to the market—including its copying of Intirion's microwave—is "particularly probative of obviousness" as it "demonstrates both that a demand existed for the patented invention, and that others tried but failed to satisfy that demand." *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Pat. Litig.*, 676 F.3d 1063, 1082 (Fed. Cir. 2012). That Petitioner *also* continued to fail to bring a product to the market long after Intirion's product was publicly available is uncontested—and clear evidence of the nonobviousness of the '746 Patent. *See In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Pat. Litig*., No. 09–MD–2118, 2010 WL 3766530, at *1–2 (D. Del. Sept. 21, 2010).

### C. Teaching Away

That the references Petitioner relies upon teach away from the claimed invention supports the nonobviousness of the '746 Patent. *See In re Kumar*, 418 F.3d 1361, 1368 (Fed. Cir. 2005). Petitioner does not contradict that ISDU teaches

away from the claimed invention.[2] *See* Reply at 28-29; Ex. 2001 at ¶ 259. Instead, Petitioner contends only that (1) the references somehow do not teach away from placing a smoke detector within a microwave, and (2) power regulations do not teach away from placing a smoke detector in a microwave. Reply at 28-29. Petitioner deliberately misunderstands: the references Petitioner relies upon teach away from the claimed invention because there would be no reason to place a smoke detector within a microwave unless you are trying to solve the *exact* problem Intirion solved—reducing false fire alarms *in dorms and hotels*, not within the microwave itself. Ex. 2001, ¶ 265. Smoke sensors inside of microwaves will trip more often than smoke sensors placed in conventional locations (i.e., on a wall/ceiling outside of the kitchen). Ex. 1002, App'x E at 306. Unless a POSITA was attempting to make a combination appliance for a dorm or hotel, the POSITA would choose not to include a smoke detector within a microwave to reduce the standby power draw in anticipation of upcoming regulations—which were publicly available at the time

[2] Petitioner rested on its Petition for ISDU grounds. For the reasons stated in the Response (and in opposition to Petitioner's motion for to apply for a subpoena, *see* Paper 18) all ISDU grounds fail and further should be excluded because ISDU has not been shown to be publicly-available prior art.

of the invention. 78 Fed. Reg. 36316 at 36316-17 (June 17, 2013) (stating the date of compliance is "June 17, 2016"); Ex. 2001, ¶ 263; Ex. 2035, ¶ 10.

**D. Copying**

Citing no caselaw or basis for its conclusion, Petitioner asserts that the evidence provided—that Petitioner itself sought to copy Intirion's patented system—"is irrelevant." Reply at 28. Yet Eric Hennings—Petitioner's President—wanted [redacted]. Ex. 2024 at 6; *see also* Response at 81-84. This "strong evidence of nonobviousness" is incontrovertible. *Volvo Penta of the Americas, LLC v. Brunswick Corp*., 81 F.4th 1202, 1213 (Fed. Cir. 2023). The Board should find that the secondary indicia of nonobviousness—and particularly, Petitioner's desperate attempts (and repeated failures attempting) to copy Intirion's patented invention—weigh against a finding of obviousness.

## IV. CONCLUSION

For all the above reasons, Petitioner has failed to meet its burden to show the '746 Patent is obvious. Intirion respectfully requests the Board confirm the patentability of the Challenged Claims of the '746 Patent.

Dated: November 19, 2024

*/R. Scott Johnson/*
R. Scott Johnson
Reg. No. 45,792

*Counsel for Patent Owner*

## CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(a)(1)(i), the undersigned hereby certifies that the foregoing Patent Owner's Sur-reply to Petitioner's Reply to Patent Owner's Response contains 5592 words, excluding parts of this Preliminary Response exempted under § 42.24(a), as measured by the word-processing system used to prepare this paper.

Dated: November 19, 2024

*/R. Scott Johnson/*
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*Counsel for Patent Owner Intirion Corporation*

## CERTIFICATE OF SERVICE

Per agreement of the parties and pursuant to 37 C.F.R. ¶ 42.105(b), the undersigned certifies that a copy of this Patent Owner's Sur-reply to Petitioner's Reply to Patent Owner's Response was served on November 19, 2024, by email on the following:


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